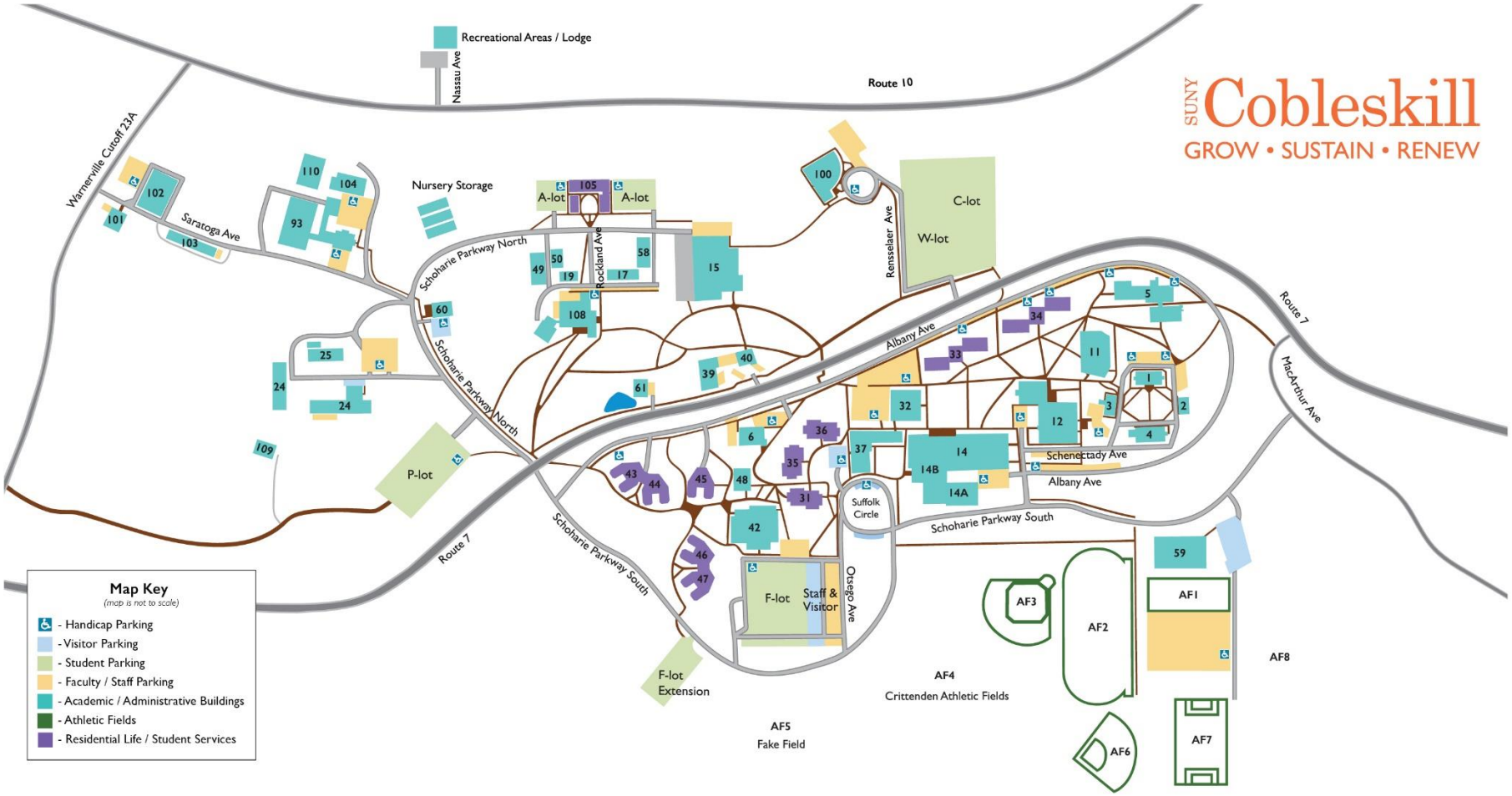
SUNY Cobleskill

College Catalog

2025-2026



Alumni Commons (105)
Alumni Hall (3)
Animal Science A / Canine (19)
Animal Science B / Livestock (50)
Animal Science C / Livestock (49)
Animal Science D / Canine Kennels (103)
Animal Science E / Equine Classroom (101)
Animal Science F / Equine Arena (102)
Beard Wellness Center (6)
Beef Cattle Barn (109)
Bouck Hall (14)
Bouck Pool (14A)
Bouck Atrium / Ballroom (14B)
Brickyard Point (48)
Carriage House (60)
Center for Agriculture & Natural Resources (108)
Center for Environmental Science & Technology (104)
Champlin Hall (42)
Cobleskill Child Care Center (100)
Curtis Mott Hall (15)
Dairy Complex (93)
Davis Hall (43)
Dix Hall (35)
Draper Hall (36)
Fake Hall (47)
Farm / Horticulture Machinery (17)
Frisbie Hall (1)
Heifer Barn (110)
Hodder Garage (61)
Home Economics Hall (2)
Johnson Hall / University Police (39)
Knapp Hall (37)
Kniskern House (40)
Mackey Service Building / Facilities (24)
Neal Robbins Field House (59)
Old Gym (4)
Parsons Hall (44)
Pearson Hall (31)
Porter Hall (45)
Prentice Hall (32)
TenEyck Hall (46)
Turf Grass (58)
VanWagenen Library (11)
Vroman Hall (33)
Warehouse / Shipping & Receiving (25)
Warner / Holmes Hall (5)
Wheeler Hall (12)
Wieting Hall (34)

ATHLETIC FIELDS

Crittenden Athletic Fields (AF4)
Fake Field (AF5)
Lacrosse / Soccer Field (AF7)
Men's Baseball Field (AF3)
Practice Field (AF8)
Tennis Courts (AF1)
Track (AF2)
Women's Softball Field (AF6)

07-19-21

Table of Contents

About SUNY Cobleskill 1
Family Educational Rights and Privacy Act of 1974 (FERPA) 12
SUNY Board of Trustees General Education Requirements 13
Math and English Placement Policies 14
Internships 17
Honors Program 18
Key to Course Sequencing 20
Degree Programs 21
Course Descriptions 167
Academic Policies 322
Academic Requirements for Financial Aid 375
VA Payment Compliance 377
College Refund Policy 378
Filing a Complaint with NC SARA 379

2025 – 2026 College Catalog

This catalog is current as of August 26, 2025. The State University of New York College of Agriculture and Technology at Cobleskill reserves the right to make changes in policies, requirements, and regulations as conditions change and such revisions are necessary subsequent to the catalog's publication.

All students are expected to have knowledge of the information contained in this publication and others, including the Student Handbook and the academic advisement materials explaining individual programs.

This catalog describes all current undergraduate programs of the institution. This is the official undergraduate catalog of record.

ABOUT SUNY COBLESKILL

Vision

As the premier educational institution of agriculture and technology, SUNY Cobleskill calls all learners to grow, to sustain and to renew the world and its citizens.

We continue to be guided by our founding vision: “Education is the hope of the world…If our young men and women are to grow quality in their lives they must learn to direct their own thinking, their own wanting, and their own doing.” (1921 College Catalog)

Mission

SUNY Cobleskill sets the standard for applied education that extends theory into practice. We cultivate our students to positively affect the cultural, economic, natural and technological forces in their lives.

In pursuit of our mission we strive to honor our history, teach by doing, forge pathways for success, think globally and across disciplines, cultivate sustainability, embrace and support our community, and promote personal growth.

Values

SUNY Cobleskill is a campus community characterized by empathy, inclusivity, respect, personal growth, integrity, and a collaborative spirit fostering well-being and sustainable practices. We recognize and celebrate student, faculty and staff achievements. We take pride in our campus and encourage collaboration with our surrounding communities.

Accreditation

SUNY Cobleskill is accredited by the Middle States Commission on Higher Education. The education department of the State University of New York registers all academic programs. SUNY Cobleskill is approved for awarding of the following degrees: Associate of Arts (A.A.); Associate of Science (A.S.); Associate of Applied Science (A.A.S.); Associate of Occupational Studies (A.O.S.); Bachelor of Business Administration (B.B.A.); Bachelor of Science (B.S.); and Bachelor of Technology (B.T.).

Leadership

SUNY Board of Trustees

John B. King Jr.
Chancellor

Dr. Merryl H. Tisch
Chairman

Cesar Perales
Vice Chairman

Joseph Belluck
Trustee

Courtney Eagles Burke
Trustee

Eric Corngold
Trustee

Marcos Crespo
Trustee

Robert Duffy
Trustee

James Haddon
Trustee

Eunice A. Lewin
Trustee

Stanley S. Litow
Trustee

Luca O. Rallis
President, SUNY Student Assembly

Bruce Simon
President, University Faculty Senate

Edward Spiro
Trustee

Cary Staller
Trustee

Candice Vacin
Trustee

Camille Joseph Varlack
Trustee

College Council

SUNY Cobleskill's College Council, in accordance with provisions of New York State Education Law, consists of ten members-nine appointed by the governor and one elected by and from the student body. A member designated by the governor serves as the council's chair. Council members are appointed to terms of seven years.

As established by the State University Trustees, the duties and powers of SUNY Cobleskill's College Council include: recommending candidates to the SUNY trustees for appointment as president of the college; reviewing all major plans of the president and making relevant recommendations before submission to the trustees; making regulations regarding campus faculty; reviewing and recommending institutional budgets; fostering the development of citizen advisory committees; naming buildings and grounds; making regulations regarding student conduct; and exercising supervision of student housing and safety.

Members

- Eric H. Stein, Chair
- Anna Blinn Cole
- Linda K. Cross
- Theresa Heary
- Martin Messner
- Tracy E. Purcell
- Susan Rightmyer
- Daniil Usmanov (Student Representative)
- Marilyn Wyman

Administration

Cabinet Members

Dr. Marion A. Terenzio
President
518-255-5111
presidentsoffice@cobleskill.edu

Derwin Bennett
Chief Diversity Officer
518-255-5838
bennetdd@cobleskill.edu

Dr. Scott Ferguson
Chief Economic Development Officer
Executive Director, Institute for Rural Vitality
518-255-5462
fergusss@cobleskill.edu

Laura Gross
Vice President for Finance and Administration
518-255-5626
grossll@cobleskill.edu

Dr. Anne Hopkins Gross
Vice President for Student Development
518-255-5214
hopkinam@cobleskill.edu

Gus McGiver
Chief of Staff
518-255-5118
mcgiveab@cobleskill.edu

Dr. Darcy Medica
Provost and Vice President for Academic Affairs
518-255-5523
academicaffairs@cobleskill.edu

Anna Miarka-Grzelak
Vice President for Strategic Enrollment and Innovation
518-255-5481
miarkaab@cobleskill.edu

Jason Politi
Director of Communications
518-255-5631
politijj@cobleskill.edu

John J. Zacharek
Vice President for Development
Executive Director of College Foundation
518-255-5524
zacharek@cobleskill.edu

Cynthia Zinzow
Executive Assistant to the President
518-255-5111
zinzowcl@cobleskill.edu

Academic Dean

Dr. Ian MacDonald
Dean of the Faculty
518-255-5323
macdonim@cobleskill.edu

Sophie Ano
Associate Dean of Agriculture and Academics
518-255-5323
deansoffice@cobleskill.edu

Campus Governance

Erik Hage
Presiding Officer

Carol Morris
Interim Secretary

Sinikka Grant
Barb Brabetz, Alternate
Faculty Senate

Kristina Johnson, Chair
Academic Personnel Policies Committee

Kelly Yacobucci, Co-Chair
Andrew Gascho-Landis, Co-Chair
Academic Policies Committee

Robert Hoople, Chair
Laura Adams, Co-Chair
Curriculum Committee

James Gregory, Chair
Facilities and Space Committee

Amanda Hantho, Co-Chair
Brent Lehman, Co-Chair
Fiscal Affairs and Strategic Planning

Deirdre Hickey, Chair
Professional Development Committee

Timothy Marten, Co-Chair
Ryan Blair, Co-Chair
Technology Committee

Faculty

Animal and Natural Sciences

Laura Adams
Assistant Professor
MA, Clemson University

Barbara Brabetz
Professor
MS, Rensselaer Polytechnic Institute

Carrie Edsall
Instructor
BS, Cornell University

Ralph Falco
Lecturer
BA, SUNY Cobleskill

Dr. Illona Gillette-Ferguson
Associate Professor
PHD, University of Cincinnati

Dr. Heavin Hannan
Lecturer
DSc, University of Aleppo

James Klino
Associate Professor
MA, SUNY at Buffalo

Michael Lapi
Instructor

Dr. Neil Law
Professor
PHD, University of Michigan at Ann Arbor

Dr. Andrew Magnuson
Assistant Professor - PRODIG+
PHD, Cornell University

Dr. Allison Maslack
Visiting Assistant Professor
DVM, Tufts Cummings School of Veterinary Medicine

Dr. Mairi Meehan
Assistant Professor
PHD, Memorial University of Newfoundland

Margaret Mansfield
Associate Professor
MS, Tufts University

Dr. Lynda McMaster-Schuyler
Professor
PHD, New York University

Susan Porter
Lecturer
BS, SUNY Cobleskill

Kimberly Tarvis
Associate Professor
MS, Colorado State University

Dr. Ben Weikert
Professor
PHD, University of Missouri

Raymond Whelihan
*Associate Professor, **Interim Department Chair***
MS, SUNY at Albany

Dr. Peiyu Zeng
Professor
PHD, University of Rhode Island

Faculty Cont.

Applied Career and Digital Technologies

Dr. Grace Begany
Associate Professor
PHD, SUNY at Albany

Mahmud Chowdhury
Assistant Professor
PHD, Clarkson University

Robert Cross
Associate Professor
MA, Cornell University

Anthony Esposito
Assistant Professor
MED, Western Governors University

James Gregory
Assistant Professorr
MA, SUNY Oswego

Joshua Louch
Instructor
BT, SUNY Cobleskill

Olivia Macedo
Assistant Professor
MS, Hofstra University

Kaden Marvin
Assistant Professor
ME, SUNY at Buffalo

Zachery Metzler
Associate Professor
MA, SUNY Oswego

Dr. Giacomo Rivituso
Professor
EDD, Northeastern University

Christopher Smith
Associate Professor
MA, Cornell University

Nicholas Testa
Associate Professor, ***Department Chair***
MA, SUNY College at Oswego

Edward Thiel
Instructor
BT, SUNY Cobleskill

Henry Whitbeck
Lecturer
BA, Franklin Pierce College

Behavioral and Health Studies

Jessica Bukovinsky
Lecturer
BS, University of New England

Dr. Amy Corbett
Professor
PHD, SUNY at Albany

Dr. Jennifer Essler
Assistant Professor
PHD, University of Veterinary Medicine Vienna

Brad Fichthorn
Professor
MS, Georgia Southern University

Suzanne Fine
Associate Professor
MAS, University of Wisconsin Madison

Scott Hill
Associate Professor
MED, Springfield College

Dr. Robert Hoople
Assistant Professor
EDD, Argosy University-Phoenix Campus Counseling Psychology

Dr. Carol Morris
Associate Professor
PHD, George Mason University

Dr. Christina Poor
Associate Professor
PHD, University of the Cumberlands

Laura Skinner
Assistant Professor
MA, SUNY at Binghamton

Jennifer Walrath
Assistant Professor
MS, SUNY College at Oswego

Caroline Warner
Lecturer

Dana Weir
Assistant Professor
MS, SUNY at Albany

Elise Weiss
Assistant Professor
MS, SUNY at Oneonta

Dr. Gail Wentworth
Professor, ***Department Chair***
EDD, University of Massachusetts at Amherst

Faculty Cont.

Fisheries, Wildlife, Environmental Studies, and Plant Sciences

Dr. Mary Arenberg
Assistant Professor
PHD, University of Illinois

Dr. Grace Armah-Agyeman
Associate Professor
PHD, Oregon State University

Dr. Melissa Brechner
Assistant Professor, ***Interim Department Co-Chair***
PHD, Cornell University

Mark Cornwell
Associate Professor
MA, SUNY at Oneonta

Dr. Charles Cotton
Associate Professor
PHD, College of William and Mary

Dr. Philip Crim
Assistant Professor
PHD, West Virginia University

Dr. Alex Ellram
Professor
PHD, University of Minnesota at Twin Cities

Dr. Andrew Gascho Landis
Associate Professor
PHD, Auburn University

Dr. Heidi Geisz
Assistant Professor
PHD, William & Mary

Deirdre Hickey
Instructor
MS, Cornell University

Dr. Lesley Judd
Associate Professor
PHD, North Carolina State University at Raleigh

Dr. Michael Losito
Professor
PHD, SUNY College of Environmental and Forestry

Dr. Roger Masse
Associate Professor
PHD, University of Rhode Island

Dr. Amy Quinn
Professor, ***Department Co-Chair***
PHD, SUNY College of Environmental Science and Forestry

Liberal Arts, Math, and Physical Sciences

Dr. Matthew Burns
Associate Professor
PHD, SUNY at Binghamton

Dr. Leigh Ann Christain
Professor
PHD, University of South Dakota

Dr. Rene Descartes
Professor
PHD, The New School

Melody Eldred
Professor
MS, Polytechnic University

Dr. Sinikka Grant
Professor
PHD, SUNY at Buffalo

Dr. Thomas Hickey
Professor
PHD, Sam Houston State University

Kristina Johnson
Associate Professor
MS, College of Saint Rose

Dr. Ko Hin Lau
Associate Professor
PHD, Indiana University at Bloomington

José Merzeau
Lecturer
BA, Rutgers University-Newark

Kevin Moore
Lecturer
MS, Marshall University

Dr. Salvador Rivera
Professor
PHD, SUNY at Albany

Dr. Susan Squair
Professor
PHD, University of Newcastle

Dr. Edward Stander
Professor
PHD, Universite Laval

Albert Tarbell
Lecturer
BA, Syracuse University

Christina Trees
Associate Professor, ***Department Chair***
MA, University of Notre Dame

William Tusang
Associate Professor
MA, SUNY College at Plattsburgh

Kurt Verderber
Professor
MA, SUNY at Albany

Kelly Yacobucci
Lecturer
MA, Utica College

Faculty Cont.

Management, Communication, and Design

David Campbell
Professor
MA, University of Houston

JoAnne Cloughly
Professor
MA, Empire State College

Adam Daily
Associate Professor
MFA, SUNY at Albany

Douglas Flanagan
Associate Professor
MS, SUNY Polytechnic Institute

Paul Gemmiti
Professor
MACC, Virginia Polytechnic Institution and State University

Erik Hage
Professor, ***Department Chair***
MA, SUNY at Binghamton

Stephen Kerzner
Lecturer
AS, Schenectady County Community College

Margrethe Lauber
Professor
MS, University of Cincinnati

Timothy Marten
Associate Professor
MLA & MURP, University of Illinois

Dr. Douglas MacLeod
Professor
DA, SUNY at Albany

Gregory Miller
Lecturer
AS, North Haven Academy

Dr. Timothy Moore
Associate Professor
PHD, St. John Fisher University

Katrina Pearl
Associate Professor
MBA, Le Moyne College

Dr. Patricia Piatov
Associate Professor
DBA, Nova Southeastern University

David Scott
Lecturer
MS, SUNY at Albany

Son Tran
Assistant Professor
MS, Massachusetts Institute of Technology

Stephen Weir
Associate Professor
MS, Cornell University

Kayla Vaughn
Professor
MFA, Marywood University

History

SUNY Cobleskill was chartered in 1911 and opened in 1916 as the Schoharie State School of Agriculture with one building, five faculty members and eight students, all young men desiring post-secondary education in agriculture.

By 1928 the College consisted of four main buildings, now known as the quadrangle, with Frisbie Hall being the headquarters for the teacher training classes, an out cropping of the home economics program which had been started for young women. Directly opposite Frisbie, in the building now called the Old Gym, the upstairs served as a basketball court and as a facility for physical education. The original basketball court lines on the floor of what is now Grosvenor Art Gallery are still clearly visible.

The basement of the Home Economics building was the center for the program in, you guessed it, home economics, as well as the College cafeteria. The building now called Alumni Hall served as the headquarters for the agricultural programs.

From 1947 to 1960 enrollment grew rapidly. The advent of degree programs resulted in a doubling of enrollment in a 10-year period prior to the fall of 1961. In the 1960s, facilities were expanded to meet the needs of the growing campus community, and in the period between.

1960 to 1973, most of the buildings which are presently on campus were built. The arches sculpture and Bouck Hall Mall, a focal point for the campus, were constructed between 1975 and 1976.

In 1987, the College began offering its first Bachelor of Technology in agriculture, and now also offers bachelor's and associate degrees in 53 programs in Agriculture and Natural Resources, Business, and Liberal Arts and Sciences, as well as a wide array of continuing education and professional development opportunities. SUNY Cobleskill is now officially recognized as a comprehensive college.

Today, SUNY Cobleskill has grown to include 782 acres and more than 40 buildings, 100 faculty members and 1,800 students. It has grown and changed but stayed true to its original charter. SUNY Cobleskill prides itself on giving individual attention to students, on programs that marry theory with practice, and on commitment to preparing students for a lifetime of learning and accomplishment.

Location

SUNY Cobleskill is located in New York's Schoharie County, a picturesque and historic area approximately 160 miles northwest of New York City and midway between Albany and Oneonta. State Route 7 runs through the middle of the 782-acre campus at the western edge of the Village of Cobleskill, directly off Interstate 88.

Schoharie County offers a rare combination of rural life and direct access to the services and activities of a metropolitan area, New York's Capital Region. Albany is only a 35-minute drive northeast of SUNY Cobleskill. The county is in close proximity to such splendors as the Adirondack Park, the Catskill Mountains, the historic Helderberg Mountains, and the Mohawk Valley. State and private parks, streams, lakes, mountain trails and ski areas provide an abundance of outdoor activities.

The Village of Cobleskill, with approximately 6,400 residents, is a typical small college town with convenient access to shopping, dining, recreational facilities and medical services. With a history that dates to 1711, the Cobleskill area is a treasure trove of historic sites and museums.

Non Discrimination

In compliance with Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Title VI and VII of the Civil Rights Act of 1964, the Americans with Disabilities Act, New York State Human Rights Law and other federal, state, and local laws , without regard to an individual's race, color, national origin, religion, creed, age, disability, sex, gender identity, sexual orientation, familial status, pregnancy, predisposing genetic characteristics, military status, domestic violence victim status, or criminal conviction. This includes, but is not limited to, recruitment, application process, examination and testing, hiring, training, grading, disciplinary actions, rates of pay or other compensation, advancement, classification, transfer and reassignment, discharge, and all other terms and conditions of employment, educational status, and access to college programs and activities.

SUNY Cobleskill will provide accommodations to individuals with disabilities in accordance with the Americans with Disabilities Act. The college will further provide accommodations to ensure the full participation of individuals in college programs, when such accommodations are reasonable and necessary, due to an individual's religion, pregnancy, maternity, or breastfeeding status.

Employees, students, applicants or other members of the college community (including but not limited to vendors, visitors, and guests) may not be subjected to harassment that is prohibited by law, or treated adversely based upon a protected characteristic.

All complaints of sexual violence, including assault, stalking, harassment, intimate partner violence, and other forms of sexually intimidating or threatening conduct will be promptly investigated by the Title IX Coordinator in cooperation with University Police. Sexual harassment consists of non-consensual sexual advances, requests for sexual favors, or other verbal or physical conduct on or off campus, when: (1) submission to such conduct is made either explicitly or implicitly a condition of an individual's employment or academic standing; or (2) submission to or rejection of such conduct is used as the basis for employment decisions or for academic evaluation, grades, or advancement; or (3) such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating or hostile academic or work environment. Sexual harassment may be found in a single episode, as well as in persistent behavior.

Questions or concerns regarding SUNY Cobleskill's nondiscrimination programs should be addressed to Nicole Field, Director of Personnel and Affirmative Action Ethics Officer; Office of Human Resources, Knapp Hall 123, Cobleskill, NY 12043; (518) 255-5514; email fieldnm@cobleskill.edu.

Student Title IX questions, concerns, or complaints should be addressed to Mary Elhakam, Title IX Coordinator, Knapp Hall 143, Cobleskill, NY 12043; (518) 255-5999; email elkaham@cobleskill.edu.

Residence Halls

The College has ten residence halls designed to accommodate between 150 and 231 students each. They house only full-time, degree-seeking students. All new students are obligated to a two-year campus residency; all transfer students are obligated to a one-year campus residency. All student rooms are wired for cable television and Internet access. Based upon cost and availability, rooms may be singles, doubles or triples. Residence hall accommodations are the property of the State University of New York, and are subject to the rules and regulations of the State University and the College.

SUNY Cobleskill Foundation

The SUNY Cobleskill Foundation exists to foster private-sector investment in SUNY Cobleskill's students, programs and facilities. The Foundation seeks and secures donations, bequests and other funds, which it invests with the goal of providing investment income to be used for the advancement of the College and its students. The SUNY Cobleskill Foundation board members include members of the local/regional community, as well as faculty, staff, students and college alumni from across the United States.

The SUNY Cobleskill Foundation provides financial assistance to students through its scholarship program; funding for faculty development, and educational programming enhancements. In addition, it provides leadership and direction for several fundraising initiatives including endowment generation for scholarships, endowed chairs, professorships, and many more. The College's "Heritage Society" is comprised of a dedicated group of SUNY Cobleskill supporters who have provided planned/estate gifts to continue the tradition of academic excellence at the College for generations to come.

SUNY Cobleskill Auxiliary Services, Inc.

The SUNY Cobleskill Auxiliary Services, Inc. (CAS) is a not-for-profit corporation that operates, manages and promotes college auxiliary services, including dining facilities, vending machines, residence hall laundry facilities, and the campus store. Membership of the CAS board includes members of the College's administration, faculty, students and the College Council. CAS awards supplementary grants to the College's offices and programs each year. Funding for these grants is derived from interest income generated by the investment portfolio.

SUNY Cobleskill Alumni Association

The SUNY Cobleskill Alumni Association is a not-for-profit corporation established in 1977. The Association boasts more than 35,000 alumni members. The Association connects the alumni to the College community and supports the overall mission to honor history, teach by doing, forge pathways for success, think globally and across disciplines, cultivate sustainability, embrace and support the community, and promote personal growth.

The purpose of the SUNY Cobleskill Alumni Association is to promote and enhance communication and fellowship among alumni, as well as to maintain and foster the loyalty and support of the College's alumni. The association works cooperatively with the College to effectively engage alumni and friends through its communications outreach and special events efforts. The Association promotes career development and placement opportunities for alumni as well as student support through connections to its network of alumni. The Association ultimately provides its alumni membership with a lifetime of connection to the College.

The Alumni Association is governed by a board of 20 directors, including student representation.

Abbreviations for Academic Buildings

ASA	Animal Science A/Canine Classroom
ASB	Animal Science B/Pig, Rabbit and Poultry Barn
ASC	Animal Science C/Small Animal Barn
ASD	Animal Science D/Canine Kennels
ASE	Animal Science E/Equine Classroom
ASF	Animal Science F/Equine Arena
AL	Alumni Hall
BH	Bouck Hall
CANR	Center for Agriculture & Natural Resources
CC	Child Care Center
CEST	Center for Environmental Science & Technology
CH	Champlin Hall
CM	Curtis-Mott Hall
DB	Dairy Barn
FH	Field House
FR	Frisbie Hall
HE	Home Economics
HO	Holmes Hall
KN	Kniskern House
LRC	Library
OG	Old Gym
PH	Prentice Hall
WA	Warner Hall
WH	Wheeler Hall
WHLA	Wheeler Hall Lab Addition

Course Prefix Key

AAMS	African American Studies
ACCT	Accounting
AGBU	Agricultural Business
AGED	Agricultural Education
AGEN	Agricultural Engineering
AGRN	Agronomy
AGSC	Agricultural Science
AMSL	American Sign Language
ANSC	Animal Science
ANTH	Anthropology
ARAB	Arabic
ARTS	Arts
BADM	Business Administration
BIOL	Biological Sciences
BIOT	Biotechnology
CAHT	Culinary Arts
CANI	Canine Training and Management
CHEM	Chemistry
CITA	Computer Information Technology
COMM	Communications
CYBR	Cybersecurity
ECHD	Early Childhood
ECON	Economics
EMSC	Emergency Medical Services
ENGL	English
ENGR	Engineering Science
ENHT	Environmental Health
ENVR	Environmental
FFCS	Foundations for College Success
FREN	French
FSMA	Financial Services Management
FWLD	Fisheries and Wildlife
GART	Graphic Arts & Design
GIST	Geographical Information Systems
GOVT	Government
HIST	History
HONR	Honors
HUMS	Humanities
INTR	Internship (Placeholder ONLY)
JOUR	Journalism
LANG	Language
MATH	Mathematics
MKHT	Marketing, Hospitality & Tourism
MUSC	Music
NAMS	Native American Studies
NTRN	Nutrition
ORHT	Ornamental Horticulture
PERS	Phys Education, Rec & Sports Studies
PHED	Physical Education
PHIL	Philosophy
PHYS	Physics
PSCI	Physical Sciences
PSYC	Psychology
RECM	Recreational Land Management
SABR	Study Abroad
SOSC	Sociology
SPAN	Spanish
SPIN	Sport Industry
SUST	Sustainability
XREG	Cross Registration

Family Educational Rights and Privacy Act of 1974 (Directory Information)

The Family Educational Rights and Privacy Act require colleges to inform parents and students of their rights under this act. An annual notice of these rights is published in several College publications, including the Student Handbook. On request, copies of this policy are available through the Registrar's Office.

SUNY Cobleskill and SUNY System Administration are deemed 'school officials' with 'legitimate educational interest' under FERPA. SUNY Cobleskill and SUNY System Administration share student record information regularly in support of student needs. Students personally identifiable information is protected within both entities and requires student authorization to share any non-directory information with a third party request.

SUNY Cobleskill has designated directory information, according to the Family Educational Rights and Privacy Act of 1974 as Amended, to be the student's:

- student name
- campus, local and home addresses
- phone number
- major
- department
- dates of attendance
- dates of graduation
- degrees awarded
- awards
- full-time/part-time status
- email address
- photo ID

This information can be released without written prior consent from the student. All other educational records will be released only under compliance with FERPA.

SUNY COBLESKILL AND THE SUNY BOARD OF TRUSTEES GENERAL EDUCATION REQUIREMENTS

The Trustees of the State University of New York have mandated that students show competency by taking credits in areas listed below in order to graduate from SUNY institutions. Students earning a BBA, BS, BT, an AA, or an AS degree must earn 30 credits of general education courses; and students earning an AAS degree must earn 20 credits of general education courses. All degrees, including AOS, must complete one course from each required skills areas. All students must also complete two core competencies – Critical Thinking and Reasoning and Information Literacy.

SUNY Cobleskill Trustee General Education Courses Fall 2025

REQUIRED SKILLS AREAS - must take one course from each area

Communication Written (COMW):
ENGL 101 Composition I
ENGL 102 Composition II

Communication Oral (COMO):
ENGL 101 Composition I
ENGL 111 Fundamentals of Speech Comm
ENGL 115 Diversity and Public Speaking

Diversity: Equity, Inclusion, and Social Justice (DVRS):
AGBU 230 Food Justice**
ANSC 411 Animal Science Ethics Seminar**
BIOL 305 Ethics in Science, Medicine & Tech
ECHD 251 Anti-Bias Strategies Human App
ENGL 115 Diversity and Public Speaking
ENGL 225 Multi-Cultural Literature
ENVR 399 Environmental Justice**
HUMS 215 Multicultural Cinema
PHIL 305 Ethics in Science, Medicine & Tech
PSYC 300 Intro to Community Psychology
SPIN 346 Gender and Sport

Mathematics (and Quantitative Reasoning) (MATH):
MATH 111 College Algebra
MATH 113 Mathematics of Finance
MATH 115 Liberal Arts Math
MATH 125 Statistics
MATH 131 Precalculus
MATH 231 Calculus

Natural Sciences (and Scientific Reasoning) (NSCI):
BIOL 101/101X Introduction to Biology
BIOL 103 Human Biology
BIOL 104/104X Prin of Animal Anat & Physiology
BIOL 105/105X Principles of Genetics
BIOL 111/111X Biology I
BIOL 112/112X Biology II
BIOL 116 Botany I
BIOL 117 Botany II
BIOL 131/131X Natural Hist of Vertebrates
BIOL 158/158X Human Anatomy and Physiology I
BIOL 159/159X Human Anatomy and Physiology II
BIOL 215 Aquatic Ecology
BIOL 305 Ethics in Science, Medicine & Tech
CHEM 101/101X Introductory Chemistry
CHEM 110 Forensic Science
CHEM 111/111X General Chemistry I
PHIL 305 Ethics in Science, Medicine & Tech
PHYS 101/101X Principles of Physics I
PHYS 102/102X Principles of Physics II
PHYS 111/111X College Physics I
PSCI 101 Astronomy
PSCI 102 Physical Geology
PSCI 105 Environmental Science and Tech

FLEXIBLE SKILLS AREAS

Humanities (HUMN):
ARTS 124 History of Art I
ARTS 125 History of Art II
ARTS 300 History of American Art
BIOL 305 Ethics in Science, Medicine & Tech
COMM 108 Introduction to Mass Media
ENGL 121 Introduction to Literature
ENGL 151 Introduction to Drama
ENGL 203 Intro to Creative Writing
ENGL 221 Postmodern Literature
ENGL 225 Multi-Cultural Literature
ENGL 241 Short Story
ENGL 320 Nature Writing
HUMS 101 Introduction to Humanities
HUMS 210 Cinema and Society
HUMS 215 Multicultural Cinema
HUMS 243 Children's Literature
MUSC 121 Introduction to Music
MUSC 223 American Music
PHIL 101 Introduction to Philosophy
PHIL 102 Introduction to Asian Philosophy
PHIL 305 Ethics in Science, Medicine & Tech

Social Sciences (SOCS):
ANTH 114 Physical Anthropology
ANTH 115 Cultural Anthropology
ANTH 200 Introduction to Archeology
ECON 123 Micro-Economics
ECON 124 Macro-Economics
GOVT 141 American Government
PSYC 111 General Psychology
SOSC 111 Introduction to Sociology
SUST 101 Introduction to Sustainability

The Arts (ARTS):
ARTS 111 Design I**
ARTS 114 Drawing I**
ARTS 300 History of American Art
COMM 210 Single Camera Video Production**
ENGL 203 Intro to Creative Writing
HUMS 210 Cinema and Society
MUSC 111 College Choir**
MUSC 121 Introduction to Music
MUSC 132 Jazz Band**
MUSC 133 Concert Band**
MUSC 223 American Music

U.S. History and Civic Engagement (USCV):
HIST 121 History of the United States I
HIST 122 History of the United States II
SPIN 220 History of American Sport

World History and Global Awareness (GLBL):
HIST 103 History of World Civilization I
HIST 104 History of World Civilization II
HIST 205 Latin American Societies & Civ

World Languages (WLNG):
AMSL 145 American Sign Language I
AMSL 146 American Sign Language II
FREN 101 Beginning French I
FREN 102 Beginning French II
SPAN 102 Beginning Spanish II

Does not satisfy Liberal Arts and Sciences requirements

Placement Policies

Mathematics Placement

(Rev. 3, dated 4/21/17)

Mathematics Background	Recommended First Course
4 years of math including: Algebra, Geometry, Algebra II & Trigonometry and Precalculus with an average ≥ 80	MATH 231
4 years of math including: Algebra, Geometry, Algebra II & Trigonometry and Precalculus with an average < 80	MATH 125 or MATH 131 (depending on major- see next page)
3 years of math including: Algebra, Geometry and Algebra II & Trigonometry with an average ≥ 80	MATH 125 or MATH 131 (depending on major- see next page)
3 years of math including: Algebra, Geometry and Algebra II & Trigonometry with an average < 80	MATH 111 or MATH 112 or MATH 125 (if required for major – see next page)
2 years of math including: Algebra and Geometry with an average ≥ 80	MATH 111 or MATH 113 or MATH 115 (depending on major – see next page)
0-2 years of math including any of the following: Algebra and Geometry with an average< 80 OR Technical Math, Applied Math, or any other course outside of the NYS sequence	MATH 101

Algebra = Course 1
Geometry = Course II
Alg. 2 & Trig. = Course III
Pre-calculus is a.k.a. Math 12

List of majors that require Math 125

Associate in Applied Science- Fisheries and Wildlife Technology
Associate in Arts- Social Science, Psychology Advisement Track
Associate in Science- Business Administration
Associate in Science- Communications (Math 125 or Math 111)
Associate in Science- Health Sciences
Associate in Science- Science

Bachelor of Science- Ag Business Mgmt
Bachelor of Science- Animal Science
Bachelor of Science- Applied Psychology
Bachelor of Science- Biotechnology
Bachelor of Science- Fermentation Science (Math 125 & 225)
Bachelor of Technology- Environmental Management (Math 125 & 225)
Bachelor of Technology- Fisheries and Aquaculture (Math 125 & 225)
Bachelor of Technology- Information Technology
Bachelor of Technology- Wildlife Management (Math 125 & 225)
Bachelor of Business Administration- Business Administration
Bachelor of Business Administration- Financial Services
Bachelor of Business Administration- Culinary Arts

General Notes

(1) MATH 113 and MATH 115 satisfy the Mathematical General Education requirement. Students in majors that terminate at MATH 111 can just as easily be placed into MATH 113 Mathematics of Finance or MATH 115 Liberal Arts Mathematics.

(2) Statistics (Math 125) is a viable placement option for students who could be placed either way (111 or 125). Consider their major (list on left) in making that determination.

(3) Math 112 (College Algebra & Trigonometry) is a good option for stronger students in lieu of Math 111, especially if they are continuing to pre-calculus here or planning to take certain graduate programs that require the calculus sequence (F&W, Business, Animal Science (Pre-Vet), etc.

(4) Math sections can be offered in different formats such as completely online (OL); computer-based learning (CB) in which students interact with software in the classroom; hybrid formats (HY) which are partially in class and partially online. Make sure students know about these different formats. The designations are listed next to courses on the master schedule.

English Placement

Because employers are emphasizing communication skills and because the SUNY Cobleskill faculty have adopted communication skills as an overarching student outcome, we have revised the placement procedure in ENGL 100 and ENGL 101.

Students are placed in ENGL 101 or ENGL 100 based on a number of measures: 1) overall high school grade point average, 2) SAT Verbal or ACT English scores, and 3) Regents English scores. These most clearly correlate with the likelihood of success based on reviews of past placement and end of the semester grades. Students with a grade point average above 79, SAT Verbal score above 450 or ACT English score above 18, and Regents English score above 79 have been placed in ENGL 101. Students who have successfully taken a college level English course and received credit may be placed directly into ENGL 102.

During the first week of classes before the end of add/drop, placement will be refined by a diagnostic tool such as a writing sample.

Placement	Measure	Recommended Parameters
English 100	SAT Verbal or ACT English	Less than or equal to **450** Less than or equal to **18**
	GPA	Less than or equal to **79**
	English Regents	Less than or equal to **75**
English 101	SAT Verbal or ACT English	Above **450** (451+) Above **18** (19+)
	GPA	Above **79** (80+)
	English Regents	Above **75** (76+)
English 102	College/ AP English Course	Only if a student has successfully taken a college level course and received college credit

Internships

Internships are structured, educational work experiences in a student's career field of interest. The internship experience provides the student with an opportunity to apply their academic knowledge in a hands-on, real world setting and allows the student to explore a specific career field that they are interested in pursuing.

All enrolled students at SUNY Cobleskill are encouraged to seek internship opportunities and participate in many internship experiences during their college career. The experience, professional contacts and references gained help to prepare students for entering the world of work after graduation.

Internships come in many different shapes and sizes. Some are credit bearing, some are not. Some are paid, others are not. Some internships are summer experiences while others may be during college breaks or the academic semester.

There is a capstone, credit bearing internship requirement of 15 weeks for most of the baccalaureate degree programs offered at Cobleskill.

Please go to https://www.cobleskill.edu/academics/internships/index.aspx for further information.

Honors Program

Overview

The Honors program provides high achieving students with opportunities to grow skills for lifelong learning, career success, and service leadership.

Student Learning Objectives

1. Advance individualized and collaborative approaches to research and project-based applied learning
2. Cultivate professional development alongside faculty, staff, and fellow Honors students
3. Foster awareness of personal growth and its relation to community engagement, locally and globally
4. Expand interdisciplinary learning to enhance critical thinking skills

Requirements

Admission – In order to be accepted into the Honors program:

- High school student requirements- 90 or better high school average and scores of 1200 or higher SAT or 27 or higher ACT
- College admission and program continuance- 3.25 cumulative GPA
  - Students who fall below the 3.25 will have a "Grace Period" of one semester in order to academically recover to the minimum GPA requirement. Inability to raise to a cumulative GPA of 3.25 will result in dismissal from the Honors program.

Curriculum Requirements:

- 18 credits for Baccalaureate
- 9 credits for Associate
- 12 credits for transfer students with 30 credits or more
- All students who graduate with Honors must partake in a capstone project by completing the corresponding HONR 295 or HONR 495, or complete an Honors designation on the capstone thesis course in their degree program. Participation in thesis projects need to be in conjunction with the Honors Director and program faculty member(s).

Coursework:

HONR 201- Honors Seminar- 1 credit

-The current one credit course taught by various faculty on a variety of interdisciplinary topics. The course title will be reflected with each course taught, and will be marked as a repeatable course thus eliminating various CRNs and sections.

(Major specific) 290-Special Projects- 1-2 credits

-Acts as a degree completion credit bearing option for students who have major-field electives in which Honors projects can satisfy degree requirements. This allows students to create and implement projects within the field that aren't linked specifically to a curriculum topic such as an Honors Designated Course project. It gives them freedom to use concepts and ideas from previous coursework to build Honors projects. These courses can be identified as Honors by staff from the Registrar's Office.

Honors Designated Course

-Honors students complete an additional 15-20 hours on a project that is connected to the learning objectives in a course that the student is currently enrolled in. When the project is completed, the student will earn an Honors designation on the course to indicated that it was an Honors course and it will be reflected in the transcript. This is not an additional degree completion credit amount, but will count towards the Honors credit total needed. This is also acceptable for students in programs that already have a required capstone project. May not exceed 4 credits.

Capstones existing within programs, ex. (FWLD 440/441) can use used like an Honors Designated Course in order to allow the student to conduct the capstone research for the major requirement, but to build further upon the research to take it to the next level.

HONR 295/495- Capstone- 3 credits

-The culminating project or thesis. It still includes research, writing, and presenting as major components.

Key to Course Sequencing

General Education Knowledge and Skills Areas

SUNY mandated **General Education Knowledge and Skills Areas** are required of all degrees. More information can be found on page 12 of the catalog which specifies the requirements for each degree type. Students should review their individual degree audit for clarity on what courses are required to meet the General Education Course Requirements. Following each course description in this catalog, if Gen Ed followed by a category is listed, the course meets one of the areas specified for the General Education Curriculum.

General Education Core Competencies

SUNY mandated **General Education Core Competencies** are required of all degrees. Following each course description in this catalog, if a competency is listed, the course meets one of the areas specified for the General Education Core Competencies.

Liberal Arts and Sciences Course Requirements

Each program has **Liberal Arts and Sciences (LAS) Course Requirements**. Please review your individual degree audit for clarity on what courses are required to meet the LAS. Following each course description in this catalog, if you see Liberal Arts and Sciences Elective or Liberal Arts and Sciences Upper-Level, these courses meet the LAS requirement.

General Elective Requirements

Where General Electives is stated, any course not already satisfying a degree requirement may be utilized.

Mathematics Competency

Mathematics competency is required of all A.A., A.S., A.A.S., and Bachelor degree candidates. More information can be found in Academic Policy 11.04.

Foundations for College Success

The Foundations for College Success course focuses on first-year students as they transition from their high school or post high school experience to the college experience and is required of all students.

Applied Learning

Applied learning extends theory into practice. At Cobleskill all students complete an applied learning competency whether through field study, internship, lab work, clinical practicum, research or international travel experiences. Courses inclusive of an applied learning experiences are identified in the course description. Any courses, whether major field, Liberal Arts and Sciences or general education can have applied learning experiences as part of the course content.

Bachelor's Degree Programs

- Agricultural Business Management BS
- Agricultural Business Management BT
- Agricultural Communications
- Agricultural Equipment Technology
- Animal Science BS
- Animal Science BT
- Applied Fermentation
- Applied Psychology
- Biotechnology
- Business Administration
- Canine Training & Management
- Communication in Technology
- Culinary Arts Management
- Cybersecurity
- Early Childhood Studies: Birth to Age 5
- Environmental Management
- Fisheries & Aquaculture
- Food Systems & Technology
- Graphic Design Technology
- Information Technology
- Landscape Contracting
- Plant Science
- Therapeutic Horsemanship
- Wildlife Management

Minors for Bachelor's Degree Programs

- Accessible Instruction
- Agricultural Education
- Art Studies
- Bioinformatics
- Biotechnology
- Cannabis Science
- Controlled Environmental Agriculture
- Chemistry
- Digital Media
- English – Literature and Writing: Literature Focus
- English – Literature and Writing: Writing Focus
- Entrepreneurship
- Equine Assisted Services
- Equine Management
- Histotechnology
- Human Resources Management
- Landscape Management
- Leadership
- Management
- Marketing
- Precision Agriculture
- Sport and Exercise
- Sports Management
- Supply Chain Management
- Sustainability
- Turfgrass Management
- Web Development

Associate Degree Programs

- Agricultural Business
- Agricultural Engineering Technology: Agricultural Power Machinery
- Agricultural Science
- Agriculture: Animal Industry
- Animal Science: Beef & Livestock Studies
- Animal Science: Dairy Production & Management
- Animal Science: Equine Studies
- Biological Technology
- Business-Business Administration (AAS)
- Business-Business Administration (AS)
- Communications
- Computer Information Systems
- Culinary Arts
- Diesel Technology
- Early Childhood
- Environmental Studies
- Fisheries and Wildlife Technology
- Graphic Design Technology
- Health Science Studies
- Histotechnician
- Horticulture
- Landscape Development
- Liberal Arts & Science: Social Science
- Paramedic (AAS)

Certificate Programs

- Agricultural Mechanics
- Child Care Practice
- Farm and Food Entrepreneurship
- Histotechnician (Certificate)
- Paramedic (Certificate)
- Supply Chain Management

Agricultural Business Management (B.S.) (Curriculum Code – 0895/HEGIS - 0112)

Bachelor of Science

Overview

The Bachelor of Science in Agribusiness Management equips students with the knowledge and skills to thrive in a rapidly evolving global agricultural industry. This academically rigorous program blends cutting-edge agribusiness management principles with a strong foundation in Liberal Arts and Sciences, preparing students to become leaders and innovators in the field.

Students will learn to integrate sustainable practices, harness data-driven decision-making, develop strategies for global markets, and embrace entrepreneurial thinking to drive industry advancement. The program emphasizes ethical leadership and social responsibility, ensuring graduates are prepared to manage agribusinesses effectively and sustainably in a complex, interconnected world.

Graduates are well-positioned for leadership roles in corporate agribusinesses, innovative startups, or advanced studies, making a lasting impact on the future of agriculture.

Student Learning Outcomes

- Understand and explain the principles of sustainability in agricultural business management and their importance in ensuring long-term economic and environmental viability.
- Apply data analytics and financial tools to gather and analyze information, using this data to make informed decisions that enhance the efficiency and profitability of agribusiness operations.
- Analyze and evaluate domestic and international agribusiness markets, considering trade policies, market trends, and cultural differences, to develop strategies that navigate these markets effectively.
- Identify and create new business opportunities in the agricultural sector by leveraging innovative solutions and entrepreneurial thinking to drive industry advancement, cultivating intellectual curiosity and the innovative mindset needed for leadership roles.
- Demonstrate and model leadership skills and ethical decision-making in managing agribusiness teams and operations, fostering a culture of integrity and social responsibility.
- Master and integrate key agribusiness management principles to achieve a competitive advantage in the industry, equipping students with the comprehensive knowledge and intellectual agility required for managerial success or advanced academic endeavors.

Major Field Requirements:	**46**
AGBU 104- Intro to Ag Microeconomics	3
AGBU 121- Marketing Ag Products	3
AGBU 141/141X- Ag Production Management	3
AGBU 207/207X- Ag Business Operations	4
AGBU 242/242X- Ag Business Financial Management	3
AGBU or AGED 300/400-Level Major Electives	27
ACCT 101- Financial Accounting	3
Technical Electives:	**12**
ACCT, AGBU, AGED, AGEN, AGRN, AGSC, ANSC, BADM, CITA, ENHT, FWLD, ORHT, RECM	9
Upper-Level ACCT, AGBU, AGED, AGEN, AGRN, AGSC, ANSC, BADM, CITA, ENHT, FWLD, ORHT, RECM	3

Liberal Arts & Sciences:	**59**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
MATH 111 or higher	6
Lab Science	6
Lower-Level (100/200-Level) Liberal Arts & Science	26
Upper-Level (300/400-Level)	15
General Electives:	**3**
PHED	1
FFCS 101- Foundation for College Success	1
General Elective	1
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Business Management (B.S.) (Curriculum Code – 0895/HEGIS - 0112)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 104	Intro to Ag Microeconomics	3
AGBU 121	Marketing Ag Products	3
ENGL 101	Composition I	3
MATH 111	College Algebra	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGBU 141/141X	Ag Production Mgmt	3
ACCT 101	Financial Accounting	3
Liberal Arts and Sciences		6
Lab Science		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 207/207X	Ag Business Operations	4
AGBU 242/242X	Ag Business Financial Mgmt	3
Liberal Arts and Sciences		9

Year 2/SPRING	
Code/Name	**Credits**
AGBU/AGED 300/400 Major Electives	9
Liberal Arts and Sciences	3
Lab Science	3

Year 3/FALL		
Code/Name		**Credits**
AGBU/AGED 300/400 Major Electives		6
Technical Elective		3
MATH 125	Statistics	3
Liberal Arts and Sciences		3

Year 3/SPRING		
Code/Name		**Credits**
AGBU/AGED 300/400 Major Electives		3
ENGL 102	Composition II	3
Technical Elective		3
Liberal Arts and Sciences		5
General Electives		1

Year 4/FALL	
Code/Name	**Credits**
AGBU/AGED 300/400 Major Electives	3
Anything from PHED	1
Technical Electives	3
Upper-Level Liberal Arts and Sciences	9

Year 4/SPRING	
Code/Name	**Credits**
AGBU/AGED 300/400 Major Electives	6
Upper-Level Liberal Arts and Sciences	6
Upper-Level Technical Elective	3

Agricultural Business Management (B.T.) (Curriculum Code – 0895/HEGIS - 0112)

Bachelor of Technology

Overview

Agricultural Business or "agribusiness" encompasses a wide range of functions required for successful modern agriculture. These functions include management, providing services and supplies to farmers, farm production of food and fiber, and processing and distributing products for consumers in the United States and beyond. Ever evolving agricultural opportunities and challenges require skilled individuals to meet the growing needs for agribusiness success.

Students in the Agricultural Business Bachelor of Technology program will learn and practice skills directly related to key drivers of the farm and agribusiness sectors. Management functions will be incorporated into coursework including the gathering, organization, analysis and interpretation of production and financial information. Students will also be exposed to economic concepts that inform sound decision making at the farm and market levels, and they will be exposed to and use contemporary agricultural technologies and software to provide real-world experience. The program ultimately prepares graduates for successful careers in agriculture.

Student Learning Outcomes

- Demonstrate skills required for managing and starting farms and agribusiness enterprises with a focus on application of contemporary agricultural technologies and farm management software to improve farm and agribusiness management decision making.
- Understand the principles of agricultural economics to analyze market trends, supply and demand, and pricing strategies specific to the agricultural industry.
- Demonstrate the ability to communicate effectively in both verbal and written forms as applicable to agriculture.
- Develop an awareness of teamwork, professional and interpersonal development and leadership.
- Develop practical skills, agribusiness work experience, industry knowledge, and professional competencies in agribusiness through hands-on experience in a real-world setting.

Major Field Requirements:	**56**
AGBU 104- Intro to Ag Microeconomics	3
AGBU 121- Marketing Ag Products	3
AGBU 141/141X- Ag Production Management	3
AGBU 207/207X- Ag Business Operations	4
AGBU 242/242X- Ag Business Financial Mgmt	3
AGBU/AGED 300/400-Level Major Electives	24
ACCT 101- Financial Accounting	3
AGBU 380- Internship Orientation Ag Bus	1
AGBU 450- Internship in Ag Business	12
Technical Electives:	**26**
AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT, RECM	20
Upper-Level ACCT, AGBU, AGED, AGEN, AGRN, AGSC, ANSC, BADM, CITA, ENHT, FWLD, ORHT, RECM	6

Liberal Arts & Sciences:	**33**
ENGL 101 or ENGL 102- Composition I or II	3
MATH 111 or higher	3
Lab Science	3
Lower-Level (100/200-Level) Liberal Arts & Science	21
Upper-Level (300/400-Level)	3
General Electives:	**5**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	3
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Business Management (B.T.) (Curriculum Code – 0895/HEGIS - 0112)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 104	Intro to Ag Microeconomics	3
AGBU 121	Marketing Ag Products	3
ENGL 101	Composition I	3
MATH by Placement		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGBU 141/141X	Ag Production Mgmt	3
ACCT 101	Financial Accounting	3
Technical Electives		3
Lab Science		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 242/242X	Ag Business Financial Mgmt	3
AGBU 207/207X	Ag Business Operations	4
Technical Electives		3
Liberal Arts and Sciences		6

Year 2/SPRING	
Code/Name	**Credits**
AGBU/AGED 300/400 Major Electives	9
Technical Electives	3
Liberal Arts and Sciences	3
General Elective	3

Year 3/FALL	
Code/Name	**Credits**
AGBU/AGED 300/400 Major Electives	6
Technical Electives	6
Liberal Arts and Sciences	3

Year 3/SPRING	
Code/Name	**Credits**
AGBU/AGED 300/400 Major Electives	3
Technical Electives	3
300/400-Level Technical Elective	3
Liberal Arts and Sciences	6

Year 4/FALL		
Code/Name		**Credits**
AGBU 380	Internship Orientation Ag Business	1
AGBU/AGED 300/400 Major Elective		6
Technical Electives		2
300/400-Level Technical Electives		3
300/400-Level Liberal Arts and Sciences		3
Anything from PHED		1

Year 4/SPRING		
Code/Name		**Credits**
AGBU 450	Internship in Ag Business	12

Agricultural Communications (B.S.) (Curriculum Code – 3170/HEGIS - 0101)

Bachelor of Science

Overview

The Bachelor of Science degree in Agricultural Communications at SUNY Cobleskill prepares students for a wide variety of professions in the agricultural and food systems industry. Students will develop an understanding and appreciation for agriculture, apply communications and graphic arts skills, while broadening their education through a significant component of Liberal Arts and Sciences. The program, which combines technical skills in graphic design with foundational and advanced courses in communications and agriculture, is comprised of digital media, web design, interpersonal and intercultural communications, journalism, food systems, marketing, promotions and sales of agricultural products along with agriculture policy, law, ethics and leadership. It provides flexibility in the selection of upper-level courses for those who wish to focus on one specific field within the program. Graduates will be positioned for employment at print and digital media agencies, food-centric non-profit entities, and government agencies. They are well suited for positions at a host of agricultural businesses with public relations, marketing and communication needs in social media, radio, video production, and print.

Student Learning Outcomes

- Students will acquire a working knowledge of agribusiness principles, a basic understanding of the American agricultural system, and the roles these play in the global food economy.
- Students will exhibit technical skills in graphic arts, an advanced set of communication skills, and the soft/employability skills required for success in a contemporary, professional work setting.
- Students will demonstrate an understanding of professional and ethical behavior.
- Students will be able to demonstrate critical thinking skills by dissecting and disseminating information relevant to food producers and consumers.

Major Field Requirements:	**42**
AGBU 104- Intro to Ag Microeconomics	3
Or ECON 123- Micro-economics	
Or ECON 124- Macro-economics	
AGBU 121- Marketing Ag Products	3
AGBU 160- Introduction to Food Systems	3
AGBU 328- Agri Sales and Promotion	3
Or BADM 311- E-Marketing	
AGBU 340- Food System Regulation	3
Or AGBU 385- Agricultural Retail Management	
AGBU 420- Ag & Environmental Policy	3
AGBU 430- Agvocacy	3
AGBU 441- Agricultural Law	3
AGBU 300/400-Level Major Elective	3
AGED 411- Ag Ed/Community Leadership	3
BADM 145- Business Communications	3
Or ENGL 111- Fund of Speech Communications	
GART 112- Digital Media	3
GART 151- Typography and Layout	3
GART 251- Computer Graphics I	3
Or GART 265- Web Design	
Or GART 270- Digital Imaging	

Technical Electives:	**6**
COMM 210- Single Camera Video Production	3
Any course from: AGBU, AGED, AGEN, AGRN, AGSC, ANSC, FWLD, ORHT, RECM	3

Liberal Arts & Sciences:	**66**
COMM 108- Introduction to Mass Media	3
COMM 120- Interpersonal Communication	3
COMM 220- Intercultural Communication	3
ENGL 101- Composition I	3
JOUR 202- Journalism Newswriting/Report	3
MATH 125- Statistics	3
PHIL 320- Ethics and Management	3
Upper-Level COMM Courses (300-499)	9
Upper-Level JOUR Courses (300-499)	6
Upper-Level Liberal Arts & Science Courses (300-499)	6
Additional Liberal Arts & Science Electives	24

General Electives:	**6**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	4

Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Communications (B.S.) (Curriculum Code – 3170/HEGIS - 0101)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 104 **Or** ECON 123 **Or** ECON 124	Intro to Ag Microeconomics **Or** Micro-economics **Or** Macro-economics	3
AGBU 121	Marketing Ag Products	3
ENGL 101	Composition I	3
GART 112	Digital Media	3
FFCS 101	Foundation for College Success	1
Anything from PHED		1

Year 1/SPRING		
Code/Name		**Credits**
BADM 145 **Or** ENGL 111	Business Communications **Or** Fund of Speech Communications	3
COMM 108	Introduction to Mass Media	3
GART 151	Typography and Layout	3
Liberal Arts and Sciences		3
MATH 111 or Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 160	Introduction to Food Systems	3
COMM 120	Interpersonal Communication	3
MATH 125	Statistics	3
Technical Elective Ag Course		3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
COMM 210	Single Camera Video Production	3
GART 251	Computer Graphics I	3
JOUR 202	Journalism Newswriting/Report	3
Liberal Arts and Sciences		3
General Elective		3

Year 3/FALL		
Code/Name		**Credits**
AGBU 328 **Or** BADM 311	Agri Sales and Promotion **Or** E-Marketing	3
COMM 220	Intercultural Communication	3
PHIL 320	Ethics and Management	3
Upper-Level COMM Course		3
Liberal Arts and Sciences		3

Year 3/SPRING		
Code/Name		**Credits**
AGBU 340 **Or** AGBU 385	Food System Regulation **Or** Agricultural Retail Management	3
AGBU 300/400-Level Major Elective		3
Upper-Level COMM Course		3
Upper-Level JOUR Course		3
Liberal Arts and Sciences		3

Year 4/FALL		
Code/Name		**Credits**
AGBU 420	Ag & Environmental Policy	3
AGED 411	Ag Ed/Community Leadership	3
Upper-Level COMM Course		3
Upper-Level JOUR Course		3
Liberal Arts and Sciences		3

Year 4/SPRING		
Code/Name		**Credits**
AGBU 430	Agvocacy	3
AGBU 441	Agricultural Law	3
Liberal Arts and Sciences		3
300/400-Level Liberal Arts and Sciences		6

Agricultural Equipment Technology (B.T.) (Curriculum Code – 0898/HEGIS – 0116)

Bachelor of Technology

Overview

Agricultural Equipment Technology graduates are prepared to maintain and manage complex systems used in modern agriculture and related industries. Graduates achieve excellent career placement and command significant salaries. Coursework emphasizes understanding, analysis and diagnosis of mechanical, electrical and hydraulic systems found on modern equipment along with, business and management skills, communications and foundational sciences. Classes provide students with a solid foundation in both practical and theoretical subjects, which prepares them for a wide range of technical and managerial careers. SUNY Cobleskill graduates obtain positions in many industries, including agriculture, manufacturing, engineering, equipment retailing and energy. Students work closely with their advisor and develop an individual program of study, which includes a supervised internship experience matching their career interests. Real world experiences supplement and enhance the student's technical background and expand career opportunities. Students are encouraged to take business courses to prepare for managerial positions in the agricultural equipment field.

Student Learning Outcomes

- Students will develop a strong foundation of technical skills that will be used to diagnose various system problems commonly found on off-road equipment and recommend a set of possible solutions.
- Students will gain the ability to effectively use computer technology, software applications, and diagnostic service programs that have become commonplace in the equipment industry.
- Students will develop the skills necessary to effectively communicate their ideas in both a written and an oral method of presentation.
- Students will be expected to develop a high level of ethical and professional standards, therefore improving future employability.
- Students will utilize their understanding of business and industry to make sound business decisions that will allow them to function effectively in an ever-changing global economy.

Major Field Requirements:	**65**
AGEN 132/132X- Fundamentals of Diesel Eng	3
AGEN 151/151X- Basic Welding	2
AGEN 166/166X- Agricultural Mechanics	2
AGEN 170/170X- Basic Hydraulics	3
AGEN 231/231X- Electrical/onic Sys Diag	3
AGEN 273/273X- Hydraulic and Hydro Diag	3
AGEN 331/331X- Ag Equip Elec Hydraulic Ctrl Sys	4
AGEN 332/332X- Engine Dynamics Seminar	4
AGEN 333/333X- Equipment Test & Development	4
AGEN 380- Career Preparation in Ag Eng	2
AGEN 480- Ag Equip Tech Seminar	2
ACCT, AGBU, BADM or AGEN 285	10
ACCT, AGBU, AGED, AGEN, AGRN, AGSC, ANSC, BADM, CITA, ENVR, GIST, ORHT, PSCI 300-499	8
AGEN 460- Internship Ag Equipment Tech Minimum of 4 credits in AGEN 460 is required **And** additional upper-level Major Technical Electives, if needed, to total 15 credits	15
Major Technical Electives:	**18**
ACCT, AGBU, AGED, AGEN, AGRN, AGSC, ANSC, BADM, CHEM, CITA, CYBR, ENHT, ENVR, FWLD, GIST, ORHT, PSCI	

Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
COMM 301- Technical Communications	3
MATH 111, MATH 112 or MATH 125 (or higher)	3
PHYS 101/101X- Principles of Physics I	4
PHYS 102/102X- Principles of Physics II **Or** PHYS 111/111X- College Physics I	4
PHED 151	1
Upper-Level Liberal Arts (300-499)	3
Additional Liberal Arts and Sciences	9
General Electives	**7**
FFCS 101- Foundation for College Success	1
General Electives	6
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Equipment Technology (B.T.) (Curriculum Code – 0898/HEGIS – 0116)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
Major Technical Elective		3
ENGL 101	Composition I	3
AGEN 166	Agricultural Mechanics	1
AGEN 166X	Agricultural Mechanics Lab	1
AGEN 170	Basic Hydraulics	2
AGEN 170X	Basic Hydraulics Lab	1
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 132	Fundamentals of Diesel Engines	2
AGEN 132X	Fundamentals of Diesel Eng Lab	1
AGEN 151	Basic Welding	1
AGEN 151X	Basic Welding Lab	1
PHYS 101	Principles of Physics I	3
PHYS 101X	Principles of Physics I Lab	1
Major Technical Elective		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGEN 231	Electrical/onic Sys Diagnosis	2
AGEN 231X	Electrical/onic Sys Diagnosis Lab	1
Anything from ACCT, BADM, AGBU or AGEN 285		3
Major Technical Elective		6
MATH 111, 112, or 125 (or higher)		3

Year 2/SPRING		
Code/Name		**Credits**
AGEN 273	Hydraulic and Hydro Diagnostics	2
AGEN 273X	Hydraulic and Hydro Diag Lab	1
Major Technical Electives		6
Anything from ACCT, BADM, AGBU, or AGEN 285		3
Liberal Arts and Sciences		3

Year 3/FALL		
Code/Name		**Credits**
AGEN 331	Ag Enq Elec Hydrlc Ctrl Sys I	2
AGEN 331X	Ag Enq Elec Hydrlc Ctrl Sys Lab	2
PHYS 102	Principles of Physics II	3
PHYS 102X	Principles of Physics II Lab	1
AGEN 380	Career Preparation in Ag Eng	2
PHED 151	Wellness	1
Liberal Arts and Sciences 300/400-Level		3

Year 3/SPRING		
Code/Name		**Credits**
AGEN 332	Engine Dynamics Seminar I	2
AGEN 332X	Engine Dynamics Seminar Lab	2
AGEN 333	Equipment Test & Development	2
AGEN 333X	Equipment Testing & Devel Lab	2
COMM 301	Technical Communication	3
AGEN 480	Ag Equip Tech Seminar	2
Upper-Level Major Technical Elective		3

Year 4/FALL	
Code/Name	**Credits**
Upper-Level Major Technical Elective	5
Anything from ACCT, AGBU, BADM, or AGEN 285	4
General Elective	6

Year 4/SPRING	
Code/Name	**Credits**
AGEN 460 and/or Upper-Level Major Technical Electives	15

Animal Science (B.S.) (Curriculum Code – 0896/HEGIS - 0104)

Bachelor of Science

Overview

The Bachelor of Science degree in Animal Science provides the academic background necessary for entrance into advanced degree programs and positions in today's demanding job market. The program offers the lab science and animal science coursework and rigor to enter masters and doctoral programs in animal science as well as the coursework necessary to apply to veterinary medicine programs. **Please visit SUNY Cobleskill's grad school page to review detailed information about our Vet School agreements:**
http://www.cobleskill.edu/academics/gradschool/index.aspx

Cobleskill offers an appealing small college setting with strong Animal Science and Natural Science departments to support the student during their education. The college maintains herds of horses, dairy and beef. Other livestock housed on the college farm include swine, poultry, sheep, and meat goats. Modern chemistry and biology laboratories give students additional valuable hands-on experiences.

Career opportunities in the animal sciences are promising. Animal agriculture is the largest component of agriculture in the northeast United States. Both the US Department of Agriculture and the US Bureau of Labor Statistics predict the number of people employed in the life sciences to continue to increase. Available positions will be greater than the number of qualified graduates. Opportunities include positions in scientific research and development, pharmaceutical, biotechnology, nutrition, education, veterinary medicine, and government and international agencies. Management and consulting positions offer additional career opportunities. Students with bachelor degrees will meet some of the needs but there will be even better opportunities for those with master's and Ph.D. degrees.

Student Learning Outcomes

- Students are capable of gathering relevant information and presenting it in oral and written form.
- Students will demonstrate effectiveness in team activities.
- Students will possess the ability to analyze problems, critically evaluate information and formulate solutions within both an academic and workplace environment.

Major Field Requirements:	**22**
ANSC 111/111X- Introduction to Animal Science	3
ANSC 122/122X- Feeds and Feeding	4
ANSC 300- Scientific Research Inquiry	2
ANSC 352/352X- Animal Health	3
ANSC 400- Farm Animal Reproduction	4
ANSC 404- Applied Animal Anatomy & Physiology	3
BIOL 104/104X- Prin Animal Anatomy & Physiology	3
Technical Electives:	**27**
Lower-Level AGBU, AGED, AGRN, AGSC, ANSC, BIOL, CHEM, ENVR, ORHT, PHYS	9
Upper-Level AGBU, AGED, AGSC, ANSC, BIOL, CHEM, ENVR, ORHT	18

Liberal Arts & Sciences:	**65**
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
BIOL 219/219X- Microbiology	4
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
CHEM 231/231X- Organic Chemistry I	5
ENGL 101- Composition I	3
ENGL 300/400 Level	3
Or COMM 301 -Technical Communications	
MATH 111- College Algebra (or higher)	3
MATH 125- Statistics	3
PHYS 111/111- College Physics I	4
Or PHYS 211/211X- Calculus Physics	
Upper-Level Liberal Arts and Sciences	12
Additional Liberal Arts and Sciences	12
General Electives	**10**
General Electives	9
PHED	1
Total Credits	**124**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Animal Science (B.S.) (Curriculum Code – 0896/HEGIS - 0104)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
ANSC 111	Intro to Animal Science	2
ANSC 111X	Intro to Animal Science Lab	1
MATH 111 or higher	College Algebra (or higher)	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
BIOL 112	Biology II	3
BIOL 112X	Biology II Lab	1
ANSC 122/122X	Feeds & Feeding	4
ENGL 101	Composition I	3
Liberal Arts and Science		3

Year 2/FALL		
Code/Name		**Credits**
CHEM 231	Organic Chemistry I	3
CHEM 231X	Organic Chemistry I Lab	2
BIOL 104/104X	Prin Animal Anatomy/Physiology	3
BIOL 219	Microbiology	3
BIOL 219X	Microbiology Lab	1
Liberal Arts and Science or General Elective		3

Year 2/SPRING		
Code/Name		**Credits**
Lower-Level Electives from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT, PHYS		6
MATH 125	Statistics	3
Liberal Arts and Sciences		3
PHED		1
General Electives		3

Year 3/FALL		
Code/Name		**Credits**
Technical Electives Lower-Level from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT, PHYS		3
ENGL 300/400 Or COMM 301	English 300/400 level **or** Technical Communications	3
PHYS 111/111X **or** PHYS 211/211X	College Physics I **or** Calculus Physics I	4
Technical Electives Upper-Level from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT		3
Liberal Arts and Sciences or General Electives		3

Year 3/SPRING		
Code/Name		**Credits**
Technical Electives Lower-Level from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT, PHYS		3
Technical Electives Upper-Level from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT		6
ANSC 352	Animal Health	2
ANSC 352X	Animal Health Lab	1
ANSC 300	Scientific Inquiry	2
Upper Level Liberal Arts and Sciences		3

Year 4/FALL		
Code/Name		**Credits**
ANSC 400	Farm Animal Reproduction	4
Technical Electives Upper-Level from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT		6
Liberal Arts and Sciences Upper-Level		3
General Electives		3

Year 4/SPRING		
Code/Name		**Credits**
ANSC 404	Applied Animal Anatomy & Physiology	3
Technical Electives Upper-Level from AGBU, AGED, ANSC, BIOL, CHEM, ENVR, ORHT		6
Liberal Arts and Sciences Upper-Level		6

Animal Science (B.T.) (Curriculum Code – 0896/HEGIS - 0104)

Bachelor of Technology

Overview

The Bachelor of Technology degree in Animal Science is designed to offer students the opportunity to study the animal sciences in preparation for careers in the animal industry at the production level or in the support industries. Advisement tracks are offered in a general course of study or in dairy, livestock, equine, canine or animal nutrition.

The College maintains a farm that houses dairy, beef, equine, meat goats, sheep, swine, and poultry. Students have the opportunity to take courses in animal care and management, nutrition, reproduction, training, forage management and agricultural business. One of the most exciting features of the Bachelor of Technology program is the full-semester internship requirement. With the completion of the internship in a specialized industry or business environment, these graduates will have experienced the real work world in their fields of expertise. This professional experience greatly enhances the graduate's qualifications and is a definite asset as they seek employment.

Career opportunities in the animal sciences are promising. Animal agriculture is the largest component of agriculture in the northeast United States. Both the US Department of Agriculture and the US Bureau of Labor Statistics predict the number of people employed in the life sciences to continue to increase. Available positions will be greater than the number of qualified graduates. Some of our recent graduates have found career positions with production farms, feed manufacturers, agribusinesses, state and federal agencies, veterinary practices, research facilities, meat processing facilities, pet stores, racetracks, equine training facilities, and publishers of agricultural and animal industry magazines.

Student Learning Outcomes

- Students are capable of gathering relevant information and present it in oral and written form.
- Students will demonstrate effectiveness in team activities.
- Students will possess the ability to analyze problems, critically evaluate information and formulate solutions within both an academic and workplace environment.

Animal Science (B.T.) (Curriculum Code – 0896/HEGIS - 0104)

Major Field Requirements:	**54**
ANSC 111/111X- Intro to Animal Science	3
ANSC 411- Animal Science Ethics Seminar	3
ANSC 380- Internship Orientation	1
ANSC 450- Internship	12
ANSC 451- Internship Reporting	2
Three credits from the following:	3
AGBU 245- Equine Business Management	
AGBU 141/141X- Ag Production Management	
AGBU 104- Intro to Ag Microeconomics	
AGBU 160- Intro to Food Systems	
AGBU 242- Ag Business Financial Management	
Three credits from the following:	3
ANSC 252/252X- Ruminant Health	
ANSC 254/254X- Equine Health	
ANSC 256/256X- Canine Health	
Three credits from the following:	3
ANSC 117/117X- Intro to Livestock Production	
ANSC 140- Small Animal Management	
ANSC 145- Basic Canine Care & Uses	
ANSC 150- Intro to Dairy Cattle Management	
ANSC 161/161X- Light Horse Management	
Three credits from the following course prefixes :	3
AGRN/AGSC/ORHT	
(AGRN 240 or AGRN 242 recommended)	
Three credits from the following:	3
ANSC 122/122X- Feeds and Feeding	
ANSC 123/123X- Intro to Dairy Nutrition	
ANSC 221- Equine/Companion Animal Nutrition	
Upper-Level Coursework:	18
ANSC/BIOL/AGBU/AGED/AGSC 300-499	
Advisement Track: (choose one)	**18**
See next page for advisement tracks and courses	
Liberal Arts & Sciences:	**30**
ENGL 101- Composition	3
MATH 111 College Algebra (or higher)	3
BIOL 101/101X or higher	3
Upper level (300/400) Liberal Arts & Sciences	9
Additional Liberal Arts & Science	12
General Electives	**18**
PHED	**1**
FFCS 101- Foundation for College Success	1
General Electives	16
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Animal Science (B.T.) (Curriculum Code – 0896/HEGIS - 0104)

Animal Science B.T. Advisement Tracks (choose one)

Animal Industry

2 courses (2-4 credits) from:
- ANSC 112- Dairy Science Techniques I
- ANSC 114- Canine Management
- ANSC 115- Animal Science Techniques I
- ANSC 116- Equine Science Techniques I

1 course from:
- ANSC 200- Applied Animal Reproduction
- ANSC 240/240X- Equine Breeding/Breeding Farm Mgmt
- ANSC 241- Dairy Cattle Breeding

6 credits from AGBU, AGSC, or ANSC 200-499
Additional 5-7 credits by advisement

Animal Nutrition

6 credits from:
- ANSC 122/122X- Feeds and Feeding
- ANSC 123/123X- Introduction to Dairy Nutrition
- ANSC 221- Equine & Companion Animal Nutrition

3 credits from:
- ANSC 322/322X- Advanced Ruminant Nutrition
- ANSC 324/324X- Feed Milling

CHEM 111/111X- General Chemistry I
FWLD 209- Fish Nutrition
Additional 4 credits by advisement

Dairy

AGSC 111- Introduction to Soil Science
ANSC 112- Dairy Science Techniques
ANSC 155- Dairy Record Management
ANSC 212- Dairy Cattle Management
ANSC 241- Dairy Cattle Breeding
Additional 4 credits by advisement

Equine

ANSC 116- Equine Techniques I (take 2 times for 2 credits total)
ANSC 164/164X- Introduction to Equine Training
ANSC 216- Equine Techniques II
ANSC 240/240X- Equine Breeding/Breeding Farm Mgmt
ANSC 264/264X- Tackless Training
Additional 7 credits by advisement

Livestock

AGSC 111- Introduction to Soil Science
ANSC 107/107X- Meat Products
ANSC 115- Animal Science Techniques I
ANSC 215- Animal Science Techniques II
ANSC 218/218X- Livestock Production, Eval & Mktg
ANSC 200- Applied Animal Reproduction
3 credits from AGEN by advisement

Animal Science (B.T.) (Curriculum Code – 0896/HEGIS - 0104)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
Advisement Track		3
ANSC 150 **or** ANSC 117/117X **or** ANSC 140 **or** ANSC 145 **or** ANSC 161/161X **or** Advisement Track	Intro to Dairy Cattle Mgmt **or** Intro to Livestock Prodctn **or** Small Animal Mgmt **or** Basic Canine Care & Uses **or** Light Horse Management **or** Advisement track	3
ENGL 101	Composition I	3
Liberal Arts and Sciences		6
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 122/122X **or** ANSC 123/123X **or** ANSC 221	Feeds and Feeding **or** Intro to Dairy Nutrition **or** Equine/Companion Animal Nutrit	4 **or** 4 **or** 3
ANSC 111/111X	Intro to Animal Science	3
ANSC 145 Basic Canine Care & Uses **or** Advisement Track		3
BIOL 101/101X Intro to Biology or higher **or** Liberal Arts and Sciences		3
MATH 111 (College Algebra) or higher		3
PHED		1

Year 2/FALL		
Code/Name		**Credits**
AGBU 245 **or** AGBU 242/242X **or** AGBU 104 **or** AGBU 160 **or** Advisement Track	Equine Business Management **or** Ag Bus Financial Mgmt **or** Intro to Ag Microeconomics **or** Intro to Food Systems **or** Advisement Track	3
ANSC 252/252X **or** ANSC 254/254X **or** Advisement Track	Ruminant Health **or** Equine Health **or** Advisement Track	6
BIOL 104/104X Animal Anatomy & Physiology **or** Liberal Arts and Sciences		3
General Electives		3

Year 2/SPRING		
Code/Name		**Credits**
ANSC 252/252X **or** ANSC 256/256X **or** Advisement Track	Ruminant Health **or** Canine Health **or** Advisement Track	3
AGBU 141/141X Ag Production Management **or** Advisement Track		6
Liberal Arts and Sciences		3
General Electives		3

Year 3/FALL	
Code/Name	**Credits**
AGRN/AGSC/ORHT **or** Major Field Electives 300/400 Level	3
Liberal Arts and Sciences	3
Liberal Arts and Sciences 300-Level or higher	3
Major Field Electives 300-Level or higher	3
General Electives	4

Year 3/SPRING	
Code/Name	**Credits**
Major Field Electives 300-Level or higher	6
AGRN/AGSC/ORHT **or** Major Field Electives 300/400 Level	3
Liberal Arts and Sciences	5
General Electives	3

Year 4/FALL		
Code/Name		**Credits**
ANSC 380	Internship Orient An Science	1
ANSC 411	Animal Science Ethics Seminar	3
Major Field Electives 300-Level or higher		6
Liberal Arts and Sciences 300-Level or higher		3
General Electives		3

Year 4/SPRING		
Code/Name		**Credits**
ANSC 450	Internship in Animal Science	12
ANSC 451	Internship Reporting	2

Applied Fermentation (B.T.) (Curriculum Code – 2606/HEGIS – 0499)

Bachelor of Technology

Overview

Applied Fermentation is a rich field focused on creating added value by microbial processing. It covers a range of opportunities in food and beverage production including wine, beer, and cheese. SUNY Cobleskill's Applied Fermentation program is solidly based in the liberal arts, the sciences, and business training.

In addition to coursework in the liberal arts, food and beverage production, students will also pursue business coursework that includes development of skills in accounting, management and marketing. Capstone courses provide students with an opportunity to put their theoretical and practical knowledge to use. The major is completed with a co-op, internship, or other capstone research project, and a senior seminar course focused on case studies in fermentation science. Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Major Field Requirements:	**69**
ACCT 101- Financial Accounting	3
AGBU 340- Food System Regulation	3
BADM 134- Principles of Marketing	3
Or AGBU 121- Marketing Ag Products	
CAHT 103- Food Service Sanitation	2
CAHT 215- Beverage Management	3
CAHT 348/348X- Sensory Evaluation	3
CHEM 214- Intro to Fermentation Science	3
CHEM 340/340X- Fermentation Science	4
CHEM Upper-Level (300-499) Electives	5
Management Course:	3
BADM 249- Management	
AGBU 207/207X- Ag Business Operations	
AGBU 141/141X- Ag Production Management	
Business Course – Lower-Level:	3
ACCT, AGBU, or BADM 100-200-Level	
Business Course – Upper-Level:	3
ACCT, AGBU, or BADM 300-400-Level	
Technical Electives – Lower-Level:	14
AGBU, AGSC, AGEN, AGRN, BIOL, CAHT, CITA, ORHT, SUST 100-200-Level	
Technical Electives – Upper-Level:	3
AGBU, AGSC, AGEN, AGRN, BIOL, CAHT, CITA, ORHT, SUST 300-400-Level	

Upper-Level Major Coursework (chosen from):	14
CAHT 302/302X- Dairy Processing Technology	3
CAHT 306/306X- Oenology	3
CAHT 304/304X- Brewing Science	3
CAHT 307/307X- Distilled Beverages	2
CAHT 308/308x- Cider, Mead & Other Beverages	3
CAHT 309/309X- Adv Topics Food & Fermentation	3
Liberal Arts & Sciences:	**46**
ENGL 101- Composition I	3
BIOL 111/111X- Biology I	4
BIOL 219/219X- Microbiology	4
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
ECON 123- Microeconomics	3
MATH 125- Statistics (or higher)	3
NTRN 122- Nutrition Science	3
PHIL 320- Ethics and Management	3
SOSC 300-Level Elective	3
Additional Liberal Arts and Sciences	12
General Electives:	**8**
General Electives	7
PHED	1
Total Credits	**123**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Applied Fermentation (B.T.) (Curriculum Code – 2606/HEGIS – 0499)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
MATH 125	Statistics	3
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry Lab	1
BADM 134 **or** AGBU 121	Principles of Marketing **Or** Marketing Ag Products	3
ENGL 101	Composition I	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
ACCT 101	Financial Accounting	3
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
Liberal Arts and Sciences		3
NTRN 122	Nutrition	3

Year 2/FALL		
Code/Name		**Credits**
BADM 249 **or** AGBU 207/207X **or** AGBU 141/141X	Management **or** Ag Bus Operations **or** Ag Production Management	3
CHEM 214	Intro to Fermentation Science	3
BIOL 219	Microbiology	3
BIOL 219X	Microbiology Lab	1
CAHT 103	Food Service Sanitation	2
Lower-Level Technical Elective		3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
CAHT 215	Beverage Management	3
ECON 123	Microeconomics	3
AGBU 340	Food System Regulation	3
Lower-Level Technical Elective		3
Lower-Level Business Course		3
PHED		1

Year 3/FALL		
Code/Name		**Credits**
CHEM 340/340X	Fermentation Science	4
Upper-Level Major Coursework		3
Lower-Level Technical Elective		3
Upper-Level Business Course		3
Liberal Arts and Science		3

Year 3/SPRING		
Code/Name		**Credits**
CAHT 348/348X	Sensory Evaluation	3
PHIL 320	Ethics and Management	3
Lower-Level Technical Elective		3
Upper-Level Major Coursework		3
Upper-Level Liberal Arts and Sciences		3

Year 4/FALL	
Code/Name	**Credits**
Lower-Level Technical Elective	2
Upper-Level Technical Elective	3
Upper-Level Major Coursework	5
General Electives	3

Year 4/SPRING	
Code/Name	**Credits**
Upper-Level Chemistry Elective	5
Upper-Level Major Coursework	3
General Elective	4

Applied Psychology (B.S.) (Curriculum Code – 1965/HEGIS – 2099)

Bachelor of Science

Overview

The goal of the Bachelor of Science in Applied Psychology is to produce graduates who, upon graduation, can find employment in educational, government, business or not-for-profit institutions and organizations. The curriculum in Applied Psychology, with an emphasis in either organizational psychology or rural community psychology is on practical applications to real-world problems that will assist students in finding employment in the field. The minimum academic requirement will be a 2.5 GPA for students in the program.

Students in the Applied Psychology program will gain experience in applying theoretical and practical knowledge to solving problems for business/industry and or social and community problems. This program will have a strong emphasis on national and cultural contexts and facilitate an awareness of both social and political systems and environmental influences on individual, group and organizational development.

The concentration in Rural Community Psychology will focus the application of psychological principles to resolve social problems in a variety of community settings. Attention will be paid to empowering and improving the quality of life for vulnerable social groups such as minorities, children and the elderly through advocacy and education.

The concentration in Organizational Psychology will focus on the student's ability to use basic psychological knowledge and skills to effectively solve real-life problems faced by business and industry.

Students must earn a grade of "C-"or better in all major field and advisement track requirements as well as ENGL 101.

Student Learning Outcomes

- Students will apply their knowledge of psychological theory and empirical findings to applied settings.
- Students will gain experience at effective communication in a variety of formats.
- Students will recognize, understand and respect the complexity of diversities in organizational and community settings.
- Students will integrate research methodologies into public and private non-clinical settings to understand and evaluate populations and work environments.
- Students will use critical thinking to analyze systematic strengths and challenges as they relate to organizations and communities with the goal of positive change.
- Students will embark upon careers from this program with realistic ideas about how to implement their knowledge and skills in organizational and community environments.

Applied Psychology (B.S.) (Curriculum Code – 1965/HEGIS – 2099)

Major Field Requirements:	**36**
PSYC 111- General Psychology	3
PSYC 231- Social Psychology	3
PSYC 250- Research Methods in Behavioral Sciences	3
MATH 125- Statistics	3
Nine credits chosen from:	9
PSYC 221- Child Psychology PSYC 222- Adolescent Psychology PSYC 320- Personality Psychology PSYC 330- Psychology of Learning PSYC 341- Organizational Psychology PSYC 342- Health Psychology PSYC 345- Psychological Resilience PSYC 350- Abnormal Psychology PSYC 360- Group Dynamics	
PSYC 400- Field Experience in Applied Psychology I	3
PSYC 470- Field Experience II†	8
PSYC 471- Field Experience II: Reporting†	4

Advisement Track: (choose one)	**15**
<u>Organizational Psychology</u> PSYC 341- Organizational Psychology BADM 121- Fundamentals of Business BADM 249- Management BADM 300- Management Communications BADM 310- Human Resources Management	
<u>Rural Community Psychology</u> PSYC 300- Community Psychology PSYC 323- Adult Development and Aging PSYC 342- Health Psychology PSYC 360- Group Dynamics SOSC 311- Rural Sociology	

Liberal Arts & Sciences:	**69**
ENGL 101- Composition I	3
Communications – ENGL 111 recommended	3
Humanities	3
Arts	3
American History	3
Western Civilization	3
Other World Civilizations	6
MATH 111- College Algebra (or higher)	3
Foreign Language	3
Social Science	6
BIOL 158/158X- Human Anatomy and Physiology I	3
BIOL 159/159X- Human Anatomy and Physiology II	3
Upper-Level (300-499)[1]	6
Social Science/Early Childhood Electives[2]: AAMS, ANTH, ECHD, ECON, GOVT, HIST, NAMS, SOSC, SUST	12
Liberal Arts Electives[2]: AAMS, ANTH, AMSL, ARAB, ARTS, BIOL, CHEM, CHIN, COMM, ECON, EMSC, ENGL, FREN, GART, GOVT, HIST, HUMS, JAPN, JOUR, MATH, MUSC, NAMS, PERS, PHED, PHIL, PHYS, PSCI, SOSC, SPAN, SUST	9

General Electives:	**1**
PHED	1

Total Credits	**121**
30 credits General Education Skills Areas General Education Core Competencies Math Competency Applied Learning Competency FFCS Competency	

†must have an overall 2.5 GPA to take and courses are taken concurrently

[1] <u>Upper-Level Liberal Arts and Sciences Suggested Courses:</u>
ANTH 317- Agri Tech: Historical & Anthropological Approaches
ARTS 300- History of American Art
COMM 301- Technical Communication
ECON 330- Comparative Economic Systems
ENGL 304- Writing in the Disciplines
ENGL 310- Selected Topics in Literature
ENGL 320- Nature Writing
GOVT 312- American Legal System
GOVT 345- International Relations
HIST 310- Triumph and Tragedy: History of the 1960's
MATH 310- Differential Equations
SOSC 311- Rural Sociology
SOSC 312- Sociology of Community

[2] <u>Social Science and Liberal Arts Electives Suggested Courses:</u>
AAMS III- Introduction to African American Studies
ANTH 115- Cultural Anthropology
ANTH 216- Culture, Society & Agriculture in Ancient Mexico
COMM 120- Interpersonal Communication
ECHD 190- Introduction to Community Agencies*
ECHD 230- Applications in Child & Family*
ECHD 251- Anti-bias Strategies: A Human Relations Approach*
ECHD 252- Conflict Resolution*
GOVT 141- American Government
GOVT 242- State and local government
GOVT 312- American Legal System
SOSC 112- Social Problems
SOSC 211- Sociology of the Family*
SOSC 311- Rural Sociology*
SOSC 312- Sociology of Community*
* Strongly Recommended

Applied Psychology (B.S.) (Curriculum Code – 1965/HEGIS – 2099)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ENGL 101	Composition I	3
MATH 111	College Algebra	3
PSYC 111	General Psychology	3
Anything from HUMANITIES		3
Anything from AMERICAN HISTORY		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ENGL 111	Fundamentals of Speech Comm	3
Anything from PSYCHOLOGY ELECTIVE		3
Anything from ARTS		3
Anything from WESTERN CIVILIZATION		3
Anything from WORLD CIVILIZATIONS		3
Anything from SOCIAL SCIENCE ELECTIVE		3

Year 2/FALL		
Code/Name		**Credits**
PSYC 231	Social Psychology	3
MATH 125	Statistics	3
Anything from WORLD CIVILIZATIONS		3
Anything from SOCIAL SCIENCE		3
BIOL 158	Human Anatomy and Physiology I	2
BIOL 158X	Human Anatomy/Physiology I Lab	1
Anything from PHED		1

Year 2/SPRING		
Code/Name		**Credits**
Anything from PSYCHOLOGY ELECTIVE		3
BIOL 159	Human Anatomy and Physiology II	2
BIOL 159X	Human Anatomy/Physiology II Lab	1
Anything from SOCIAL SCIENCE ELECTIVE		3
Anything from SOCIAL SCIENCE		3
Anything from FOREIGN LANGUAGE		3

Year 3/FALL	
Code/Name	**Credits**
Anything from ADVISEMENT TRACK	6
Anything from SOCIAL SCIENCE ELECTIVE	3
Anything from LIBERAL ARTS ELECTIVES	6

Year 3/SPRING		
Code/Name		**Credits**
Anything from ADVISEMENT TRACK		3
PSYC 250	Research Methods in Behavorial Sci	3
PSYC 400	Field Exper in Applied Psychology I	3
Anything from LIBERAL ARTS ELECTIVES		3
Anything from SOCIAL SCIENCE ELECTIVE		3

Year 4/FALL	
Code/Name	**Credits**
Anything from ADVISEMENT TRACK	6
Anything from UPPER-LEVEL LIBERAL ARTS	6
Anything from PSYCHOLOGY ELECTIVE	3

Year 4/SPRING		
Code/Name		**Credits**
Anything from SOCIAL SCIENCE ELECTIVE		3
PSYC 470	Field Experience II	8
PSYC 471	Field Experience II: Reporting	4

Biotechnology (B.S.) (Curriculum Code – 0794/HEGIS - 0499)

Bachelor of Science

Overview

SUNY Cobleskill's Biotechnology program is solidly based in the arts and sciences with a further focused and advanced specialization in modern cellular biology, genetics, and molecular biology as they relate to organisms important in agriculture. As such, students will be required to take the major's sequence of science (biology and chemistry) and mathematics courses. Students will then specialize in an area appropriate to his/her interest and career objectives. Specialization areas include microorganisms, plants, and animals used in modern agriculture. Capstone courses provide students with the theoretical and practical knowledge of molecular biology and genetic engineering as they relate to plants (both genomic and chloroplast emphasis), animals, and microorganisms used in agriculture. Advanced knowledge areas include: ethics, biosafety, cell culture, gene identification, gene isolation, cloning (amplification), insertion methods, screening, and post-transcriptional and post-translational analysis of gene activity.

Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

- Students will be able to prepare a professional quality technical report.
- Students will demonstrate a basic understanding of the nature of science.
- Students will demonstrate good lab practice.
- Students will understand and demonstrate standard ethical practices.
- Students will demonstrate knowledge of the fundamental principles common to living systems at the molecular and cellular level: DNA, RNA, protein synthesis, and structure-function relationship of cellular organelles.
- Students will demonstrate knowledge in the principles of microscopy, skill in microscopic technique, and proper care and maintenance procedures.
- Students will demonstrate understanding of the basic concepts in genetic engineering and related methods of bacterial transformation, screening, DNA isolation, DNA characterization, and genetic cloning.
- Students will demonstrate, by experimental design, advanced knowledge of current applications in cell and molecular biology.
- Students will demonstrate mastery of sterile techniques of media preparation for tissue culture.
- Students will demonstrate the ability to perform as part of a team in group activities.
- Students will demonstrate critical thinking skills.

Biotechnology (B.S.) (Curriculum Code – 0794/HEGIS - 0499)

Major Field Requirements:	**49**
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
BIOL 219/219X- Microbiology	4
BIOL 364/364X- Biotechnology	4
BIOL 375/375X- Cell Biology	4
BIOL 405- Theory/Methods in Ag Biotech	4
BIOL 410- Molecular Genetics	3
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
CHEM 231/231X- Organic Chemistry I	5
CHEM 351- Biochemistry	3
BIOL 480- Internship in Ag Biotech	6
Or Upon advisor approval, upper-level courses chosen from: BIOL 420/420X- Tissue Culture Techniques BIOL 425/425X- Bioinformatics BIOL/CHEM 395- Current Research Topics BIOT 395- Research in Applied Biotech	

Major Technical Electives:	
Upper-Level Course Chosen From: BIOL 305, BIOL 320, BIOL/CHEM 395, BIOL 420/420X, BIOL 425/425X, BIOL 430, CHEM 350, 300-400 Level from: AGRN, ANSC, ENVR, FWLD, or ORHT	3 6
Lower-Level Courses Chosen From: BIOL 114, BIOL 116, BIOL 117, BIOL 186, BIOL 258/258X, BIOL 259/259X, CHEM 232/232X, CHEM 244/244X, MATH 225 100-200 Level from: AGRN, ANSC, ENVR, FWLD, or ORHT	

Additional Liberal Arts & Sciences:	**19**
ENGL 101- Composition I	3
MATH (125 or higher)	6
Additional Liberal Arts and Sciences	10

General Electives:	**43**
FFCS 101- Foundation for College Success	1
PHED	1
Upper-Level General Electives Suggested, but not required, courses: AGRN 312, 350, 362, BIOL 390, ENVR 350, FWLD 330, 430, ORHT 329, 356, 377	18
General Electives Suggested, but not required, courses: AGSC 281, FWLD 115, 209, ORHT 251	23

Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Biotechnology (B.S.) (Curriculum Code – 0794/HEGIS - 0499)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
MATH 125 or higher	Statistics (or higher)	3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 112	Biology II	3
BIOL 112X	Biology II Lab	1
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
MATH 125 or higher	Statistics (or higher)	3
Liberal Arts and Sciences		3
General Elective		3

Year 2/FALL		
Code/Name		**Credits**
BIOL 219	Microbiology	3
BIOL 219X	Microbiology Lab	1
CHEM 231	Organic Chemistry I	3
CHEM 231X	Organic Chemistry I Lab	2
Technical Elective		3
Anything from PHED		1
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
CHEM 351	Biochemistry	3
Liberal Arts and Sciences		6
General Elective		7

Year 3/FALL		
Code/Name		**Credits**
BIOL 375	Cell Biology	3
BIOL 375X	Cell Biology Lab	1
Technical Elective		3
Liberal Arts and Sciences		9

Year 3/SPRING		
Code/Name		**Credits**
BIOL 364	Biotechnology	2
BIOL 364X	Biotechnology Lab	2
General Elective		9

Year 4/FALL		
Code/Name		**Credits**
BIOL 405	Theory/Methods in Ag Biotech	3
BIOL 405X	Theory/Meth Ag Biotech Lab	1
BIOL 410	Molecular Genetics	3
Liberal Arts and Sciences		3
General Elective		5

Year 4/SPRING		
Code/Name		**Credits**
BIOL 480	Internship in Ag Biotechnology	6
General Elective		6

Business Administration (B.B.A.) (Curriculum Code – 0280/HEGIS – 0599)

Bachelor of Business Administration

Overview

The Bachelor of Business Administration in Business Administration program is designed to prepare students with knowledge and skills that will be broaden their technical expertise and that will enable them to become effective managers at technology-focused organizations. In order to maintain competitiveness, companies will need to rely more than ever on the expertise and managerial effectiveness of their technical specialists. The program is designed to provide seamless transfer opportunities for students with associate degrees with no significant loss of credit, and also prepares students to seek further education in appropriate master's degree programs.

Students must complete, with a minimum GPA of 2.00, all required and elective courses bearing the major field course prefixes.

Student Learning Outcomes

- Apply effective oral and written communication skills.
- Apply critical business principles and practices.
- Demonstrate professional and ethical behavior.
- Identify, analyze, and solve business-related problems to improve corporate and individual outcomes.
- Gain experiential or specialized learning through an internship or a focused learning plan.

Major Field Requirements:	**49**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
ACCT 335- Principles of Financial Management	3
BADM 131- Principles of Business	3
BADM 134- Principles of Marketing	3
BADM 145- Business Communications	3
BADM 201- Personal Finance	3
BADM 223- Business Law I	3
BADM 249- Management	3
BADM 305- International Business	3
BADM 320- Ethics and Management	3
BADM 380- Internship Orientation	1
BADM 400- Operations Management	3
BADM 449- Management Policies and Issues	3
CITA 110- Intro to Computer Applications	3
Or CITA 112- Spreadsheet and Database Appl	
Management Elective (300-499):	
ACCT, BADM, CITA, CAHT, ECON, FSMA, GOVT, MKHT, PSYC, TRAV	6

Internship:	**12**
BADM, CAHT, CITA, FSMA 480- Internship	9
BADM, CAHT, CITA, FSMA 485- Internship Reporting	3
Or BADM, CAHT, CITA, FSMA 300-499	
Professional Requirements:	**15**
Courses in consultation with advisor – at least 5 credits must be 300/400-level	
Liberal Arts & Sciences:	**34**
ENGL 101- Composition	3
ECON 124- Macro-Economics	3
MATH 125- Statistics or MATH 231- Calculus I	3
PHED 151	1
Additional Liberal Arts and Sciences	18
Upper-Level (300-499)	6
General Electives	**12**
Total Credits	**122**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Business Administration (B.B.A.) (Curriculum Code – 0280/HEGIS – 0599)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BADM 131	Principles of Business	3
BADM 145	Business Communications	3
CITA 110 **or** CITA 112	Intro to Computer Applications **or** Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1
Liberal Arts and Sciences		3

Year 1/SPRING		
Code/Name		**Credits**
BADM 134	Principles of Marketing	3
ECON 124	Macro-Economics	3
MATH 125	Statistics	3
PHED 151	Wellness	1
Liberal Arts and Sciences		6

Year 2/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
BADM 223	Business Law I	3
Liberal Arts and Sciences		9

Year 2/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting	3
BADM 249	Management	3
Professional Requirements		3
General Electives		6

Year 3/FALL		
Code/Name		**Credits**
BADM 201	Personal Finance	3
BADM 305	International Business	3
BADM 380	Internship Orientation Bus Adm	1
Professional Requirements		6
Liberal Arts and Sciences 300/400-Level		3

Year 3/SPRING		
Code/Name		**Credits**
BADM 320	Ethics and Management	3
BADM 400	Operations Management	3
Management Elective 300/400-Level		3
Professional Requirements		3
Liberal Arts and Sciences 300/400-Level		3

Year 4/FALL		
Code/Name		**Credits**
ACCT 335	Prin of Financial Mgmt	3
BADM 449	Management Policy & Issues	3
Management Elective 300/400-Level		3
Professional Requirements		3
General Elective		5

Year 4/SPRING		
Code/Name		**Credits**
BADM 480	Internship in Bus Admin	9
BADM 485	Internship Bus Admin Reporting	3

Canine Training & Management (B.T.) (Curriculum Code – 0896/HEGIS - 0104)

Bachelor of Technology

Overview

The Bachelor of Technology Degree in Canine Training and Management is designed to provide students with the opportunity for in-depth study in the knowledge and skills necessary to successfully train and manage dogs, including subjects in biology, anatomy, training, behavior, management, health, genetics, nutrition and physiology. The program offers the range and depth of course work to enter directly into the field of canine training and management or to pursue graduate studies. Students must earn a grade of "C-"or better in all major field requirements except for technical electives.

Student Learning Outcomes

- Students will demonstrate meaningful knowledge and skill in dog handling and training.
- Using critical thinking students will be able to design a training program for a dog, interpret the results of its success and make adjustments needed for success.
- Students will work collaboratively, be able to explain their thought processes professionally and make appropriate recommendations to others within the field including owners, trainers, kennel managers, nutritionists and veterinarians.
- Students will demonstrate written and verbal skills to effectively present canine training plans and justify their decisions.

Major Field Requirements:	**35**
ANSC 142/142X- Care/Training of the Working Dog	3
ANSC 144- Canine Techniques (1 cr twice)	2
ANSC 146- Canine Career Opportunities	1
ANSC 222/222X- Behavioral Prob of Companion An	3
Two credits from Canine Elective Courses	2
ANSC 224- Detector Dog Teams ANSC 225- Canine Aggression ANSC 226- Canine Area Search ANSC 243- Canine Tracking and Trailing ANSC 244- Training the Canine Good Citizen ANSC 245- Intro to Rally Obedience	
ANSC 242- Canine Training (1cr twice)	2
ANSC 256- Canine Health	3
ANSC 364/364X- Domestic Animal Behavior	3
ANSC 380- Internship Orientation	1
ANSC 411- Animal Science Ethics Seminar	3
Or BIOL 305- Ethics Science, Med or Technology	
ANSC 450- Internship in Animal Science	12
Upper-Level Canine Electives (chosen from):	**9**
ANSC 340/340X- Competition Obedience & Show ANSC 342/342X- Sporting Dogs ANSC 343/343X- Canine Technologies ANSC 344/344X- Dogs in the Helping Profession ANSC 345/345X- Canine Detection ANSC 425/425X- Therapy Dog Teams ANSC 427/427X- Service Dogs	
Technical Electives (chosen from):	**27**
Anything ACCT, AGBU, AGSC, ANSC, BADM, BIOL	12
Upper-Level (300-400) AGBU, AGED, AGSC, ANSC, BADM, PSYC	15

Liberal Arts & Sciences:	**33**
ENGL 101 or ENGL 102- Composition I or II	3
MATH 111 or higher	3
BIOL 104/104X- Prin Animal Anatomy & Physiology	3
Or BIOL 111/111X- Biology I	
BIOL 105/105X- Principles of Genetics	3
Or BIOL 219/219X- Microbiology	
PSYC 111- General Psychology	3
Upper-Level 300/400 Liberal Arts & Sciences	6
Additional Liberal Arts & Sciences	12
General Electives:	**16**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	14
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Canine Training & Management (B.T.) (Curriculum Code – 0896/HEGIS - 0104)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 142/142X	Care & Training of the Working Dog	3
ANSC 146	Canine Career Opportunities	1
BIOL 104/104X	Prin of Animal Anatomy & Physiology	3
ENGL 101 or 102	Composition I or Composition II	3
General Education or MATH 111		3
Lower-Level Technical Elective		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 144	Canine Techniques	1
ANSC 242	Canine Training	1
BIOL 105/105X	Principles of Genetics	3
PSYC 111	General Psychology	3
MATH 111 or higher or Liberal Arts and Sciences		3
Lower-Level Technical Electives		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
ANSC 144	Canine Techniques	1
ANSC 222/222X	Behavioral Problems of Companion Animals	3
ANSC 242	Canine Training	1
Canine Electives (ANSC 224, 225, 226, 243, 244)		1-2
Lower-Level Technical Electives		6
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
ANSC 256/256X	Canine Health	3
Canine Electives (ANSC 224, 225, 226, 243, 244)		1-2
Lower-Level Technical Electives		3
Liberal Arts and Sciences		3
General Electives		3-4

Year 3/FALL		
Code/Name		**Credits**
ANSC 364/364X	Domestic Animal Behavior	3
Upper-Level Canine Elective		3
Upper-Level Technical Electives		3
Upper-Level Liberal Arts and Sciences		3
General Electives		6

Year 3/SPRING	
Code/Name	**Credits**
Upper-Level Canine Elective	3
Upper-Level Technical Elective	9
General Electives	3

Year 4/FALL		
Code/Name		**Credits**
ANSC 380	Internship Orientation	1
ANSC 411 **Or** BIOL 305	Animal Science Ethics **Or** Ethics Science, Medicine or Tech	3
Upper-Level Canine Elective		3
Upper-Level Liberal Arts and Sciences		3
General Electives		3-5

Year 4/SPRING		
Code/Name		**Credits**
ANSC 450	Internship in Animal Science	12

Communication in Technology (B.S.) (Curriculum Code – 2055/HEGIS – 0605)

Bachelor of Science

Overview

The Communication in Technology B.S. degree at SUNY Cobleskill prepares students for a wide variety of professions in communications, publishing, news media, broadcasting, government, advertising, public relations, or countless other fields that require communications professionals on staff. SUNY Cobleskill understands that students may have numerous jobs during the course of a lifetime and may need to master lots of information media. Therefore, the faculty seeks to instill a broad set of applied skills that students can take into the work force. Besides key areas of study in critical thinking, writing, research, and presentation, students also undertake applied courses in graphic and Web design, TV production, layout and typography, digital imaging and animation, journalism, mass media, marketing, and advertising. SUNY Cobleskill also has internship agreements with many major organizations as well as an in-house TV studio that also serves as the local access cable station. Mass communication is an exciting and growing area of study in this fast-paced world, and SUNY Cobleskill offers students a great deal of one-on-one faculty contact and an applied, hands-on curriculum that prepares them for the contemporary communications workplace.

Students must earn a grade of "C-" or better in all major field and advisement track requirements as well as ENGL 101.

Student Learning Outcomes

Goals
Students should have understanding of or competency with:

- Broadcasting and TV production concepts, strategies, and technology.
- The principles and technology of Web, graphic and print design.
- Communication as a dynamic and culturally interactive process with social, cognitive, and rhetorical dimensions.
- Mass communication phenomena, their relationship to popular culture, and the role of technology in the information age.
- The practice, process, and ethics of contemporary journalism, as well as an understanding of the news media landscape.
- The contemporary, historical, social and political contexts of mass media.
- Different goals and modes of oral presentation and the ability to competently express ideals.

Objectives

- Demonstrate critical thinking and expression in oral, written, and visual modes.
- Demonstrate competence in vocabulary, concepts, and issues in the mass media, as well as an understanding of the interplay between media and culture.
- Demonstrate conceptual development and oral presentation in various rhetorical and expository modes.
- Demonstrate applied skill sets in areas of graphic and Web design and television production.
- Demonstrate competence in solving problems of graphic design and composition using distinct forms of visual media and production modes.
- Exhibit professionalism as well as a universal and advanced set of communication skills that are consonant with the contemporary communication workplace.

Communication in Technology (B.S.) (Curriculum Code – 2055/HEGIS – 0605)

Major Field Requirements:	**45**
BADM 134- Principles of Marketing	3
BADM 330- Advertising and Promotion	3
COMM 108- Intro to Mass Media: Comm Info Age	3
COMM 120- Interpersonal Communications	3
COMM 210- Single Camera Video Production	3
COMM 220- Intercultural Communications	3
COMM 240- Video Studio Production	3
COMM 315- Contemporary Issues Mass Media	3
COMM 420- Visual Media	3
COMM 450- Collaborative Media Production	3
ENGL 111- Fund of Speech Communications	3
GART 265- Web Design	3
GART 270- Digital Imaging	3
JOUR 202- Journalism New Writing/Report	3
JOUR 402- The New Media Landscape	3
Major Technical Electives: (chosen from)	**9**
ARTS 324- History of Graphic Design	
BADM 311- E-Marketing	
BADM 325- International Marketing	
BADM 334- Marketing Research	
COMM 481- Communications Senior Projects	
Any COMM 200-499 course not already required	
Any GART 300-499 course	
GART 385- Web Animation	
JOUR 302- Feature Writing	

Liberal Arts & Sciences:	**60**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
Humanities	6
MATH 111- College Algebra (or higher)	3
Lab Science	3
Social Science	9
Language	6
Upper-Level (300-499)	21
Additional Liberal Arts and Sciences	6
General Electives:	**7**
General Electives	6
PHED	1
Total Credits	**121**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Communication in Technology (B.S.) (Curriculum Code – 2055/HEGIS – 0605)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ENGL 101	Composition I	3
ENGL 111	Fund of Speech Communications	3
MATH 111 or higher	College Algebra (or higher)	3
COMM 108	Intro Mass Media:Comm Info Age	3
COMM 120	Interpersonal Communications	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3
GART 265	Web Design	3
BADM 134	Principles of Marketing	3
COMM 210	Single Camera Video Production	3
Major Technical Elective		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
Anything from Liberal Arts and Sciences		3
Anything from BIOL, CHEM, PHYS, PSCI		3
ENGL 102	Composition II	3
Major Technical Elective		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3

Year 2/SPRING		
Code/Name		**Credits**
JOUR 202	Journalism Newswriting/Report	3
COMM 220	Intercultural Communication	3
COMM 240	Video Studio Production	3
GART 270	Digital Imaging	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3

Year 3/FALL		
Code/Name		**Credits**
BADM 330	Advertising and Promotion	3
COMM 420	Visual Media	3
Language		3
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3
Anything from Liberal Arts and Sciences Upper-Level		3

Year 3/SPRING		
Code/Name		**Credits**
JOUR 402	The News Media Landscape	3
COMM 315	Contemporary Issues Mass Media	3
Language		3
Anything from Liberal Arts and Sciences Upper-Level		3
Anything from Liberal Arts and Sciences		3

Year 4/FALL		
Code/Name		**Credits**
Major Technical Elective		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3
Anything from Liberal Arts and Sciences Upper-Level		3
General Elective		2
COMM 450	Collaborative Media Production	3

Year 4/SPRING	
Code/Name	**Credits**
General Elective	3
Anything from Liberal Arts and Sciences Upper-Level	3
Anything from Liberal Arts and Sciences	6
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	3

Culinary Arts (B.B.A.) (Curriculum Code – 1622/HEGIS – 0599)

Bachelor of Business Administration

Overview

SUNY Cobleskill's B.B.A. in Culinary Arts is designed to accommodate the associate degree student with an educational opportunity that will lead to a Bachelor's degree with additional knowledge of management and culinary arts. This degree is offered with the expertise of faculty in the Culinary Arts, Hospitality and Tourism department and the Business and Computer Technology department at SUNY Cobleskill. Students gain knowledge and skill base opening career possibilities in management of restaurants, institutional food services, hotels and resorts. The program is for students that have earned Associate degrees in restaurant management, food service management, institutional foods, or culinary arts and are interested in pursuing additional study of management to enhance their career opportunities. Students must have a 2.5 GPA or better for entry into the Culinary Arts BBA program.

Students must complete all required and elective courses with prefixes of CAHT, ACCT, and BADM with a minimum GPA of 2.00.

Student Learning Outcomes

- Compute financial costs/analysis and interpret basic financial records used in the food service industry.
- Understand the management tools needed for efficient and effective food production.
- Explore the importance of matching the menu to the facilities and equipment available.
- Demonstrate the managerial and technical skills needed for successful employment in the food service industry.

Major Field Requirements:	**49**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
ACCT 311- Cost Accounting	3
Or ACCT 335- Financial Management	
BADM 223- Business Law I	3
Or TRAV 223- Travel/Hospitality Law	
BADM 134- Principles of Marketing	3
Or HOTL 205- Principles of Marketing Service Bus	
BADM 249- Management	3
Or CAHT 255- Principles of Management Srvc Bus	
BADM 400- Operations Management	3
CAHT 215- Beverage Management	3
CAHT 310- Customer Service	3
CAHT 335- Advanced Catering Management	3
CAHT 347- Facility Operations Management	3
CAHT 380- Internship Orientation	1
CAHT 480- Internship	9
CAHT 485- Internship Reporting	3
CAHT Upper-level Elective	3

Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
ECON 123 **or** 124- Micro- **or** Macro-Economics	3
MATH 125- Statistics	3
NTRN 122- Nutrition Science	3
Upper-Level (300-499)	6
Additional Liberal Arts and Sciences (MATH 111 recommended)	12

Professional Requirements:	**39**
CAHT 001- Serv Safe Cert Class & Exam	0
CAHT 103- Food Service Sanitation	2
CAHT 104- Service for Restaurant Professionals	1
CAHT 111- Culinary I	3
CAHT 112- Culinary II	3
CAHT 140- Mathematics Hospitality Operations	3
CAHT 145- Food Service Purchasing	3
CAHT 160- Baking and Pastry I	3
CAHT 235- Catering	3
CAHT 247- Menu Planning/Merchandising	3
CAHT 270- Restaurant Practicum	3
Management Upper-Level (300-499):	9
chosen from AGBU, BADM, CAHT, CITA, MKHT, ACCT, COMM, GOVT, PSYC, SOSC	
Professional Elective:	3
chosen from AGBU, BADM, CAHT, CITA, MKHT, ACCT, COMM, GOVT, PSYC, SOSC	

General Electives:	**2**
General Electives	1
PHED	1

Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Culinary Arts (B.B.A.) (Curriculum Code – 1622/HEGIS – 0599)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CAHT 001	Serv Safe Cert Class & Exam	0
CAHT 103	Food Service Sanitation	2
CAHT 111	Culinary I	3
CAHT 140	Mathematics Hospitality Operat	3
CAHT 160	Baking and Pastry I	3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
CAHT 104	Service for Restaurant Profess	1
CAHT 112	Culinary II	3
CAHT 145	Food Service Purchasing	3
CAHT 247	Menu Planning/Merchandising	3
Liberal Arts and Sciences		6
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
CAHT 235	Catering	3
NTRN 122	Nutrition	3
Professional Elective		3
Liberal Arts and Sciences		6

Year 2/SPRING		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
CAHT 255 **or** BADM 249	Prin Mgmt for Service Business **or** Management	3
CAHT 215	Beverage Management	3
CAHT 270	Restaurant Practicum	3
BADM 134 **or** HOTL 205	Principles of Marketing **or** Prin Mktg for Svc Businesses	3

Year 3/FALL		
Code/Name		**Credits**
ACCT 103	Managerial Accounting	3
BADM 223 **or** TRAV 223	Business Law I **or** Travel & Hospitality Law	3
CAHT 332	Advanced Food Production	3
MATH 125	Statistics	3
Management Upper-Level		3

Year 3/SPRING		
Code/Name		**Credits**
ACCT 311	Cost Accounting	3
CAHT 335	Advanced Catering Management	3
CAHT 347	Facility Operations Management	3
ECON 123 **or** ECON 124	Micro-Economics **or** Macro-Economics	3
Liberal Arts and Sciences Upper-Level		3

Year 4/FALL		
Code/Name		**Credits**
BADM 400	Operations Management	3
CAHT 310	Customer Service	3
CAHT 380	Internship Orientation	1
Management Upper-Level		6
Liberal Arts and Sciences Upper-Level		3

Year 4/SPRING		
Code/Name		**Credits**
CAHT 480	Internship	9
CAHT 485	Internship Reporting	3

Cybersecurity (B.T.) (Curriculum Code – 2698/HEGIS - 0701)

Bachelor of Technology

Overview

The Bachelor of Technology degree in Cybersecurity is designed to provide the student with the opportunity for in-depth study in several areas of the cybersecurity domain such as computer networking, computing programming, information security, web development, database, and digital and mobile forensics. The program offers the range and depth of course work to enter directly into the field of cybersecurity or to pursue graduate studies. Furthermore, this program has an applied learning component that gives students real world experience using real world forensic tools.

Students must complete, with a minimum GPA of 2.00, all required and elective courses bearing the major field course prefixes.

Student Learning Outcomes

- Students will demonstrate a meaningful understanding and professional skills in areas such as computer networking, ethical hacking and digital forensics, database, web development and information and cybersecurity. These skills are in accordance with those set by the Association of Computing Machinery (ACM) as skills in demand for cybersecurity professionals.
- Students will demonstrate an understanding of how to identify and apply security controls with regards to technical, administrator, and physical concerns.
- Students will demonstrate the ability to work collaboratively in a team.
- Students will demonstrate an understanding of the concepts, techniques, and methodologies associated with the collection, transportation, and preservation of collected digital evidence.
- Students will demonstrate the ability to communicate effectively both, verbally and in written form.
- Students will demonstrate the ability to articulate effectively technical terminology to non-technical people.
- Students will demonstrate an understanding of the ethical use of technology at all times.
- Students will demonstrate the ability to apply risk management concepts and techniques with regard to security.

Major Field Requirements:	**77**
CITA 115/115X- Computer Operating Systems	3
CITA 120/120X- Computer Hardware Concepts	3
CITA 130- Intro to Web Development	3
CITA 135- Python Programming	3
CITA 200/200X- Introduction to Networking	3
CITA 230/230X- Computer Networks	3
CITA 320/320X- Networking Administration	3
CITA 325/325X- Introduction to Network Security	3
CITA 340- Data Base Concepts	3
CITA 380- Internship Orientation	1
CYBR 350/350X- Digital Forensics	3
CYBR 375/375X- Ethical Hacking/Incident Hndlg	3
CYBR 450- Management of Information Security	3
PSYC 350- Abnormal Psychology	3
Major Field Electives: CITA or CYBR 300-499:	6
Internship:	
CITA 492- Internship in Information Tech	12
Or 12 credits of 300-400 level coursework	

Professional Requirements: (by advisement)	
ACCT, BADM, CITA, CYBR, FSMA, GOVT, PSYC, SOSC	13
ACCT, CITA, CYBR, FSMA, GOVT, PSYC, SOSC 300-499	6
Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
MATH 125- Statistics	3
PSYC 111- General Psychology	3
Additional Liberal Arts and Sciences	21
General Electives	**13**
FFCS 101- Foundation for College Success	1
PHED	1
General Electives	11
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Cybersecurity (B.T.) (Curriculum Code – 2698/HEGIS - 0701)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CITA 115	Computer Operating Systems	2
CITA 115X	Computer Operating Systems Lab	1
CITA 135	Python Programming	3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1
Liberal Arts and Sciences		3
General Elective		3

Year 1/SPRING		
Code/Name		**Credits**
CITA 130	Intro to Web Development	3
CITA 120	Computer Hardware Concepts	2
CITA 120X	Computer Hardware Concepts Lab	1
MATH 125	Statistics	3
Professional Requirement		3
Liberal Arts and Sciences		6
Anything PHED		1

Year 2/FALL		
Code/Name		**Credits**
CITA 200	Introduction to Networking	2
CITA 200X	Introduction to Networking Lab	1
Professional Requirement		3
Liberal Arts and Sciences		9
General Elective		3

Year 2/SPRING		
Code/Name		**Credits**
CITA 230	Computer Networks	2
CITA 230X	Computer Networks Lab	1
CITA 325	Intro to Network Security	2
CITA 325X	Intro to Network Security Lab	1
Professional Requirement		3
Liberal Arts and Sciences		6
General Elective		3

Year 3/FALL		
Code/Name		**Credits**
CITA 320	Networking Administration	2
CITA 320X	Networking Administration Lab	1
CYBR 350	Digital Forensics	2
CYBR 350X	Digital Forensics Lab	1
PSYC 111	General Psychology	3
Major Field Elective		3
Upper-Level Professional Requirement		3

Year 3/SPRING		
Code/Name		**Credits**
CITA 340	Data Base Concepts	3
CYBR 375	Ethical Hacking/Incident Hndlg	2
CYBR 375X	Ethical Hacking/Incid Hndlg Lab	1
PSYC 350	Abnormal Psychology	3
Professional Requirement		3
Liberal Arts and Sciences		3

Year 4/FALL		
Code/Name		**Credits**
CYBR 450	Mgmt of Information Security	3
CITA 380	Internship Orientation	1
Major Field Elective		3
Upper-Level Professional Requirement		3
Liberal Arts and Sciences		3
General Elective		3

Year 4/SPRING		
Code/Name		**Credits**
CITA 492	Internship in Information Tech	12
OR Anything from UPPER-LEVEL COURSEWORK		12

Early Childhood Studies: Birth to Age 5 (B.S.) (Curriculum Code – 1763/HEGIS – 1305)

Bachelor of Science

Overview

SUNY Cobleskill's B.S. in Early Childhood emphasizes best practices in the education and care of children, birth through age five. It offers a full range of early childhood courses and field experiences, including a 450-hour internship for which students may choose from a variety of education and agency settings. There is also a strong liberal arts component, research experience, and career/graduate school preparation. Students who have completed the 2-year AAS and AS degrees in Early Childhood at SUNY Cobleskill with a 2.5 GPA or better are eligible for admission to the Bachelor of Science program.

The program prepares students for employment as infant, toddler, and preschool lead teachers in childcare, private preschool programs, and agencies such as Head Start, as well as case management in early intervention, infant-early childhood mental health, and other domestic issues to improve family and community life. Students must earn a grade of "C" or better in all major field and advisement track requirements and a "C-" or better in ENGL 101.

Student Learning Outcomes

Students will demonstrate advanced competency in:

- Promoting child development and learning
- Building family and community relationships
- Observing, documenting, and assessing to support young children and families
- Planning and teaching developmentally appropriate lessons for young children
- Upholding professional standards in the early childhood field
- Managing tasks and/or client cases in a responsible and organized way

Major Field Requirements:	**40**
ECHD 130- Intro to Early Childhood Programs	3
ECHD 170- Child Growth and Development Prac	3
ECHD 175- Infants and Toddlers	3
ECHD 240- Child and Family Wellness	3
ECHD 280- Exceptional Children	3
ECHD 351- Families as Partners EC Programs	3
ECHD 352- Positive Child Guidance	3
ECHD 380- Internship Orientation	1
ECHD 450- Infant-EC Mental Health	3
ECHD 452- Assess/Eval EC Programs	3
ECHD 460- Internship	8
ECHD 461- Internship Reporting	4
Or LAS upper-level 12credits in place of internship	
Advisement Options: (choose one)	**18**
Child and Family	
ECHD 230- Applications in Child & Family	
PSYC 300- Community Psychology	
PSYC 350- Abnormal Psychology	
Or PSYC 360- Group Dynamics	
SOSC 211- Sociology of the Family	
Six credits of Major Electives (see next section)	
Curriculum	
ECHD 150- Curriculum and Methods	
ECHD 234- Practicum (6 credits)	
ECHD 354- Math/Science for Young Children	
ECHD 357- Literacy Dev in Young Children	
Three credits of Major Electives (see next section)	

Major Electives: (chosen from)	
ECHD 121- Expressive Arts	
ECHD 251- Anti-Bias Strategies Human App	
ECHD 252- Conflict Resolution: Create Peace Env	
ECHD 260- Foundations of Modern Education	
ECHD prefixed course not already required	
Liberal Arts & Sciences:	**60**
ENGL 101 or 102- Composition I or II	3
MATH 111- College Algebra (or higher)	3
Humanities (HUMS 243 recommended)	6
HIST 121 or 122- History of United States I or II	3
Social Science (PSYC 111 recommended)	3
Science	3
Arts, Language, Western Civ, or World Cultures	3
Additional Liberal Arts and Sciences	21
Upper-Level (300-499)	12
ENGL Upper-Level (300-499)	3
General Electives:	**2**
General Electives	1
PHED	1
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Early Childhood Studies: Birth to Age 5 (B.S.) (Curriculum Code – 1763/HEGIS – 1305)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ECHD 130	Intro Early Childhood Programs	3
FFCS 101	Foundation for College Success	1
ENGL 101	Composition I	3
ECHD 170 **or** ECHD 175	Child Growth & Dev Theory Prac **or** Infants and Toddlers	3
Advisement Option		3
Any lab science from BIOL, CHEM, PHYS, PSCI		3

Year 1/SPRING		
Code/Name		**Credits**
ECHD 170 **or** ECHD 175	Child Growth & Dev Theory Prac **or** Infants and Toddlers	3
ECHD 240	Child and Family Wellness	3
MATH 111 or higher	College Algebra (or higher)	3
Advisement Option		3
Liberal Arts and Sciences		3
PHED		1

Year 2/FALL		
Code/Name		**Credits**
HUMS 243	Children's Literature	3
ECHD 280	Exceptional Children	3
ECHD 351 **or** ECHD 352	Families as Partners EC Progms **or** Positive Child Guidance	3
Major Elective		3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
ECHD 234 Practicum (for Curriculum Option) Or Advisement Option		6
Major Elective		3
HIST 121 **or** HIST 122	History of United States I **or** History of United States II	3
Liberal Arts and Sciences		3

Year 3/FALL		
Code/Name		**Credits**
ECHD 452	Assess/Eval EC Prgm	3
Anything from ENGL 300-Level or higher		3
Liberal Arts and Sciences		9

Year 3/SPRING		
Code/Name		**Credits**
ECHD 351 **or** ECHD 352	Families as Partners EC Progms **or** Positive Child Guidance	3
Advisement Option		3
Liberal Arts and Sciences		9

Year 4/FALL		
Code/Name		**Credits**
ECHD 380	Internship Orientation	1
Advisement Option		3
Liberal Arts and Sciences Upper-Level		12

Year 4/SPRING		
Code/Name		**Credits**
ECHD 460	Internship	8
ECHD 461	Internship Reporting	4

Environmental Management (B.T.) (Curriculum Code – 2705/HEGIS – 0115)

Bachelor of Technology

Overview

Widespread environmental problems and a growing recognition of the importance of sustainable solutions have resulted in an increased demand for environmental managers and scientists. The four-year Bachelor of Technology degree in Environmental Management will train students in conservation of natural (or biological) resources, applied water resources, ecosystem management and restoration. This program builds on the existing Associate's degree in Environmental Studies. Courses emphasizing hands-on learning in soil and water conservation, watershed management, conservation biology, restoration ecology, forest and aquatic ecology, terrestrial invertebrate ecology, and applied hydrology form the core of the coursework in the program. Instruction takes place in the classroom, but relies extensively on field experiences in forests, streams, rivers, and agricultural lands in close proximity to campus. Course content emphasizes current environmental issues such as invasive species, biological control of invasive species, climate change, habitat loss and fragmentation, ecosystem services, and conservation of biodiversity. Central to the program is a project-based capstone sequence that meets for two semesters of the junior and senior years. The capstone sequence focuses on professional development, research methodology, proposal development, data collection, analysis, and presentation. Additionally, all students will have the option of completing an approved professional experience consisting of an internship, co-op, or other similar experience in lieu of select upper-level coursework.

Student Learning Outcomes

Students will be able to:

- Demonstrate an understanding of ecological and environmental science principles, and familiarity with government agencies and legislation necessary for managing and protecting natural resources.
- Use critical thinking for data collection, management, and analysis to support decision-making processes.
- Effective communication, both written and oral
- Collaborate with peers, professionals, and members of the community to implement creative solutions to environmental problems.

Environmental Management (B.T.) (Curriculum Code – 2705/HEGIS – 0115)

Major Field Requirements:	**70**
AGBU 420- Ag & Environmental Policy	4
AGEN 112/112X- Surveying	2
Or FWLD 211- Wildlife Law Enforce & PR	
Or ENVR/FWLD 270/370- Biodiversity field studies	
AGRN 425- Watershed Management	3
AGSC 111- Introduction to Soil Science	3
BIOL 186- Entomology	3
BIOL 212- Forest Ecology	3
BIOL 308- Terrestrial Invertebrate Ecology	3
BIOL 320- Environmental Toxicology	3
BIOL 340- Ecological Restoration	3
BIOL 403- Conservation Biology	3
ENVR 350- Environmental Law and Regulation	3
ENVR 415- Environmental Research Methods	2
Or ENVR 460- Internship in Environmental Mgmt	
ENVR 416- Environmental Science Communication	2
Or ENVR 460- Internship in Environmental Mgmt	
FWLD 101- Intro Natural Resource Conservation	3
FWLD 350- Wetlands Assess & Delineation	3
GIST 130/130X- Geographic Info Systems	3
ORHT 121- Woody Plant Materials	3
ORHT 377- Integrated Pest Mgmt of Ornamentals	3
Or AGRN 313- Soil Fertility	
PSCI 105- Environmental Science and Technology	3
Or PHYS 111/111X – College Physics I	
PSCI 221- Soil and Water Conservation	3
PSCI 324- Applied Hydrology	3
Upper-Level 300/400 Major Tech Electives: AGBU, AGEN, AGRN, AGSC, BIOL, CHEM, ENVR, FWLD, GIST, ORHT, PSCI or ENVR 460	9

Liberal Arts & Sciences:	**43**
ENGL 101- Composition I	3
BIOL 112/112X- Biology II	4
Or BIOL 131/131X- Natural History of Vertebrates	3
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
Or CHEM 216/216X- Water Chemistry	3
COMM 301- Technical Communication	3
MATH 111, 112, 131, 231, or 232	3
MATH 125- Statistics	3
MATH 225- Statistical Methods	3
SUST 101- Introduction to Sustainability	3
Or Social Science Elective	
Upper-Level Liberal Arts and Sciences (300-499)	3
Additional Liberal Arts and Sciences	12
General Electives:	**7**
FFCS 101- Foundation for College Success	1
PHED	1
General Electives	5
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Environmental Management (B.T.) (Curriculum Code – 2705/HEGIS – 0115)

Suggested Course Sequencing

Year1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
BIOL 186	Entomology	3
FWLD 101	Intro Natural Resource Cons	3
MATH 111 **or** MATH 112 **or** MATH above 125	College Algebra **or** College Algebra & Trigonometry **or** MATH higher than 125	3
FFCS 101	Foundation for College Success	1
PHED 151	Wellness	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 112/112X **or** BIOL 131/131X	Biology II **or** Natural History of Vertebrates	4 **or** 3
CHEM 111/111X	General Chemistry I	4
ENGL 101	Composition	3
PSCI 105 **or** PHYS 111/111X	Environmental Science & Tech **or** College Physics I	3 **or** 4
SUST 101	Introduction to Sustainability **or** Social Science Elective	3

Year 2/FALL		
Code/Name		**Credits**
AGSC 111	Introduction to Soil Science	3
BIOL 212	Forest Ecology	3
ORHT 121	Wood Plant Materials	3
Liberal Arts and Sciences		6

Year 2/SPRING		
Code/Name		**Credits**
PSCI 221	Soil and Water Conservation	3
CHEM 112/112X **or** CHEM 216/216X	General Chemistry II **or** Water Chemistry	4 **or** 3
GIST 130/130X	Geographic Info Systems	3
Liberal Arts and Sciences		6

Year 3/FALL		
Code/Name		**Credits**
BIOL 308	Terrestrial Invertebrate Ecology	3
COMM 301	Technical Communications	3
ENVR 350	Environmental Law & Regulation	3
MATH 125	Statistics	3
Upper-Level Liberal Arts and Sciences		3

Year 3/SPRING		
Code/Name		**Credits**
AGEN 112/112X **or** FWLD 211 **or** ENVR/FWLD 270/370	Surveying **or** Wildlife Law Enf PR **or** Biodiversity Field Study	2
PSCI 324	Applied Hydrology	3
BIOL 340	Ecological Restoration	3
ENVR 415 **or** ENVR 460	Environmental Research Methods **or** Internship in Environmental Mgmt	2
General Electives		5

Year 4/FALL		
Code/Name		**Credits**
ORHT 377 **or** AGRN 313	Integrated Pest Mgmt Orn **or** Soil Fertility	3
ENVR 416 **or** ENVR 460	Environmental Scientific Comm **or** Internship in Environmental Mgmt	2
AGBU 420	Ag & Environmental Policy	4
FWLD 350	Wetlands Assess & Delineation	3
MATH 225	Statistical Methods	3

Year 4/SPRING		
Code/Name		**Credits**
AGRN 425	Watershed Mgmt	3
Upper-Level Major Field Technical Elective from AGBU, AGEN, AGRN, BIOL, CHEM, ENVR, PHYS, PSCI or ENVR 460		9
BIOL 320	Environmental Toxicology	3
BIOL 403	Conservation Biology	3

Fisheries and Aquaculture (B.S.) (Curriculum Code – 1857/HEGIS - 0107)

Bachelor of Science

Overview

Aquaculture is the fastest growing segment of the agriculture industry. This rapidly changing and expanding field is on the cutting edge of technology. With the demand of food fishes on the rise, aquaculture provides quality fish for public consumption, while at the same time reducing over-fishing of the native species found in our country's rivers, lakes and oceans. As a result, a demand has been created for technicians skilled in operating fish hatcheries and biologists trained in fisheries resource management. SUNY Cobleskill's Fisheries and Aquaculture program gives students a hands-on experience raising salmon, trout, arctic char, and diverse fisheries management field experiences. Students work in one of the largest and most diverse academic aquaculture facilities in the Northeast, including a 40,000-gallon coldwater hatchery, quarantine hatchery, warm water fish hatchery and earthen grow out ponds.

Student Learning Outcomes

Students will be able to:

- Demonstrate effective scientific communication skills.
- Demonstrate proficiency in working with wild and captive aquatic organisms, to include identification of organisms using dichotomous keys, capture methods, and husbandry.
- Incorporate societal elements of scientific research, e.g. managing large-scale field projects or understanding landmark fisheries policy.
- Demonstrate basic skills of aquatic physical, chemical, and biological analysis and the gear used to sample aquatic habitats.

Major Field Requirements:	**57**
BIOL 415- Marine Ecology	4
CITA 112- Spreadsheet & Database Applications	3
ENVR 350- Environmental Law & Regulation	3
FWLD 101- Intro to Natural Resource Conservation	3
FWLD 112- Aquaculture Techniques	1
FWLD 115- Fisheries Techniques	3
FWLD 209- Fish Nutrition	1
FWLD 211- Wildlife Law Enforce & PR	2
FWLD 217- Hatchery Techniques	1
FWLD 220- Wildlife Management	3
FWLD 221- Fisheries Science	3
FWLD 325- Aquaculture Engineering	3
FWLD 330- Production Aqua/Mariculture	3
FWLD 350- Wetlands Assess & Delineation	3
FWLD 351- Wildlife Policy & Reg Comply	1
FWLD 400- Pond Management	1
FWLD 421- Fisheries Management	3
FWLD 430- Fish Hatchery Management	3
FWLD 440- Fisheries Research I	2
FWLD 441- Fisheries Research II	2
FWLD 451- Aquatic & Marine Resource Mgmt	3
GIST 130- Geographic Information Systems	3
AGBU 310- Ag Business Entrepreneurship	3

Liberal Arts & Sciences:	**60**
ENGL 101- Composition I	3
COMM 301- Technical Communications	3
BIOL 111/111X- Biology I	4
BIOL 215- Aquatic Ecology	3
BIOL 131- Natural History of Vertebrates	3
BIOL 307- Invertebrate Zoology	4
BIOL 318- Fish Biology	4
CHEM 111/111X- General Chemistry	4
CHEM 216/216X- Water Chemistry	3
MATH 125- Statistics	3
MATH 225- Statistical Methods	3
ORHT 121- Woody Plant Materials	3
Physical Science Elective:	7
PHYS, PSCI, CHEM, and/or AGSC 111	
PHED 151- Wellness	1
Additional Liberal Arts and Sciences	12
General Electives:	**7**
FFCS 101- Foundation for College Success	1
General Electives	6
Total Credits	**124**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Fisheries and Aquaculture (B.S.) (Curriculum Code – 1857/HEGIS - 0107)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
ENGL 101	Composition I	3
FWLD 101	Intro Natural Resource Cons	3
FWLD 112	Aquaculture Techniques	1
MATH 125	Statistics	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 131	Natural History of Vertebrates	3
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
CITA 112	Spreadsheet & Database Applic	3
FWLD 115	Fisheries Techniques	3
PHED 151	Wellness	1

Year 2/FALL		
Code/Name		**Credits**
BIOL 215	Aquatic Ecology	3
FWLD 220	Wildlife Management	3
ORHT 121	Woody Plant Materials	3
FWLD 209	Fish Nutrition	1
Liberal Arts and Sciences		6

Year 2/SPRING		
Code/Name		**Credits**
FWLD 211	Wildlife Law Enforce & PR	2
FWLD 217	Hatchery Techniques	1
FWLD 221	Fisheries Science	3
GIST 130	Geographic Info Systems	2
GIST 130X	Geographic Info Systems Lab	1
Liberal Arts and Sciences		6

Year 3/FALL		
Code/Name		**Credits**
FWLD 325	Aquaculture Engineering	3
BIOL 307	Invertebrate Zoology	4
BIOL 318	Fish Biology	4
COMM 301	Technical Communication	3
MATH 225	Statistical Methods	3

Year 3/SPRING		
Code/Name		**Credits**
FWLD 330	Production Aqua/Mariculture	3
FWLD 440	Fisheries Research I	2
CHEM 216	Water Chemistry	2
CHEM 216X	Water Chemistry Lab	1
AGBU 310	Ag Business Entrepreneurship	3
General Elective		3

Year 4/FALL		
Code/Name		**Credits**
BIOL 415	Marine Ecology	4
FWLD 350	Wetlands Assess & Delineation	3
FWLD 351	Wildlife Policy & Reg Comply	1
FWLD 400	Pond Management	1
FWLD 430	Fish Hatchery Management	3
FWLD 441	Fisheries Research II	2
Physical Sciences Elective		4

Year 4/SPRING		
Code/Name		**Credits**
ENVR 350	Environmental Law & Regulation	3
FWLD 421	Fisheries Management	3
FWLD 451	Aquatic & Marine Resource Mgmt	3
Physical Sciences Elective		4
General Elective		3

Food Systems and Technology (B.T.) (Curriculum Code – 2541/HEGIS - 0113)

Bachelor of Technology

Overview

The Bachelor of Technology (B.T.) degree in Food Systems and Technology will provide students the knowledge of and skills needed to be employed in a domestic and/or international food system. Food systems education is, by its nature, multidisciplinary since the path of raw commodities from field to end-user intersects with engineering, processing, and our stock of natural resources, policy making and public health. The design and implementation of a food system directly impacts diet, risk of food borne illness, economic development, business viability, air and water quality, and the capacity of resources to feed and fuel growing populations. Students will learn about a variety of food system designs and the technologies that are critical to efficiently and effectively produce, process, and distribute food. The program is comprised of the following academic cores: food science & production, food system management, and sustainability. Through these cores, students will have the opportunity for hands on, practical experiences in the College's livestock and dairy facilities, greenhouses, alternative energy labs, and culinary facilities. Further, students are required to complete a full-semester internship with a private or public food system.

Career opportunities in food systems are plentiful because of the global pressures for efficiency in food production and distribution created by growing populations and increased worldwide affluence. Graduates of the program will be prepared to work directly in the production or processing sectors of the food industry because of their understanding of state-of-the-art technology and operating procedures. Students will also be able to work in any number of private and public organizations dedicated to research, advocacy, or education for food professionals. The program is designed to encourage the development of problem solving and critical thinking capacities necessary for graduates' success in a quickly-changing, complex food system

Students must complete, with a minimum GPA of 2.00, all required and elective courses bearing the major field course prefixes.

Student Learning Outcomes

- Identify the economic, political, social, and ecological implications of domestic and international food system designs and evaluate the food system(s) needed to meet growing demand for food.
- Apply skills learned in the production, processing, packaging, and end-user preparation of food to improve a food system.
- Evaluate food business ventures utilizing the financial, operational and marketing, and management skills critical for entrepreneurial/managerial success.
- Describe the regulatory structure under which all food businesses operate in the United States and be able to evaluate using a risk/benefit analysis policy concerns regarding environmental, human nutrition, and food safety outcomes of food system design.
- Assess the sustainability of production and distribution paradigms by evaluating the use of energy and waste management technologies.
- Plan and conduct experiments to solve novel problems in food system design.
- Identify a diversified professional network of food producers, processors, and professionals in the Northeast.
- Describe the relationship between food system design on their own health and the health of communities.
- Effectively communicate ideas in both written and oral formats.

Food Systems and Technology (B.T.) (Curriculum Code – 2541/HEGIS - 0113)

Major Field Requirements:	**50**
AGBU 104- Introductory to Ag Microeconomics	4
AGBU 160- Introduction to Food Systems	3
AGBU 207- Ag Business Operations	3
or BADM 259- Supply Chain Management	
AGBU 219/219X- Ag Retail Practicum and Lab	3
AGBU 330- Commodity Supply & Marketing	3
AGBU 340- Food System Regulation	3
AGBU 380- Internship Orientation	1
AGBU 395/395X- Value Added Prod & Mktg and Lab	3
AGBU 420- Agricultural & Environmental Policy	4
AGBU 450- Internship in Ag Business	12
AGSC 311- Multicultural HR Mgmt In Agriculture	3
or AGSC 313- Immigration Issues in Agriculture	
CAHT 103- Food Service Sanitation	2
CAHT 304/304X- Brewing Science and Lab	3
or advisor approved dairy processing elective	
Major Field Electives (chosen from):	3
AGRN 251- Fruit Science	
AGRN 252- Vegetable Production	
ANSC 107/107X- Meat Products	

Technical Electives: (12 cr must be 300/400-level)	**30**
Chosen from ACCT, AGBU, AGEN,AGRN, AGSC,	
ANSC, BADM, BIOL, CAHT, CHEM, or SUST	
Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
Biology Elective – BIOL 101/101X or higher	3
Chemistry Elective – CHEM 101/101X or higher	3
NTRN 122- Nutrition Science	3
Upper-Level Liberal Arts and Sciences (300-499)	6
Additional Liberal Arts and Sciences	9
General Electives	**10**
FFCS 101- Foundation for College Success	1
PHED	1
General Electives	8
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Food Systems and Technology (B.T.) (Curriculum Code – 2541/HEGIS - 0113)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 104	Intro to Ag Microeconomics	4
AGBU 160	Intro to Food Systems	3
ENGL 101	Composition I	3
MATH 111 or higher	College Algebra (or higher)	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
NTRN 122	Nutrition Science	3
Technical Electives		12
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
BIOL 101	Introduction to Biology	2
BIOL 101X	Introduction to Biology Lab	1
Major Field Elective		3
Technical Elective		6
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
AGBU 330	Commodity Supply & Marketing	3
CAHT 304/304X **Or**	Brewing Science **Or** Advisor-approved dairy processing elective	3
CHEM 101	Introductory Chemistry	2
CHEM 101X	Introductory Chemistry Lab	1
Liberal Arts and Sciences		6

Year 3/FALL		
Code/Name		**Credits**
AGBU 420	Agricultural & Environ Policy	4
AGSC 311 **Or** AGSC 313	Multicultural HR Mgmt in Ag **Or** Immigration Issues in Ag	3
CAHT 103	Food Service Sanitation	2
Technical Electives		6
Liberal Arts and Sciences		3

Year 3/SPRING		
Code/Name		**Credits**
AGBU 340	Food System Regulation	3
AGBU 395	Value-added Prod & Marketing	2
AGBU 395X	Value-added Prod & Mktg Lab	1
AGBU 207 **Or** BADM 259	Ag Business Operations **Or** Supply Chain Management	3
Technical Electives		6

Year 4/FALL		
Code/Name		**Credits**
AGBU 380	Internship Orientation	1
AGBU 219	Ag Retail Practicum	2
AGBU 219X	Ag Retail Practicum Lab	1
Liberal Arts and Sciences		3
General Electives		8

Year 4/SPRING		
Code/Name		**Credits**
AGBU 450	Internship	12

Graphic Design Technology (B.S.) (Curriculum Code – 2253/HEGIS - 0699)

Bachelor of Science

Overview

The Graphic Design Technology program prepares students for employment in the fast-paced and ever-changing design industry, meeting the needs of our students for a graphic design career education by offering a curriculum that integrates theory and technical skills with the liberal arts program. The program follows an interdisciplinary approach in which students take courses in the arts, humanities and social sciences, as well as courses in computer technology. SUNY Cobleskill recognizes the increasing importance of computer skills in the professional field, and views the computer as a design tool, one which can only be used to its full potential with a strong foundation in art and design. The program focuses on creative thinking and an understanding of the principles of design rather than simply the technical manipulation of computer software. Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

Students will demonstrate

- Competence in the utilization of graphics software to complete assignments and create projects that incorporate the application of design principles.
- Competence in the utilization of various media to complete assignments and create projects that incorporate the application of design principles.
- Competence in the utilization of various media, including graphic software, to complete assignments and create projects that incorporate the application of design principles.
- Their knowledge of art and design history by successfully completing exams.
- Competence in the utilization of various media to complete assignments and create projects that incorporate the application of design principles.
- Competence in all courses within the major by creating a well-designed portfolio.

Major Field Requirements:	**55**
ARTS 111- Design I	3
ARTS 114- Drawing I	3
ARTS 324- History of Graphic Design	3
GART 112- Digital Media	3
GART 151- Typography and Layout	3
GART 251- Computer Graphics I	3
GART 252- Computer Graphics II	3
GART 265- Web Design I	3
GART 270- Digital Imaging	3
GART 280- Portfolio Prep and Presentation	1
CITA/GART 330- Web Design II	3
GART 351- Advanced Typography	3
GART 352- Digital Prepress Production	3
CITA/GART 375/375X- Web Design III	3
GART 385- Web Animation	3
GART 460- Senior Seminar I: Design Research	3
GART 461- Senior Seminar II: Senior Project	3
Major Technical Electives: (chosen from)	6
ARTS 214- Drawing II	
ARTS 215- Painting	
ARTS 216- Introduction to Ceramics	
COMM 210- Single Camera Video Production	
COMM 240- Video Studio Production	
COMM 260- The Art of Audio/Video Edit	
COMM 270- Video for Web	
Any additional GART course	

Liberal Arts & Sciences:	**60**
ENGL 101- Composition I	3
Additional ENGL (102 or higher)	3
ARTS 124- History of Art I	3
ARTS 125- History of Art II	3
Humanities	6
MATH 111- College Algebra (or higher)	3
Science	6
Social Science	6
Language	6
Upper-Level (300-499)	21
General Electives:	**7**
General Electives	6
PHED	1
Total Credits	**122**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Graphic Design Technology (B.S.) (Curriculum Code – 2253/HEGIS - 0699)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ARTS 114	Drawing I	3
ARTS 124	History of Art I	3
GART 112	Digital Media	3
ENGL 101	Composition I	3
Anything from SOCIAL SCIENCE		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ARTS 111	Design I	3
ARTS 125	History of Art II	3
GART 151	Typography and Layout	3
ENGL 102 or higher	Composition II or higher	3
Anything from HUMANITIES		3
Anything from PHED		.5

Year 2/FALL		
Code/Name		**Credits**
GART 251	Computer Graphics I	3
GART 265	Web Design	3
GART 270	Digital Imaging	3
Anything from SCIENCE		3
Liberal Arts and Sciences		3
Anything from PHED		.5

Year 2/SPRING		
Code/Name		**Credits**
GART 252	Computer Graphics II	3
GART 280	Portfolio Prep and Presentation	1
GART 330	Web Design II	3
MATH 111 or higher	College Algebra or higher	3
Liberal Arts and Sciences		3
Anything from SOCIAL SCIENCE		3

Year 3/FALL		
Code/Name		**Credits**
ARTS 324	History of Graphic Design	3
GART 352	Digital Prepress Production	3
CITA/GART 375/375X	Web Design III	3
Anything from SOCIAL SCIENCE		3
Anything from SCIENCE		3
Liberal Arts and Sciences		3

Year 3/SPRING		
Code/Name		**Credits**
GART 351	Advanced Typography	3
GART 385	Web Animation	3
Major Technical Elective		3
Anything from LANGUAGE		3
General Elective		3

Year 4/FALL		
Code/Name		**Credits**
GART 460	Senior Seminar I	3
Major Technical Elective		3
Anything from LANGUAGE		3
Anything from HUMANITIES		3
Liberal Arts and Sciences		3

Year 4/SPRING		
Code/Name		**Credits**
GART 461	Senior Seminar II	3
Liberal Arts and Sciences		6
Anything from HUMANITIES		3
Anything from General Electives		3

Information Technology (B.T.) (Curriculum Code – 2045/HEGIS - 0799)

Bachelor of Technology

Overview

The demand for skilled knowledgeable workers in today's fast-paced business world is growing with network and systems administrator positions leading the way. Today's technology savvy organizations are seeking employers with a blend of up-to-date technology skills blended with a fundamental understanding of business principles. Information technology workers will need to develop solutions for tomorrow's problems. The B.T. degree program at SUNY Cobleskill is designed to provide the successful graduate with the necessary skills in today's fast-paced global economy. Students will prepare to enter the professional work-place in the areas of help desk support, PC construction, troubleshooting and repair, training, project management, local area network/telecommunications, maintenance, management, information security, Web site development and management, and/or Web publishing and marketing.

Students must complete, with a minimum GPA of 2.00, all required and elective courses bearing the major field course prefixes.

Student Learning Outcomes

- Analyze complex business problems and develop an appropriate solution incorporating best practices in their field.
- Configure and support Information Systems specific to their field.
- Successfully work in a collaborative environment.
- Effectively communicate with a wide audience in both written and oral formats.
- Demonstrate lifelong learning skills to prepare them to solve tomorrow's problems.

Major Field Requirements:	**40**
ACCT 101- Financial Accounting	3
BADM 249- Management	3
BADM 300- Management Communications	3
BADM 320- Ethics and Management	3
CITA 112- Spreadsheet and Database Management	3
CITA 115/115X- Computer Operating Systems	3
CITA 325/325X- Introduction to Network Security	3
CITA 380- Internship Orientation	1
CITA 405- Project Management	3
CITA 460- Management Information Systems	3
CITA 492- Internship in Information Tech	12
Advisement Track: (choose one)	**39**
See next page for advisement tracks and courses	

Liberal Arts & Sciences:	**34**
ENGL 101- Composition I	3
MATH 125- Statistics	3
Or MATH 231- Calculus I	
PHED 151	1
Additional Liberal Arts and Sciences	21
Upper-Level (300-499)	6
General Electives	**9**
Total Credits	**122**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Information Technology (B.T.) (Curriculum Code – 2045/HEGIS - 0799)

Information Technology Advisement Tracks (choose one)

Application and Web Development

CITA 130- Intro to Web Development
CITA 140- Introduction to Programming
CITA 190/190X- Linux Operating Systems
CITA 210- Visual Programming and Development Tools
CITA 220- Systems Analysis
CITA 305- Java Programming
CITA 330- Web Publishing II
CITA 340- Data Base Concepts
CITA 350- Object Oriented Systems
CITA 420- Programming for the Web
9 credits from ACCT, ARTS, BADM, CITA, COMM, or GART

Information Security

CITA 120/120X- Computer Hardware Concepts
CITA 190/190X- Linux Operating Systems
CITA 200/200X- Data Communications and Networking
CITA 230/230X- Network Technology
CITA 320/320X- Network Administration
CITA 335/335X- Cisco Routing
CYBR 350/350X- Digital Forensics
CYBR 375/375X- Ethical Hacking/Incident Handling
CYBR 450- Management of Information Security
12 credits from ACCT, BADM, CITA, or GART

Information Systems

CITA 130- Intro to Web Development
CITA 140- Introduction to Programming
CITA 200/200X- Data Communications and Networking
CITA 220- Systems Analysis
CITA 230/230X- Network Technology
CITA 340- Data Base Concepts
BADM 400- Operations Management
18 credits from ACCT, BADM, CITA, or GART (at least 6 credits must be 300/400-level)

Network Administration and Support

CITA 120/120X- Computer Hardware Concepts
CITA 190/190X- Linux Operating Systems
CITA 200/200X- Data Communications and Networking
CITA 220- Systems Analysis
CITA 230/230X- Network Technology
CITA 320/320X- Network Administration
CITA 335/335X- Cisco Routing
CITA 430/430X- Software Integration and Interoperability
15 credits from ACCT, ARTS, BADM, CITA, COMM, or GART (at least 3 credits must be 300/400-level)

Web Graphics and Design

CITA 130- Intro to Web Development
CITA 240- Computer Graphics I
CITA 250- Computer Graphics II
GART 260- Digital Photography
GART 270- Digital Imaging
CITA 330- Web Publishing II
CITA 375/375X- Dynamic Graphics and Animation
CITA 410- Multi-Media Computing
15 credits from ACCT, ARTS, BADM, CITA, COMM, or GART (at least 3 credits must be 300/400-level)

Information Technology (B.T.) (Curriculum Code – 2045/HEGIS - 0799)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CITA 112	Spreadsheet & Database Applic	3
CITA 115	Computer Operating Systems	2
CITA 115X	Computer Operating Systems Lab	1
Advisement Track		3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1
Liberal Arts and Sciences		3
PHED 151	Wellness	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
Advisement Track		6
Liberal Arts and Sciences		6

Year 2/FALL		
Code/Name		**Credits**
BADM 249	Management	3
Advisement Track		6
MATH 125 **or** MATH 231	Statistics **or** Calculus I	3 **or** 4
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
Advisement Track		9
Liberal Arts and Sciences		6

Year 3/FALL		
Code/Name		**Credits**
CITA 325	Intro to Network Security	2
CITA 325X	Intro to Network Security Lab	1
BADM 300	Management Communications	3
CITA 380	Intern Orientation Info Tech	1
Advisement Track		3
Liberal Arts and Sciences		3
General Elective		3

Year 3/SPRING		
Code/Name		**Credits**
CITA 405	Project Management	3
BADM 320	Ethics and Management	3
Advisement Track		9
Liberal Arts and Sciences Upper-Level		3

Year 4/FALL		
Code/Name		**Credits**
CITA 460	Management Information Systems	3
Advisement Track		3
Liberal Arts and Sciences Upper-Level		3
General Elective		5

Year 4/SPRING		
Code/Name		**Credits**
CITA 492	Internship in Information Tech	12

Landscape Contracting (B.T.) (Curriculum Code – 1946/HEGIS - 0109)

Bachelor of Technology

Overview

The landscape industry combines creativity, science, technical skills, and business knowledge. As a designer, horticulturist, installer, manager, owner, technician, or landscape architect, you'll create and maintain outdoor environments. Whether designing, installing, or managing landscapes, you'll need hands-on skills, horticultural knowledge, technical abilities, and strategic thinking to adapt and collaborate. Landscape professionals promote environmental stewardship, resource management, and sustainable spaces. Opportunities for further education in Landscape Architecture, Ecological Restoration, and M.B.A. programs are available. This dynamic field shapes the places where we live, work, and play, making a lasting impact on the environment.

Student Learning Outcomes

- Develop and apply knowledge and skills in the plant sciences, including plant identification, plant health, botany, and soil science.
- Apply knowledge of design principles and techniques to create, visualize, and assess landscape designs that meet client needs and industry standards and enhance the built environment.
- Demonstrate a comprehensive understanding of the industry standards, practices, tools, and equipment used in landscape construction, arboriculture, and landscape maintenance.
- Develop landscape services estimates and apply knowledge of project management principles and practices to oversee the implementation of landscape projects, including budgeting, scheduling, and quality control.
- Recognize and interpret business principles and practices to effectively manage a landscape contracting business, including financial management, marketing, and client relations.
- Employ professional oral and written communication through presentations, reports, and collaborative projects to prepare students to work with clients, contractors, and other professionals involved in landscape contracting to deliver successful projects.
- Recognize and apply principles of sustainable land stewardship and ethical leadership regarding the environmental, social, and economic impacts of the landscape industry and be able to evaluate changing perceptions, regulations, and challenges through applied skills, case studies, and field trips.
- Prepare for and complete a capstone internship.

Landscape Contracting (B.T.) (Curriculum Code – 1946/HEGIS - 0109)

Major Field Requirements:	**62**
AGEN 112/112X- Surveying & Land Management	2
AGRN 335- Agricultural Chemicals	3
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 121- Woody Plant Materials	3
ORHT 122- Environmental Design I	3
ORHT 160- Landscape Contracts	1
ORHT 161- Landscape Graphics	2
ORHT 221/221X- Landscape Construction	3
ORHT 223- Environmental Design II	3
ORHT 282- Arboriculture	3
ORHT 335- Irrigation	3
ORHT 360- Advanced Landscape Contracts	3
ORHT 377- Integrated Pest Mgmt Ornamentals	3
ORHT 433- Landscape Firm Management	3
ORHT 444- Landcadd	3
ORHT 450/451- Internship/Internship Reporting	15
Or 15 credits of 300-400 level coursework	
Upper-Level Technical Electives:	**6**
300-400 level coursework chosen from: AGEN, AGRN, AGSC, FWLD, GIST, ORHT, or RECM	
Lower-Level Technical Electives:	**9**
100-200 level coursework chosen from: AGEN, AGRN, AGSC, BIOL, CITA, ENGR, GART, GIST, ORHT, or RECM	
Business and Entrepreneurship Electives:	**12**
100-200 level coursework chosen from: ACCT, AGBU, BADM, ECON, or MKHT	6
300-400 level coursework chosen from: ACCT, AGBU, BADM, or MKHT	6

Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
Or ENGL 102– Composition II	
MATH 111- College Algebra (or higher)	3
BIOL 116- Botany I	3
Or BIOL 111/111X- Biology I	
CHEM 101/101X- Introductory Chemistry	3
Communication Oral Course	3
Diversity: Equity, Inclusion, & Social Justice Course	3
Additional General Education Courses chosen from:	12
Humanities	
Social Sciences	
The Arts	
U.S. History and Civic Engagement	
World History and Global Awareness	
World Languages	
General Electives:	**2**
FFCS 101- Foundation for College Success	1
PHED	1
Total Credits	**121**

30 credits General Education Skills Areas

General Education Core Competencies

Math Competency

Applied Learning Competency

FFCS Competency

Landscape Contracting (B.T.) (Curriculum Code – 1946/HEGIS - 0109)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111 **or** BIOL 116 **or** BIOL 111/111X	Intro to Soil Science **or** Botany I **or** Biology I	3
ENGL 101	Composition I	3
MATH 111 College Algebra or higher		3
ORHT 160	Landscape Contracts	1
ORHT 161	Landscape Graphics	2
General Education Flex/Elective		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 112	Surveying & Land Measurement	1
AGEN 112X	Surveying & Land Measure Lab	1
AGSC 111 **or** BIOL 116 **or** BIOL 111/111X	Intro to Soil Science **or** Botany I **or** Biology I	3
ORHT 122	Environmental Design I	3
General Education Flex/Electives		6
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
ORHT 121	Woody Plant Materials	3
ORHT 221/221X	Landscape Construction	3
ORHT 223	Environmental Design II	3
Lower-Level Technical Elective		3
Genera Education Communication Oral course		3

Year 2/SPRING		
Code/Name		**Credits**
AGSC 186	Entomology	3
CHEM 101/101X	Introductory Chemistry	3
ORHT 282	Arboriculture	3
General Education DEISJ course		3
General Education Flex/Elective		3

Year 3/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology	3
ORHT 335	Irrigation	3
Lower-Level Business Elective		3
Lower-Level Technical Elective		3
Upper-Level Technical Elective		3

Year 3/SPRING		
Code/Name		**Credits**
AGRN 335	Agricultural Chemicals	3
ORHT 360	Advanced Landscape Contracts	3
ORHT 444	Landcadd	3
Lower-Level Business Elective		3
Upper-Level Business Elective		3

Year 4/FALL		
Code/Name		**Credits**
ORHT 377	Integrated Pest Mgt Ornamentls	3
ORHT 433	Landscape Firm Management	3
Lower-Level Technical Elective		3
Upper-Level Technical Elective		3
Upper-Level Business Elective		3

Year 4/SPRING		
Code/Name		**Credits**
ORHT 450	Internship Ornamental Hort	12
ORHT 451	Orn Hort Internship Reporting	3

Plant Science (B.T.) (Curriculum Code – 0897/HEGIS - 0103)

Bachelor of Technology

Overview

The B.T. degree program in Plant Science offers students excellent opportunities for highly relevant technical preparation for potential employment in agronomic, floricultural, and horticultural production, natural resource management and protection, environmental protection, recreational and sports area management, turfgrass management, golf course management, and landscape contracting. This broadly designed, flexible program allows students to select courses that provide a specific focus with a common foundation in applied sciences.

Student Learning Outcomes

- Successfully establish and maintain ornamental and/or food crop plants.
- Accurately interpret soil tests and make proper recommendations.
- Recommend nutrient deficiency correction in plants.
- Explain plant physiology including: photosynthesis, respiration, nutrient uptake, and nitrogen fixation.
- Diagnose insect, disease, and weed problems related to plant science.
- Recommend controls for plant diseases and pests and use electronic resources to support these recommendations.
- Communicate clearly using technical terminology common to plant science.

Major Field Requirements:	**44**
AGRN/ORHT/RECM 450- Internship	12
AGRN/ORHT/RECM 451- Internship Reporting	3
Group I:	6
AGRN 335- Agricultural Chemicals	
AGRN 350- Plant Nutrition	
AGRN 362- Applied Plant Physiology	
ORHT 377- Integrated Pest Mgmt Ornamentals	
Group II:	12
AGRN, AGSC, ORHT, RECM (300-400-Level)	
Other Major:	11
AGRN, AGSC, ORHT, RECM	
Major Technical Electives:	**26**
Upper-Level	6
ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM	
Upper- or Lower-Level	20
ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM	

Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
Additional Liberal Arts and Sciences	24
General Electives:	**20**
General Electives	19
PHED	1
Total Credits	**120**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Plant Science (B.T.) (Curriculum Code – 0897/HEGIS - 0103)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM		9
ENGL 101	Composition I	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
MATH 111 or higher	College Algebra (or higher)	3
Anything from AGRN, AGSC, ORHT, RECM		3
Liberal Arts and Sciences		3
General Elective		3
Anything from PHED		1

Year 2/FALL	
Code/Name	**Credits**
Anything from AGRN, AGSC, ORHT, RECM	3
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM	5
Liberal Arts and Sciences	3
General Elective	3

Year 2/SPRING	
Code/Name	**Credits**
Anything from AGRN, AGSC, ORHT, RECM	5
Liberal Arts and Sciences	3
General Elective	6

Year 3/FALL		
Code/Name		**Credits**
AGRN 335 **or** AGRN 350 **or** AGRN 362 **or** ORHT 377	Agricultural Chemicals **or** Plant Nutrition **or** Applied Plant Physiology **or** Integrated Pest Mgt Ornamentls	3
Anything from AGRN, AGSC, ORHT, RECM 300-Level or higher		3
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM 300-Level or higher		3
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM		6
Liberal Arts and Sciences		3

Year 3/SPRING		
Code/Name		**Credits**
AGRN 335 **or** AGRN 350 **or** AGRN 362 **or** ORHT 377	Agricultural Chemicals **or** Plant Nutrition **or** Applied Plant Physiology **or** Integrated Pest Mgt Ornamentls	3
Anything from AGRN, AGSC, ORHT, RECM 300-Level or higher		6
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM. 300-Level or higher		3
Liberal Arts and Sciences		3

Year 4/FALL	
Code/Name	**Credits**
Anything from AGRN, AGSC, ORHT, RECM 300-Level or higher	3
Liberal Arts and Sciences	6
General Elective	6

Year 4/SPRING	
Code/Name	**Credits**
Anything from AGRN, ORHT, RECM - 450	12
Anything from AGRN, ORHT, RECM - 451	3

Therapeutic Horsemanship (B.T.) (Curriculum Code – 1320/HEGIS - 0104)

Bachelor of Technology

Overview

The Bachelor of Technology Degree in Therapeutic Horsemanship is designed to provide the student the opportunity for in-depth study in the foundations of equine assisted activities and therapies including subjects within equine science, education, psychology, recreation, and sport. Successful students may complete on campus the required teaching hours necessary for application to the Professional Association of Therapeutic Horsemanship International for instructor certification. The program offers the range and depth of coursework to enter directly into the field of therapeutic horsemanship or to pursue graduate studies.

Students will be immersed in an integrated therapeutic horsemanship program which offers children and adults, with and without special needs, the pleasure of working with carefully selected horses while interacting with college students, community volunteers, parents, teachers, and therapists in an enriching environment. Our philosophy is to use the horse as a motivational tool to enhance skill development based on the parents, teachers, and therapists' goals and objectives. Therapeutic horsemanship offers a wide array of benefits such as improved listening skills and focus, improved sequencing and motor planning, greater self-confidence, development of patience and control, improved coordination, and recreational enjoyment.

Student Learning Outcomes

- Students will demonstrate meaningful knowledge of horsemanship including equine care and management, riding skill and instruction, and equine behavior.
- Students will possess the confidence and self-reliance required for independent thought, the critical thinking skills necessary for the selection and assessment of information, and the creativity for the generation and organization of concepts in novel ways.
- Students will work effectively in a team environment including clients, parents, teachers, therapists, and volunteers.
- Students will demonstrate community engagement.
- Students will write goals and objectives clearly and distinctly in behavioral terms.
- Students will construct task analyses that are specific, detailed, thorough, and appropriate for skill level instruction.
- Students will create daily lesson plans appropriate for current goals and objectives with consideration for on-going evaluation and assessment.
- Students will demonstrate sound horsemanship skills and knowledge of therapeutic horsemanship in the development and conduct of safe, appropriate, and progressive therapeutic horsemanship instruction.
- Students will demonstrate proficiency in the selection, management, and training of horses used in therapeutic horsemanship activities.
- Create and implement well-organized, safe and effective volunteer orientation and training sessions.

Therapeutic Horsemanship (B.T.) (Curriculum Code – 1320/HEGIS - 0104)

Major Field Requirements:	**48**
ANSC 116- Equine Science Techniques	1
ANSC 164/164X- Introduction to Equine Training	2
ANSC 168- Equine Assisted Services	2
ANSC 254/254X- Equine Health	3
ANSC 268- Introduction to Riding Instruction	1
ANSC 268X- Introduction to Riding Instr Lab	2
ANSC 283, 284, 285, 286- Equitation	3
ANSC 368/368X- Therapeutic Riding Instruction	3
ANSC 468- Therapeutic Certification Hours	3
Six credit chosen from	6
ANSC 161/161X- Light Horse Management	
ANSC 221- Equine/Companion Animal Nutrition	
ANSC 264/264X- Tackless Training	
ANSC 380- Internship Orientation	1
ANSC 450- Internship	12
ECHD 280- Exceptional Children	3
PERS 350- Psyc & Sosc of Sport & Exercise	3
PSYC 350- Abnormal Psychology	3
Technical Electives:	**24**
AGBU/BADM Elective by advisement[1]	3
PERS Electives by advisement[2]	3
ECHD Electives by advisement[3]	3
Upper-Level AGED/AGSC/ANSC Electives by advisement[4]	9
Additional Upper-Level Tech Electives chosen from AGED/AGSC/ANSC/BIOL/ECHD/PERS/PSYC/SOSC	6

Liberal Arts & Sciences:	**36**
AMSL 145- American Sign Language	3
BIOL 103/103X- Human Biology	3
COMM 120- Interpersonal Communications	3
Or ENGL 111- Fund of Speech Communications	
ENGL 101- Composition I	3
Or ENGL 102- Composition II	
MATH 111- College Algebra (or higher)	3
PSYC 111- General Psychology	3
SOSC 111- Introduction to Sociology	3
Two Different Gen Ed categories: American History, Arts, Humanities, Western Civ, or World Cultures	6
PSYC or SOSC 300-499	6
Additional PSYC or SOSC by advisement	3
General Electives	**14**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	12
Total Credits	**122**

30 credits General Education Skills Areas
General Education Core Competencies
Math Competency
Applied Learning Competency
FFCS Competency

[1]Technical Electives AGBU/BADM Suggested Courses:

AGBU 245- Equine Business Management
BADM 249- Management

[2]Technical Electives PERS Suggested Courses:

PERS 211- First Aid/CPR
PERS 214- Athletic Injuries
PERS 216- Theory and Techniques Coaching
PERS 230- Motor Learning and Behavior

[3]Technical Electives ECHD Suggested Courses:

ECHD 170- Child Growth and Development
ECHD 190- Introduction to Community Agencies
ECHD 352- Positive Guild Guidance

[4]Technical Electives Upper-Level Suggested Courses:

AGED 309- Teaching & Learning in Ag Education
AGED 411- Ag Education and Community Leadership
ANSC 364- Domestic Animal Behavior
ANSC 399- Research in Animal Science
ANSC 464- Exercise Physiology

Therapeutic Horsemanship (B.T.) (Curriculum Code – 1320/HEGIS - 0104)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 168	Equine Assisted Services	1
ANSC 283, 284, 285, or 286	Equitation	1
ANSC 116	Equine Science Techniques	1
ANSC 161/161X **or** ANSC 221 **or** ANSC 264/264X	Light Horse Management **or** Equine/Companion Animal Nutri **or** Tackless Training	3
ECHD Elective by advisement		3
ENGL 101 **or** ENGL102	Composition I **or** Composition II	3
PSYC 111	Introduction to Psychology	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AMSL 145	American Sign Language I	3
ANSC 164/164X	Intro to Equine Training	2
ANSC 168	Equine Assisted Services	1
ANSC 283, 284, 285, or 286	Equitation	1
ANSC 161/161X **or** ANSC 221 **or** ANSC 264/264X	Light Horse Management **or** Equine/Companion Animal Nutri **or** Tackless Training	3
ENGL 111 **or** COMM 120	Fund of Speech Communications **or** Interpersonal Communication	3
MATH 111 or higher	College Algebra (or higher)	3

Year 2/FALL		
Code/Name		**Credits**
ANSC 254/254X	Equine Health	3
ANSC 283, 284, 285, or 286	Equitation	1
BIOL 103/103X	Human Biology	3
Liberal Arts and Sciences		3
SOSC 111	Introduction to Sociology	3
General Elective		3

Year 2/SPRING		
Code/Name		**Credits**
AGBU/BADM Technical Elective by advisement		3
ANSC 268/268X	Intro to Riding Instruction	3
ECHD 280	Exceptional Children	3
PERS Technical Elective by advisement		3
Liberal Arts and Sciences		3
Anything from PHED		1

Year 3/FALL		
Code/Name		**Credits**
ANSC 368/368X	Therapeutic Riding Instr	3
PSYC 350	Abnormal Psychology	3
Additional Technical Electives Upper-Level		6
Additional PSYC or SOSC by advisement		3

Year 3/SPRING		
Code/Name		**Credits**
ANSC/AGED/AGSC Tech Elect Upper-Level by advisement		3
PERS 350	Psyc & Sosc of Sports & Exerc	3
Upper-Level PSYC or SOSC		3
General Electives		6

Year 4/FALL		
Code/Name		**Credits**
ANSC 468	Therapeutic Certification Hours	3
ANSC 380	Internship Orientation	1
ANSC/AGED/AGSC Tech Elect Upper-Level by advisement		6
Upper-Level PSYC or SOSC		3
General Elective		3

Year 4/SPRING		
Code/Name		**Credits**
ANSC 450	Animal Science Internship	12

Wildlife Management (B.T.) (Curriculum Code – 1858/HEGIS - 0107)

Bachelor of Technology

Overview

On the forefront of global concern comes the demand for wildlife biologists trained to perform an increasing variety of challenging tasks as environmental issues confronting the world continue to emerge. SUNY Cobleskill's Bachelor of Technology program in Wildlife Management is designed to train wildlife biologists for careers in the 21st century. The curriculum is multi-faceted, and prepares students for traditional careers as wildlife biologists with state and federal agencies, as well as new and ever-expanding career opportunities as wildlife biologists and consultants with regional, national, and international corporate environmental firms. Students have the opportunity to obtain all the coursework necessary to satisfy the educational requirements to become appointed as Certified Wildlife Biologist by The Wildlife Society, and the optional 15-credit internship provides students with a unique opportunity to acquire professional experience in the field of wildlife management.

Students who have completed the 2-year AAS degree in Fisheries and Wildlife Technology or Environmental Studies at SUNY Cobleskill with a 2.75 GPA or greater are eligible for admission to the Wildlife Management Bachelor of Technology Program.

Student Learning Outcomes

- Articulate conceptual knowledge and apply technical skills germane to the Wildlife Management profession.
- Identify and evaluate problems in the management of wildlife and formulate solutions
- Plan, execute, and report scientific research as it applies to the management of wildlife populations.
- Effectively communicate (speaking and writing) information relevant to Wildlife Management with diverse audiences.

Major Field Requirements:	**54**
AGSC 111- Intro to Soil Science	3
BIOL 131- Natural History of Vertebrates	3
BIOL 316- Ornithology	3
BIOL 317- Herpetology	3
BIOL 330- Mammalogy	3
BIOL 400- Evolutionary Biology	3
CITA 112- Spreadsheet & Database Applications	3
FWLD 101- Intro Natural Resource Conservation	3
FWLD 125- Wildlife Techniques	3
FWLD 211- Wildlife Law Enforce & PR	2
FWLD 220- Wildlife Management	3
FWLD 221- Fisheries Science	3
FWLD 320- Ecology & Mgmt Waterfowl	3
FWLD 350- Wetlands Assess & Delineation	3
FWLD 351- Wildlife Policy & Reg Comply	1
FWLD 395- Wildlife Damage Management	3
GIST 130/130X- Geographic Info Systems	3
ORHT 121- Woody Plant Materials	3
BIOL 211- Terrestrial Ecology	3
Or BIOL 215- Aquatic Ecology	
Internship:	**15**
FWLD 450- Internship	15
or 300/400-Level Electives	15

Liberal Arts & Sciences:	**54**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
BIOL 111/111X- Biology I	4
BIOL 116- Botany I	3
BIOL 307- Invertebrate Zoology	3-4
Or BIOL 318- Fish Biology	
Or BIOL 415- Marine Ecology	
Or BIOL 308- Terrestrial Invertebrate Ecology	
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
COMM 301- Technical Communications	3
ENGL 111- Fund of Speech Communications	3
FWLD 444- Wildlife Science	3
MATH 111- College Algebra (or higher)	3
MATH 125- Statistics	3
MATH 225- Statistical Methods	3
DEISJ General Education Core Course	3
Additional Liberal Arts and Sciences	9
General Elective:	**2**
PHED	1
FFCS 101- Foundation for College Success	1
Total Credits	**125**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Wildlife Management (B.T.) (Curriculum Code – 1858/HEGIS - 0107)

Suggested Course Sequencing

Year1/FALL		
Code/Name		**Credits**
BIOL 111/111X	Biology I	4
ENGL 101	Composition I	3
FWLD 101	Intro Natural Resource Cons	3
MATH 111	College Algebra (or higher)	3
FFCS 101	Foundation for College Success	1
PHED 151	Wellness	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 131	Natural History of Vertebrates	3
CHEM 111/111X	General Chemistry I	4
CITA 112	Spreadsheet & Database Appl	3
FWLD 125	Wildlife Techniques	3
Anything from GENERAL EDUCATION CORE		3

Year 2/FALL		
Code/Name		**Credits**
BIOL 211 **or** BIOL 215	Terrestrial Ecology **or** Aquatic Ecology	3
CHEM 112/112X	General Chemistry II	4
FWLD 220	Wildlife Management	3
ORHT 121	Woody Plant Materials	3
Anything from GENERAL EDUCATION CORE		3

Year 2/SPRING		
Code/Name		**Credits**
FWLD 211	Wildlife Law & PR	2
FWLD 221	Fisheries Science	3
GIST 130/130X	Geographic Info Systems	3
MATH 125	Statistics	3
Anything from GENERAL EDUCATION CORE		6

Year 3/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science	3
BIOL 116	Botany I	3
FWLD 320	Ecology & Mgmt Waterfowl	3
FWLD 395	Wildlife Damage Management	3
MATH 225	Statistical Methods	3

Year 3/SPRING		
Code/Name		**Credits**
BIOL 316	Ornithology	3
BIOL 317	Herpetology	3
BIOL 400	Evolutionary Biology	3
ENGL 102	Composition II	3
FWLD 444	Wildlife Science	3

Year 4/FALL		
Code/Name		**Credits**
BIOL 307 **or** BIOL 318 **or** BIOL 415 **or** BIOL 308	Invertebrate Zoology **or** Fish Biology **or** Marine Ecology **or** Terrestrial Invertebrate Ecology	3
BIOL 330	Mammalogy	3
COMM 301	Technical Communication	3
ENGL 111	Fund Speech Communications	3
FWLD 350	Wetlands Assess & Delineation	3
FWLD 351	Wildlife Policy & Reg Comply	1

Year 4/SPRING		
Code/Name		**Credits**
FWLD 450 **or** coursework	Internship in Fish/Wildlife **or** 300/400-Level Electives	15

Accessible Instruction Minor

Minor

Overview

The Accessible Instruction minor provides students opportunities to gain multidisciplinary knowledge and practical skills for providing instruction in individuals with a range of learning, neurological, and physical motor challenges. Students will learn how to adapt instructional methods and environments for accessibility based on different learners' needs and goals. This minor is designed for a wide variety of majors and offers flexibility among courses so students can choose an area of focus.

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
ECHD 280- Exceptional Children	3
ECHD 360- Differentiated Instruction	3
PERS 230- Motor Learning and Behavior	3
OR ANSC 368/368X- Therapeutic Riding Instruction	
Six credits chosen from:	6
AGED 309- Teaching/Learning in Ag Ed AMSL 145- American Sign Language I ANSC 344- Dogs in Helping Professions ECHD 170- Child Growth & Dev ECHD 175- Infants and Toddlers ECHD 352- Positive Child Guidance PERS 350- Psyc & Soc of Sport & Exercise PSYC 323- Adult Development & Aging PSYC 330- Psychology of Learning PSYC 350- Abnormal Psychology	

Prerequisites may include:

AGED 307
ANSC 142
ANSC 242
ANSC 268
ECHD 130
ECHD 170
ECHD 190
PERS 201
PSYC 111
PSYC 221
PSYC 231
PSYC 250

Agricultural Education Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
AGED 307- Intro Agricultural Education	3
AGED 309- Teaching/Learning Ag Education	3
AGED 411- Ag Ed/Community Leadership	3
Six credits chosen from:	6
ECHD 260- Foundations of Modern Education ECHD 280- Exceptional Children PSYC 222- Adolescent Psychology PSYC 300- Community Psychology PSYC 323- Adult Development and Aging PSYC 330- Psychology of Learning PSYC 341- Organizational Psychology PSYC 350- Abnormal Psychology	

Prerequisite:

PSYC 111

Art Studies Minor

Minor

Overview

The Art Studies minor is designed for students seeking a broader understanding of Art History and Studio Art. This program will help to foster a culture of design-centered creative thinking campus-wide, by broadening the impact of arts-related coursework on students pursuing fields that are not considered to be "creative" programs.

This minor is open to students enrolled in any Bachelors Program. To satisfy the minor, all students must complete 15 credits of required coursework with at least 6 credits at the 200-level or higher. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
ARTS 111- Design I	3
ARTS 124- History of Art I	3
OR ARTS 125- History of Art II	
Six credits chosen from:	6
ARTS 214- Drawing II ARTS 215- Painting ARTS 216- Ceramics ARTS 300- History of American Art ARTS 324- History of Graphic Design ARTS 310- Selected Topics In Art	
Three credits (not already taken above) chosen from:	3
ARTS 114- Drawing I ARTS 124- History of Art I ARTS 125- History of Art II ARTS 214- Drawing II ARTS 215- Painting ARTS 216- Ceramics ARTS 300- History of American Art ARTS 324- History of Graphic Design ARTS 310- Selected Topics In Art	

Bioinformatics Minor

Minor

Overview

To satisfy the minor, all students must complete 20 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A minimum grade of C or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**16**
CITA 112- Spreadsheet & Database Applications	3
CITA 135- Python Programming	3
BIOL 425- Bioinformatics	3
BIOL 425X- Bioinformatics Lab	1
Select **one** of the following:	3
MATH 225- Statistical Methods **or** MATH 231- Calculus I	
Select **one** of the following:	3
BIOL 410- Molecular Genetics **or** BIOL 430- Applied Immunology	

Prerequisites may include:

BIOL 105/105X
BIOL 111/111X
BIOL 112/112X
BIOL 219/219X
BIOL 375/375X
BIOL 410
CHEM 111/111X
CHEM 112/112X
MATH 125
MATH 131
MATH 231
MATH 232
MATH 233
MATH 310

Biotechnology Minor

Minor

Overview

To satisfy the minor, all students must complete a minimum of 17 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better and a minimum grade of C- or better are required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**17-18**
BIOL 364- Biotechnology	3
BIOL 364X- Biotechnology Lab	1
BIOL 375- Cell Biology	3
BIOL 375X- Cell Biology Lab	1
Six to seven credits chosen from: BIOL 116- Botany BIOL 219/219X- Microbiology BIOL 395- Topics in Current Research BIOL 405/405X- Theory&Methods in Biotechnology BIOL 420/420X- Tissue Culture Techniques CHEM 244/244X- Instrumental Analysis CHEM 395- Topics in Current Search Maximum of three credits chosen from: BIOL 305- Ethics in Science, Medicine, & Tech BIOL 320- Environmental Toxicology BIOL 410- Molecular Genetics BIOL 430- Applied Immunology CHEM 351- Biochemistry	6-7
Three credits chosen from: AGRN, ANSC, FWLD, or ORHT	3

Prerequisites may include:

BIOL 105/105X
BIOL 111/111X
BIOL 112/112X
BIOL 219/219X
BIOL 364/364X
BIOL 375/375X
BIOL 405/405X
BIOL 410
CHEM 111/111X
CHEM 112/112X
CHEM 231/231X
ENGL 101

Cannabis Science Minor

Minor

Overview

The Cannabis Science Minor will provide students with an in-depth exploration of the cannabis industry from seed to final product. The minor covers the complex process of cannabis production, management and cultivation, plant care, yield maximization, breeding, and more. This minor is appropriate for students in horticulture, agriculture, and natural science related majors and provides students opportunities for focus on a specific area of interest. Upon successful completion of this minor, students will be able to (1) demonstrate a broad understanding of the cannabis industry; (2) explain a variety of production and processing techniques; and (3) evaluate market trends.

To satisfy the minor, all students must complete 13 credits of required coursework plus an additional 3 credits from the elective listing. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**16**
AGRN 135- Cannabis Management	2
AGRN 255- Cannabis Harvest and Analysis	2
AGRN 313- Soil Fertility	3
AGRN 351- Cannabis Cultivation	3
ORHT 377- Integrated Pest Management	3
Three credits chosen from the following: AGRN 335- Agricultural Chemicals AGRN 338- Weed Identification and Control CHEM 244- Instrumental Analysis ORHT 335- Irrigation	3

Prerequisites may include:

AGSC 111
AGSC 186
AGSC 281
BIOL 116
CHEM 111/111X

Controlled Environmental Agriculture Minor

Minor

Overview

To satisfy the minor, all students must complete 18 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A minimum grade of C or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**18**
AGSC 281- Plant Pathology	3
ORHT 133- Horticulture Crop Production	3
ORHT 251- Greenhouse Management	3
Three credits chosen from the following:	3
AGRN 335- Agricultural Chemicals ORHT 377- Integrated Pest Management	
Six credits chosen from the following:	6
AGRN 335- Agricultural Chemicals AGRN 350- Plant Nutrition AGRN 351- Cannabis Cultivation ORHT 329- Hydroponics ORHT 356- Plant Propagation ORHT 377- Integrated Pest Management	

Prerequisites may include:

AGSC 111
AGRN 135
AGRN 355
BIOL 101/101X
BIOL 116
CHEM 101/101X
CHEM 111/111X

Chemistry Minor

Minor

Overview

To satisfy the minor, all students must complete 20 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A minimum grade of C or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**20**
CHEM 231- Organic Chemistry I	3
CHEM 231X- Organic Chemistry I Lab	2
CHEM 232- Organic Chemistry II	3
CHEM 232X- Organic Chemistry II Lab	2
CHEM 244- Instrumental Analysis	2
CHEM 244X- Instrumental Analysis Lab	2
Six credits chosen from:	6
CHEM 216/216X- Water Chemistry CHEM 351- Biochemistry MATH 232- Calculus II PHYS 303- Applied Thermodynamics	

Prerequisites may include:

CHEM 111/111X
CHEM 112/112X
MATH 231
PHYS 111

Digital Media Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A minimum grade of C or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

This minor cannot be paired with the Graphic Design Technology BS degree. For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
GART 112- Digital Media	3
GART 151- Typography and Layout	3
GART 251- Computer Graphics I	3
GART 265- Web Design	3
GART 270- Digital Imaging	3

English – Literature and Writing Minor: Literature Focus

Minor

Overview

The English Minor in Literature and Writing gives students the tools for textual and cultural study and advanced writing. The English minor helps students improve the skills that employers in almost every field – business, science and technology, non-profit sector, etc. – are looking for: critical thinking, effective communication both in writing and speech, cultural awareness, and creative problem solving.

To satisfy the minor, all students must complete 18 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A minimum grade of C or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**18**
200-level Literature course chosen from: ENGL 215 ENGL 221 ENGL 223 ENGL 225 ENGL 241 ENGL 293 HUMS 210	3
300-level Literature courses chosen from: ENGL 310 ENGL 316 HUMS 310	6
Any level Literature course chosen from above or from: ENGL 121 ENGL 151	3
ENGL 302	3
Writing course chosen from: ENGL 203 ENGL 205 ENGL 250 ENGL 291 ENGL 320	3

Prerequisites:
ENGL 101

English – Literature and Writing Minor: Writing Focus

Minor

Overview

The English Minor in Literature and Writing gives students the tools for textual and cultural study and advanced writing. The English minor helps students improve the skills that employers in almost every field – business, science and technology, non-profit sector, etc. – are looking for: critical thinking, effective communication both in writing and speech, cultural awareness, and creative problem solving.

To satisfy the minor, all students must complete 18 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A minimum grade of C or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**18**
200-level Literature course chosen from: ENGL 215 ENGL 221 ENGL 223 ENGL 225 ENGL 241 ENGL 293 HUMS 210	3
300-level Literature course chosen from: ENGL 310 ENGL 316 HUMS 310	3
Any level Literature course chosen from above or from: ENGL 121 ENGL 151	3
ENGL 302	3
Writing courses chosen from: ENGL 203 ENGL 205 ENGL 250 ENGL 291 ENGL 320	6

Prerequisites:
ENGL 101

Entrepreneurship Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
ACCT 150- QuickBooks **Or** ACCT 335 Financial Management	3
BADM 134- Principles of Marketing	3
BADM 249- Management	3
BADM 314 Fundamentals of Entrepreneurship	3
BADM 315- Entrepreneurship	3

Prerequisites may include:

ACCT 101
ACCT 103

Equine Assisted Services Minor

Minor

Overview

Therapeutic riding and other equine assisted services are a growing segment of the equine industry. The equine assisted services minor combines coursework from the equine and early childhood programs to give the student a solid background to assist in therapeutic riding and other equine assisted services programs. The minor is intended both for animal science majors as well as being open to other majors across campus. Equine majors will particularly find the minor a meaningful addition to their course of study. Part time and volunteer opportunities abound as well as opportunities for internships, full time positions and further study. Students graduating with the equivalent of a minor have gone on to manage facilities with equine assisted services programs as well as obtained advanced degrees to become therapists (speech and occupational, for examples) that combined their expertise in equine and therapy.

To satisfy the minor, all students would take the 12 credits in the required listing. An additional 3 credits would be selected from the elective listing. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
ANSC 268- Intro to Riding Instruction	1
ANSC 268X- Intro to Riding Instruction Lab	2
ANSC 368- Therapeutic Riding Instruction	2
ANSC 368X- Therapeutic Riding Instruction Lab	1
ECHD 280- Exceptional Children **Or** if ECHD 280 is required for your major, then: ANSC 264/264X- Tackless Training & Lab	3
PERS 230- Motor Learning and Behavior	3
Three credits chosen from:	3
AMSL 145- American Sign Language I	
ANSC 260- Care & Training of Driving Horse	
ANSC 264/264X- Tackless Training & Lab	
ECHD 170- Child Growth and Development Prac	
PSYC 221- Child Psychology	
PSYC 222- Adolescent Psychology	
PSYC 330- Psychology of Learning	

Equine Management Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. This includes 12 credits of 100/200 level coursework and one 300/400 level course from the courses listed below.

Bachelor's degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
ANSC 161- Light Horse Management	2
ANSC 161X- Light Horse Management Lab	1
ANSC 221- Equine or Companion Animal Nutrition	3
Or ANSC 223/223X- Intro to Animal Nutrition	4
ANSC 254- Equine Health	2
ANSC 254X- Equine Health Lab	1
AGBU 245- Equine Business Management	3
AGBU 245X- Equine Business Management Lab	1
Three credits chosen from:	3
ANSC 374/374X- Advanced Equine Reproduction	
ANSC 400- Farm Animal Reproduction	
ANSC 465/465X- Canine Fitness and Strength	
BIOL 300- Principles of Parasitology	

Prerequisites may include:

ANSC 111/111X
ANSC 117/117X
ANSC 150
ANSC 220
ANSC 240/240X
ANSC 252/252X
ANSC 254/254X
BIOL 104/104X
BiOL 111/111X
BIOL 112/112X

Histotechnology Minor

Minor

Overview

To satisfy the minor, all students must complete 18 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**18**
BIOL 114- Medical Terminology/Orientation	2
BIOL 251- Microscopic Anatomy	2
BIOL 251X- Microscopic Anatomy Lab	2
BIOL 268- Microtechniques	3
BIOL 268X- Microtechniques Lab	3
Six credits chosen from:	6
BIOL 258- Anatomy & Physiology I **And** BIOL 258X- Anatomy & Physiology I Lab	
BIOL 259- Anatomy & Physiology II **And** BIOL 259X- Anatomy & Physiology II Lab	
BIOL 305- Ethics Science, Medicine & Tech	
BIOL 430- Applied Immunology	

Prerequisites:

BIOL 111/111X
BIOL 112/112X
BIOL 251/251X
CHEM 111/111X
CHEM 112/112X

Human Resources Management Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
BADM 249- Management	3
BADM 305- International Business	3
BADM 310- Human Resources Management	3
PSYC 341- Organizational Psychology	3
Three credits chosen from:	3
BADM 349- Strategic Mgmt for Quality	
BADM 450- You, The Leader	
PSYC 360- Group Dynamics	

Prerequisites:

ECON 124
BADM 201
PSYC 111

Landscape Management Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
Choose two of the following: ORHT 122- Environmental Design I ORHT 221 & 221X- Landscape Contruction & Lab ORHT 223- Environmental Design II ORHT 282- Arboriculture RECM 222- Turfgrass Management	6
Choose three of the following: AGRN 338- Weed Identification & Control ORHT 321- Herbaceous Plant Materials ORHT 335- Irrigation ORHT 360- Adv. Landscape Contracts ORHT 421- Landscape Plants Assoc & Use ORHT 433- Landscape Firm Management	9

Prerequisites may include:

ORHT 121
ORHT 122
ORHT 160

Leadership Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
BADM 300- Management Communications	3
BADM 450- You, The Leader	3
FSMA 401- Corporate Governance	3
PSYC 360- Group Dynamics	3
Choose one of the following: BADM 249- Management BADM 320- Ethics and Management BADM 349- Strategic Management for Quality COMM 220- Intercultural Communication PSYC 341- Organizational Psychology	3

Prerequisites may include:

BADM 145
BADM 249
CITA 110
ENGL 101
ENGL 111
PSYC 111

Management Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
BADM 223- Business Law I	3
BADM 249- Management	3
BADM 305- International Business	3
BADM 310- Human Resources Management	3
Three credits chosen from:	3
BADM 315- Entrepreneurship	
BADM 349- Strategic Management for Quality	
BADM 420- Marketing Management	
FSMA 401- Corporate Governance	
PSYC 341- Organizational Psychology	
PSYC 360- Group Dynamics	3

Prerequisites:

ECON 124
PSYC 111

Marketing Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
BADM 134- Principles of Marketing	3
BADM 334- Marketing Research	3
MKHT 311- E-Marketing	3
Three credits chosen from:	3
BADM 135- Retailing	
BADM 137- Professional Selling	
Three credits chosen from:	3
BADM 325- International Marketing	
BADM 330- Advertising and Promotion	
BADM 420- Marketing Management	
MKHT 405- Consumer Behavior	

Prerequisites:
BADM 249

Precision Agriculture Minor

Minor

Overview

The Precision Agriculture Minor prepares students to deploy, use, and support precision agriculture technology and associated management applications.

To satisfy the minor, all students must complete 11 credits of required coursework plus an additional 6 credits from the elective listing. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**17**
AGEN 248- GNSS Apps in Agriculture	2
AGEN 348- Precision Ag Applications	3
AGRN 313- Soil Fertility	3
AGSC 111- Introduction to Soil Science	3
Six credits chosen from the following:	6
AGRN 242- Forage & Seed Crops AGRN 335- Agricultural Chemicals AGRN 338- Weed Identification & Control AGRN 350- Plant Nutrition AGSC 186- Entomology AGSC 281- Plant Pathology ORHT 335- Irrigation ORHT 377- Integrated Pest Management	

Prerequisites may include:

AGSC 111
AGSC 186
AGSC 281
BIOL 101
BIOL 116
CHEM 111

Sport & Exercise Minor

Minor

Overview

The Sport & Exercise minor is available to any student in a bachelor degree program.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
PERS 201- Introduction to Sport & Exercise	3
PERS 230- Motor/Learning Behavior	3
PERS 350- Psychology/Sociology of Sport & Exercise	3
PERS Electives chosen from:	6
PERS 211- First Aid and CPR PERS 213- Current Issues Health/Wellness PERS 214- Care & Prevention of Athletic Injuries PERS 215- Organiz/Admin Physical Ed & Athletics PERS 216- Theory & Techniques of Coaching PERS 340- Sport and Society	

Sports Management Minor

Minor

Overview

The Sports Management minor is designed to provide a high quality educational experience focusing on the principles and practices of the industry. The sports industry requires a variety of people with specific academic training. It needs athletes, sales people, publicists, business managers, scouts, statisticians, officials, coaches, store managers, and health and fitness personnel. The goal of the Sports Management minor is to provide the student with a concentration of courses aimed at preparing the student for a career in the management and administration of the sport and fitness industry.

The Sports Management minor is available to any student in a bachelor degree program.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
PERS 240- Facilities and Event Management	3
PERS 250- Introduction to Sports Management	3
PERS 360- Sports Marketing	3
PERS Electives chosen from:	6
PERS 211- First Aid and CPR PERS 215- Organiz/Admin Physical Ed & Athletics PERS 216- Theory & Techniques of Coaching PERS 230- Motor/Learning Behavior PERS 340- Sport and Society PERS 350- Psychology/Sociology Sport & Exercise	

Prerequisites:
PERS 201

Supply Chain Management Minor

Minor

Overview

The minor in Supply Chain Management is designed to prepare students for work experience across the various domains of supply chain including logistics, warehousing, distribution, purchasing, transportation, and inventory management. Supply chain management and logistics are key functions through which companies can gain strategic advantage, and companies are hiring graduates to drive innovations for their new economic surroundings. In this minor, courses drawing on the foundations of supply chain for both manufacturing and service industries allow students to complete a course of study that can meet the new demands.

This minor can be completed fully online or through a hybrid method.

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
BADM 249- Management	3
BADM 259- Supply Chain Management	3
BADM 355- Logistics Management	3
BADM 365- Purchasing	3
Three credits chosen from:	3
BADM 320- Ethics and Management	
BADM 360- Business Sustainability	
BADM 349- Strategic Management for Quality	
CITA 405- Project Management	

Prerequisites may include:
BADM 223

Sustainability Minor

Minor

Overview

To satisfy the minor, all students must complete 15 credits of required coursework. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
BADM 360- Business Sustainability – Triple Bottom Line	3
FSMA 401- Corporate Governance	3
PSCI 105- Environmental Science and Technology	3
Or if PSCI 105 is required for your major, then choose one of the following: ENVR 401- Alternative Energy Prod Tech ENVR 411- Environmental Pollution	
SUST 101- Introduction to Sustainability	3
Choose one of the following: BIOL 305- Ethics Science, Medicine & Tech ENVR 301- Unit Operations and Processes ENVR 350- Environmental Law and Regulation ENVR 401- Alternative Energy Prod Tech ENVR 411- Environmental Pollution	3

Prerequisites may include:

BADM 223
BADM 249
MATH 231
PHYS 111
PHYS 112

Turfgrass Management Minor

Minor

Overview

The Turfgrass Management Minor provides students with an introduction to the management and maintenance of turfgrasses used for aesthetics (residential and commercial lawns, parks, institutional grounds), and recreation (golf courses, athletic and sports fields). Students will gain an understanding of the techniques required to successfully establish and manage turfgrasses commonly grown throughout the United States.

To satisfy the minor, all students must complete 14 credits of required coursework plus an additional 3 credits from the elective listing. Bachelor degree students can seek to fulfill the coursework for the minor. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**17**
ORHT 335- Irrigation	3
ORHT 377- Integrated Pest Management	3
RECM 222- Turfgrass Management	3
RECM 290B- Special Projects Rec Land Mgt	2
RECM 378- Golf Course Management	3
Three credits chosen from the following:	3
AGEN 121/121X- Turf and Grounds Care Equipment AGEN 122/122X- Basic Small Engine Repair AGRN 313- Soil Fertility AGRN 335- Agricultural Chemicals AGRN 338- Weed Identification and Control AGRN 350- Plant Nutrition	

Prerequisites may include:

AGSC 111
AGSC 186
AGSC 281
BIOL 116
CHEM 111/111X

Web Development Minor

Minor

Overview

The Web Development Minor is designed to provide students with deeper study and hands-on learning with both the front-end (client-side) and back-end (server-side) of web development. The expansion of e-commerce, the increased reliance on the mobile web, and the growth of the Internet of Things (IoT) are expected to fuel demand for web developers over the next decade. Web development technologies are ubiquitous and well-entrenched – for example, JavaScript, the only language to run natively in web browsers, issued by over 80% of developers and 95% of all websites – however, a shortage of these skills persists across the technology industry. A minor in web development will allow interested students to focus on this fundamental pillar of information technology and master both front- and back-end web development skills.

To satisfy the minor, all students must complete 15 credits of required. The Web Development Minor is available to any student in a bachelor degree program. A GPA of 2.0 or better is required of the coursework in the minor to be awarded the minor.

A maximum of 9 credits may be shared between major field requirements and a minor. Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements.

For further policy information regarding Minors, please see Academic Policies 3.21 Minor Courses.

Minor Requirements:	**15**
CITA 130- Intro to Web Development	3
CITA 265- Web Development II	2
CITA 265X- Web Development II Lab	1
CITA 365- Web Development III	2
CITA 365X- Web Development III Lab	1
CITA 340- Database Concepts	3
CITA 420- Programming for the Web	3

Prerequisites:

CITA 112- Spreadsheets and Databases
CITA 330- Web Design II

Agricultural Business (A.A.S.) (Curriculum Code – 0511/HEGIS - 5401)

Associate in Applied Science

Overview

Agricultural Business or "agribusiness" encompasses a wide range of functions required for successful modern agriculture. These functions include providing supplies and services to farmers, actual on-farm production of food and fiber, and processing and distributing products for consumers in the United States and beyond. Food, which is undoubtedly the most basic of necessities, is an extremely important industry, offering a tremendous variety of rewarding careers. As global populations continue to expand, it will require additional skilled individuals to ensure that growing agricultural needs continue to be met.

Students in the AAS Agricultural Business program will be introduced to key aspects of the farm and agribusiness sectors. Various management functions will be incorporated into coursework including the gathering, organization and interpretation of production and financial information. Students will also be exposed to basic economic concepts that inform sound decision making at the farm and market levels, and they will be exposed to various agricultural technologies and software to provide real-world experience. The program ultimately prepares graduates for further education and careers that require strong communication skills and working with diverse teams.

Student Learning Outcomes

- Understand basic management strategies commonly used by farmers, agribusiness owners and front-line managers.
- Apply agribusiness and precision agriculture technologies to improve productivity, efficiency and compliance.
- Gather, organize and interpret production and financial data common to farms and agribusinesses.
- Relate economic principles including supply/demand, market trends, and pricing dynamics to local and global agricultural industries.
- Develop verbal and written communication skills to effectively work with diverse stakeholders connected to various agricultural sectors.

Major Field Requirements:	**19**
AGBU 104- Intro to Ag Microeconomics	3
AGBU 121- Marketing Ag Products	3
AGBU 141- Ag Production Management	2
AGBU 141X- Ag Production Management Lab	1
AGBU 207- Ag Business Operations	3
AGBU 207X- Ag Business Operations Lab	1
AGBU 242- Ag Business Financial Management	2
AGBU 242X- Ag Business Financial Management Lab	1
ACCT 101- Financial Accounting	3
Major Technical Electives:	**15**
AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ORHT, ACCT, BADM, CITA	

Liberal Arts & Sciences:	**21**
ENGL 101- Composition I	3
Or ENGL 102- Composition II	
MATH 103 (Mathematics of Finance) or higher	3
Lab Science	3
Additional Liberal Arts and Sciences	12
General Electives:	**5**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	3
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Business (A.A.S.) (Curriculum Code – 0511/HEGIS - 5401)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 104	Intro to Ag Microeconomics	3
AGBU 121	Marketing Ag Products	3
ENGL 101	Composition I	3
MATH 103 or higher	Mathematics of Finance (or higher)	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGBU 141	Ag Production Management	2
AGBU 141X	Ag Production Management Lab	1
ACCT 101	Financial Accounting	3
Technical Elective		3
Lab Science		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 242	Ag Bus Financial Management	2
AGBU 242X	Ag Bus Financial Management Lab	1
AGBU 207	Ag Business Operations	3
AGBU 207X	Ag Business Operations Lab	1
Technical Elective		3
Liberal Arts and Sciences		6

Year 2/SPRING	
Code/Name	**Credits**
Technical Elective	9
Liberal Arts and Sciences	3
General Elective	3
Anything from PHED	1

Agricultural Power Machinery (A.A.S.) (Curriculum Code – 0506/HEGIS – 5301)

Associate in Applied Science

Overview

Modern agriculture demands skilled technicians who have an understanding of the complex designs and applications of power machinery. The Agricultural Power Machinery major deals with the techniques of servicing and selling farm machinery and tractors. Students develop basic working skills in the mechanics of gas and diesel power units, field machines, hydraulics, transmissions and final drives, as well as diesel engines, power trains, computerized controllers, electronics, and mobile air conditioning as they pertain to modern tractors. Additional course work specializes in tillage, planting, harvesting, and materials handling equipment. Extensive use of electronic technical manuals, computerized testing procedures, and Global Positioning are incorporated in the curriculum. Practical knowledge of agriculture coupled with general management practices will prepare students for employment with farms, agricultural equipment dealerships and companies for management, sales, parts and service positions.

Student Learning Outcomes

- Troubleshoot and diagnose malfunctions in agricultural equipment including engines and fuel systems, power trains, hydraulic systems, electrical/electronic systems, heating and air conditioning systems, tillage equipment, planting equipment, hay and forage equipment, and harvesting equipment using modern testing equipment and computer-based diagnostics and information.
- Adjust, repair, and overhaul mechanical system components using both standard as well as manufacturer specific tools and procedures.
- Understand the principles of operation of various equipment systems along with advanced technology applications including precision agriculture.
- Work effectively in an equipment dealership by knowing the functions and procedures of service departments, sales departments, and parts departments.
- Work safely to avoid accidents that cause damage or injury to themselves, other people, or personal property.
- Adapt to the needs of the employers who need people that can think critically, manage their time effectively, communicate confidently, problem solve using logic and/or mathematical reasoning, and appreciate the diversity of their surroundings including customers, co-workers, and the environment.

Major Field Requirements:	**34**
AGEN 111/111X- Intro to Computing in Ag Eng Tech	2
AGEN 132/132X- Fund of Diesel Engine Tech	3
AGEN 151/151X- Basic Welding	2
AGEN 166/166X- Agricultural Mechanics	2
AGEN 170/170X- Basic Hydraulics	3
AGEN 231/231X- Electrical/onic System Diag	3
AGEN 232/232X- Power Train Theory Diag/Repair	4
AGEN 241/241X- Agricultural Machinery	4
AGEN 245/245X- Air Conditioning	2
AGEN 273/273X- Hydraulics&Hydrostatic Diag	3
AGEN 285- Equipment Retailing Management	3
AGEN 292/292X- Fuel Systems	3
Advisement Track: (choose one)	**6**
Power Machinery:	
AGEN 115- Supervised Work Experience	1
AGEN (excluding 105 & 261)	4
FFCS 101- Foundation for College Success	1
John Deere:	
AGEN 007- Industry Work Experience	0
AGEN 116- Manufacturer Orientation	1
AGEN 117- Manufacturer Training 1	1
AGEN 118- Manufacturer Training 2	1
AGEN 119- Manufacturer Training 3	1
AGEN (excluding 105 & 261)	1
FFCS 101- Foundation for College Success	1

Liberal Arts & Sciences:	**20**
ENGL 101- Composition I	3
ENGL 102 or higher	3
PHED 151	1
PHYS 101/101X- Principles of Physics I	4
Math/Science	3
Additional Liberal Arts and Sciences	6
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Power Machinery (A.A.S.) (Curriculum Code – 0506/HEGIS – 5301)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGEN 111	Intro Computing in Ag Eng Tech	1
AGEN 111X	Intro Comp Ag Eng Tech Lab	1
AGEN 116	Manufacturer Orientation**	1
AGEN 151	Basic Welding I	1
AGEN 151X	Basic Welding Lab	1
AGEN 166	Agricultural Mechanics I	1
AGEN 166X	Agricultural Mechanics Lab	1
AGEN 170	Basic Hydraulics I	2
AGEN 170X	Basic Hydraulics	1
ENGL 101	Composition I	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 117	Manufacturer Training 1**	1
AGEN 132	Fund Diesel Engine Tech I	2
AGEN 132X	Fund Diesel Engine Tech Lab	1
PHYS 101	Principles of Physics I	3
PHYS 101X	Principles of Physics I Lab	1
ENGL 102 (Composition II) or higher		3
MATH 111 (College Algebra) or higher, or science elective		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGEN 007	John Deere Work Experience	0
AGEN 118	Manufacturer Training 2**	1
AGEN 231	Electrical/onic Sys Diag I	2
AGEN 231X	Electrical/onic Sys Diag Lab	1
AGEN 241	Agricultural Machinery	2
AGEN 241X	Agricultural Machinery Lab	2
AGEN 285	Equipment Retailing Mgmt I	3
AGEN 292	Fuel Systems I	2
AGEN 292X	Fuel Systems Lab	1
AGEN Elective		2*/1**

Year 2/SPRING		
Code/Name		**Credits**
AGEN 115	Supervised Work Experience*	1
AGEN 119	Manufacturer Training 3**	1
AGEN 232	Pwr Trn Theory Diag/Repair I	2
AGEN 232X	Pwr Train Theory Diag&Rep Lab	2
AGEN 245	Air Conditioning I	1
AGEN 245X	Air Conditioning Lab	1
AGEN 273	Hydraulic&Hydrostatic Diag	2
AGEN 273X	Hydraulic&Hydrostatic Diag Lab	1
PHED 151	Wellness	1
AGEN Elective*		2

* Indicates courses required for the Power Machinery advisement tack
** Indicates courses required for the John Deere advisement track.

Agricultural Science (A.A.S.) (Curriculum Code – 0514/HEGIS - 5402)

Associate in Applied Science

Overview

The Agricultural Science curriculum is designed to prepare students who plan to continue their studies for a Bachelor's degree in Agriculture. This curriculum provides an opportunity for students to combine the technical courses of Agricultural Science with an increased emphasis in science and mathematics.

Student Learning Outcomes

- Students will be academically prepared to continue studies beyond the Associate's degree level.
- Students will be familiar with the basic nutritional characteristics of feedstuffs used in the Northeast.
- Students will be familiar with factors that affect the nutritional requirements of livestock.
- Students will be familiar with factors concerned in meeting the nutritional requirements of livestock.
- Students will be able to access animal science information.
- Students will be familiar with basic care and management, conformation, evaluation, and handling of large animals.
- Students will be able to work as part of a team.

Major Field Requirements:	**12**
ANSC 111/111X- Intro to Animal Science	3
ANSC 122/122X- Feeds & Feeding	3
Or ANSC 123/123X- Intro to Dairy Nutrition	
Or ANSC 221- Equine/Companion Animal Nutri	
ANSC 100-499	3
ANSC 200-level Course	3
Agricultural Electives:	**12**
AGBU, AGEN, AGRN, AGSC, ANSC	

Liberal Arts & Sciences:	**28**
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
ENGL 101- Composition I	3
ENGL 102- Composition II	3
MATH 111- College Algebra (or higher)	3
Additional Liberal Arts and Sciences	3
General Electives	**8**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	6
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Agricultural Science (A.A.S.) (Curriculum Code – 0514/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 111	Intro to Animal Science	2
ANSC 111X	Intro to Animal Science Lab	1
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
ENGL 101	Composition I	3
MATH 111 or higher	College Algebra (or higher)	3
Anything from AGBU, AGEN, AGRN, AGSC, ANSC		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 122/122X **or** ANSC 123/123X **or** ANSC 221	Feeds and Feeding **or** Intro to Dairy Nutrition **or** Equine/Companion Animal Nutri	3
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
ENGL 102	Composition II	3
PHED		1

Year 2/FALL		
Code/Name		**Credits**
Anything from ANSC		3
BIOL 112	Biology II	3
BIOL 112X	Biology II Lab	1
Anything from AGBU, AGEN, AGRN, AGSC, ANSC		6
Liberal Arts and Sciences		3

Year 2/SPRING	
Code/Name	**Credits**
ANSC 200-Level	3
Anything from AGBU, AGEN, AGRN, AGSC, ANSC	3
General Electives	6

Agriculture: Animal Industry (A.A.S.) (Curriculum Code – 2297/HEGIS - 5402)

Associate in Applied Science

Overview

The Animal Industry AAS degree program is designed to offer students the opportunity to study animal sciences. The program allows the student flexibility in tailoring a program to meet their career goals while giving them a solid base in the animal sciences. The program prepares students for careers in the animal industry including its support industries. This program is suitable for students looking to take courses in small animal management or specialize in more than one farm animal species or combine an animal interest with one in agricultural business, agricultural education, agricultural engineering or plant science. Students may elect to continue their education by transferring into a bachelor of technology within the school of agriculture.

Student Learning Outcomes

- Be familiar with the basic care, handling and management of animals
  - Student will demonstrate basic animal handling skills
  - Student will show knowledge of the care and management of animals
- Be familiar with the nutritional needs of animals
  - Student will be able to analyze an animal ration
  - Student will be able to develop an animal ration
- Be able to access animal science information
  - Student will be able to do a library search
  - Student will be able to present accessed animal science information into written and oral form
- Be able to communicate effectively both oral and written
  - Demonstrate effective oral and written communication
- Be able to work successfully with team members to achieve a common assignment
  - Demonstrate successes at team activity by contributing to a team project

Major Field Requirements:	**30**
ANSC 111/111X- Intro to Animal Science	3
ANSC 122/122X- Feeds and Feeding	3
Or ANSC 221- Equine & Companion Animal Nutri	
ANSC 200-level course	6
AGBU Course	3
AGSC 141- Career Opportunities in Ag Industry	1
AGSC 241- Ag Career Prep	1
Ag Electives by Advisement from following prefixes:	13
ANSC, AGBU, AGEN, AGRN, AGSC, ORHT	

Liberal Arts & Sciences:	**21**
ENGL 101- Composition I	3
BIOL	3
MATH 111- College Algebra or higher	3
Additional Liberal Arts and Sciences	12
General Electives	**10**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	8
Total Credits	**61**

20 credits General Education Skills Areas

General Education Core Competencies

Math Competency

Applied Learning Competency

FFCS Competency

Agriculture: Animal Industry (A.A.S.) (Curriculum Code – 2297/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 141	Career Opportunities in Ag Industry	1
Anything from BIOL		3
ENGL 101	Composition I	3
Anything from AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ORHT		6
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 111	Intro to Animal Science	2
ANSC 111X	Intro to Animal Science Lab	1
ANSC 122/122X **or** ANSC 221	Feeds and Feeding **or** Equine & Companion Animal Nutr	4 **or** 3
MATH 111 or higher	College Algebra (or higher)	3
Liberal Arts and Sciences		3
PHED		1

Year 2/FALL		
Code/Name		**Credits**
ANSC 200-Level		3
Anything from AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ORHT		3
Anything from AGBU		3
Liberal Arts and Sciences		3
General Elective		3

Year 2/SPRING		
Code/Name		**Credits**
ANSC 200-Level		3
AGSC 241	Ag Career Prep	1
Anything from AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ORHT		4
Liberal Arts and Sciences		3
General Elective		5

Animal Science: Beef & Livestock Studies (A.A.S.) (Curriculum Code – 0561/HEGIS - 5402)

Associate in Applied Science

Overview

The degree in Beef and Livestock Studies is geared towards providing a solid base in the renewed interest and increase of the production and marketing of meat animals in the Northeast. Students have ample opportunities to gain hands-on experience in handling various livestock using SUNY Cobleskill's year-round maintained breeding and market animal resources in the herds/flocks of beef, sheep, meat goats and swine, and seasonally with rabbits and poultry. Applied knowledge related to care and management, feeding, breeding, selection, evaluations, marketing and meat animal processing through the College's USADA Meats Processing Facility are highlights of major field courses.

The changing profile of the New York animal livestock industry toward increased grassland farming and the enlargement of marketing facilities in the Northeast have greatly influenced livestock production. Students are trained in practical, hands-on situations using SUNY Cobleskill's cow/calf, stocker and feeder programs as well as the College's sheep and goat flock. Applied knowledge in livestock production related to selection, care and management, nutrition, breeding, health and opportunities in the industry are emphasized. Modern technology has created a demand for trained specialists in this branch of livestock management and the agribusiness field.

Student Learning Outcomes

- Prepare a management plan for an animal enterprise or processing facility that include skills for positive handling, care and management of animals and animal products.
- Recognize animal health and wellness and be able to choose appropriate management techniques to optimize the production of the herd or flock.
- Describe animal nutritional requirements for the production of food and fiber and translate the needs of an animal into appropriate ration formulations, then evaluate the effectiveness of the ration.
- Relate the needs and outputs of animals to the forage and crop resources available.
- Analyze industry record systems to implement and appropriate decision-making strategy that will maximize the profitability of the herd or flock.
- Identify current breeding and reproductive methods and practices in the livestock industry and use them to evaluate the genetic merit of individual animals for selection decisions on the enterprise.

Major Field Requirements:	**34**
AGBU 141/141X- Ag Production Management	3
AGEN course	3
AGRN 242- Forage and Seed Crops	3
Or AGSC 111- Intro to Soil Science	
ANSC 107/107X- Meat Products	3
ANSC 111/111X- Intro to Animal Science	3
ANSC 115- Animal Science Techniques I	2
ANSC 117/117X- Intro to Livestock Production	3
ANSC 215- Animal Science Techniques II	1
ANSC 218/218X- Livestock Production, Eval, & Mktg	3
ANSC 220 – Animal Reproduction	3
ANSC 223/223X- Principles of Animal Nutrition	4
ANSC 252/252X – Ruminant Health	3

Liberal Arts & Sciences:	**22**
ENGL 101- Composition I	3
PHED 151- Wellness	1
BIOL or CHEM	3
MATH 111- College Algebra	3
Additional Liberal Arts and Sciences	12
General Electives	**4**
FFCS 101- Foundation for College Success	1
General Electives	3
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Animal Science: Beef & Livestock Studies (A.A.S.) (Curriculum Code – 0561/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 115	Animal Science Techniques	2
ANSC 111	Intro to Animal Science	2
ANSC 111X	Intro to Animal Science Lab	1
MATH 111	College Algebra	3
ENGL 101	Composition I	3
BIOL or CHEM	Anything from Biology or Chemistry	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGBU 141	Ag Business Management	2
AGBU 141X	Ag Business Management Lab	1
ANSC 117	Intro to Livestock Production	2
ANSC 117X	Intro to Livestock Production Lab	1
ANSC 107	Meat Products	2
ANSC 107X	Meat Products Lab	1
ANSC 223	Principles of Animal Nutrition	3
ANSC 223X	Principles of Animal Nutrition Lab	1
ANSC 215	Animal Science Techniques II	1

Year 2/FALL		
Code/Name		**Credits**
Anything from AGEN		3
ANSC 252	Ruminant Health	2
ANSC 252X	Ruminant Health Lab	1
PHED 151	Wellness	1
Liberal Arts and Sciences		6
General Elective		3

Year 2/SPRING		
Code/Name		**Credits**
AGRN 242 **Or** AGSC 111	Forage & Seed Crops **Or** Introduction to Soil Science	3
ANSC 220	Animal Reproduction	3
ANSC 218	Livestock Prdtn, Eval & Mktg	2
ANSC 218X	Livestock Prdtn, Eval & Mktg Lab	1
Liberal Arts and Sciences		6

Animal Science: Dairy Production & Management (A.A.S.) (Curriculum Code – 0507/HEGIS - 5402)

Associate in Applied Science

Overview

The Dairy Production and Management curriculum at SUNY Cobleskill is designed to provide a well-rounded education in the efficient and profitable management of dairy operations. The dairy industry is recognized as one of the largest and most important industries in New York State. The need for well-trained and competent workers in this growing business is consistently greater than the number of graduates available for placement. SUNY Cobleskill is a leader in two-year education and is committed to meeting the future needs of the dairy industry in the Northeastern United States. Students gain necessary skills, knowledge and experience through classroom instruction, laboratory training, on-farm experience and field visits. Students also will be provided with the knowledge to enable them to continue their education in bachelor's degree programs or to enter closely related occupations in the dairy industry.

Student Learning Outcomes

- Prepare a management plan for a dairy enterprise that includes skills for positive handling, care and management of animals within the herd.
- Recognize the dairy animal's health and wellness and be able to choose appropriate management techniques to optimize the production of the herd.
- Describe animal nutritional requirements and translate these needs into appropriate ration formulations, then evaluate the effectiveness of the ration.
- Relate the needs and outputs of the dairy herd to the forage and crop resources available.
- Analyze dairy industry record systems to implement an appropriate decision-making strategy that will maximize the profitability of the herd.
- Identify current breeding and reproductive methods and practices in the dairy industry and utilize them to evaluate the genetic merit of individual animals for selection decisions.

Major Field Requirements:	**27**
AGBU 141/141X – Ag Production Management	3
ANSC 111/111X – Intro to Animal Science	3
ANSC 112- Dairy Science Techniques I	2
ANSC 150- Intro to Dairy Cattle Management	3
ANSC 155- Dairy Record Management	3
ANSC 212- Dairy Cattle Management	3
ANSC 223/223X- Principles of Animal Nutrition	4
ANSC 241- Dairy Cattle Breeding	3
ANSC 252/252X- Ruminant Health	3
Major Technical Electives: (chosen from)	**3**
AGBU 104- Intro to Ag Microeconomics	3
AGBU 122- Milk Marketing & Dairy Policy	3
AGBU 242/242X- Ag Bus Financial Management	3
AGRN 242- Forage & Seed Crops	4
AGSC 111- Intro to Soil Science	3
ANSC 272/272X- Artificial Insemination	3
ANSC 274/274X- Bovine Hoof Care	3

Liberal Arts & Sciences:	**21**
ENGL 101- Composition I	3
BIOL 104/104X- Prin Animal Anatomy & Physiology	3
Additional Liberal Arts and Sciences (SPAN 101 recommended)	15
General Electives	**9**
PHED	1
FFCS 101- Foundation for College Success	1
General Electives	7
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Animal Science: Dairy Production & Management (A.A.S.)(Curriculum Code – 0507/HEGIS – 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 111	Intro to Animal Science	2
ANSC 111X	Intro to Animal Science Lab	1
BIOL 104	Prin Animal Anatomy/Physiology	2
BIOL 104X	Prin Animal Anat/Phys Lab	1
ANSC 112	Dairy Techniques I	2
ENGL 101	Composition I	3
General Elective		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGBU 141	Ag Production Mgmt	2
AGBU 141X	Ag Production Mgmt Lab	1
ANSC 223	Principles of Animal Nutrition	3
ANSC 223X	Principles of Animal Nutrition Lab	1
ANSC 150	Intro to Dairy Cattle Management	3
Liberal Arts and Sciences		6

Year 2/FALL		
Code/Name		**Credits**
ANSC 155	Dairy Record Management	3
ANSC 241	Dairy Cattle Breeding	3
ANSC 252	Ruminant Health	2
ANSC 252X	Ruminant Health Lab	1
Liberal Arts and Sciences		6

Year 2/SPRING		
Code/Name		**Credits**
ANSC 212	Dairy Cattle Management	3
Major Technical Elective		3
Liberal Arts and Sciences		3
General Elective		4
PHED		1

Animal Science: Equine Studies (A.A.S.) (Curriculum Code – 0518/HEGIS – 5402)

Associate in Applied Science

Overview

SUNY Cobleskill's Equine Studies program is the oldest curriculum of its kind in New York State. It has been successfully training students to work in the fields of equine care management and related agribusinesses for more than 35 years. Opportunities for graduates of this program are excellent and varied.

Student Learning Outcomes

- Students will be able to do a library search and demonstrate translation or material into written or oral format.
- Students will demonstrate success at team activities.
- Students will recognize and demonstrate safe horse handling techniques.
- Students will be able to analyze an equine ration.
- Students will understand basic training and behavior of equine.
- Students will be able to demonstrate basic equine care skills.
- Students will be able to successfully critique a management situation.
- Students will understand basic reproduction principles.

Major Field Requirements:	**36**
AGBU 245- Equine Business Management	4
AGEN 105- Farm Equipment Operation/Safety	1
AGRN 240- Equine Forage Management Prac	3
ANSC 111/111X- Intro to Animal Science	3
ANSC 116- Equine Science Techniques	1,1
ANSC 161/161X- Light Horse Management	3
ANSC 164/164X- Intro to Equine Training	2
ANSC 216- Equine Science Techniques II	1
ANSC 221- Equine/Companion Animal Nutrition	3
ANSC 240/240X- Equine Brdg & Brdg Farm Mgmt	3
ANSC 254/254X- Equine Health	3
ANSC 264/264X- Tackless Training	3
Ag electives	5

Liberal Arts & Sciences:	**20**
ENGL 101- Composition I	3
BIOL (recommended BIOL 104 and BIOL 105)	6
Additional Liberal Arts and Sciences	11
General Electives	**4**
General Electives	3
PHED	1
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Animal Science: Equine Studies (A.A.S.) (Curriculum Code – 0518/HEGIS – 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGEN 105	Farm Equip Operatn/Safety I	1
ANSC 116	Equine Science Techniques I	1
ANSC 161	Light Horse Management	2
ANSC 161X	Light Horse Management Lab	1
ANSC 264	Tackless Training	2
ANSC 264X	Tackless Training Lab	1
Anything from BIOL (BIOL 104/104X recommended)		3
ENGL 101 **or** ENGL 102	Composition I **or** Composition II	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 116	Equine Science Techniques I	1
ANSC 111	Intro to Animal Science I	2
ANSC 111X	Intro to Animal Science I Lab	1
ANSC 221	Equine/Companion Animal Nutrit	3
ANSC 164	Intro to Equine Training	1
ANSC 164X	Intro to Equine Training Lab	1
Anything from BIOL (BIOL 105/105X recommended)		3
Liberal Arts and Sciences		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
AGRN 240	Equine Forage Mgmt Prac I	3
ANSC 254	Equine Health	2
ANSC 254X	Equine Health Lab	1
Ag Elective		3
Liberal Arts and Sciences		7

Year 2/SPRING		
Code/Name		**Credits**
AGBU 245	Equine Business Management	4
ANSC 216	Equine Science Techniques II	1
ANSC 240	Equine Breedg & Brdg Farm Mgmt	2
ANSC 240X	Equine Brdg/Brdg Farm Mgt Lab	1
Ag Elective		3
General Elective		3

Biological Technology (A.A.S.) (Curriculum Code – 0614/HEGIS - 5407)

Associate in Applied Science

Overview

Biological technicians learn a variety of skills applicable in biological science, including biotechnology, one of the largest growing industries in the world. SUNY Cobleskill offers a two-year program of study leading to an A.A.S. degree with a concentration in Biological Technology. Students in this program are provided with a basic foundation in university-level biology, chemistry, mathematics and liberal arts. In addition, specialty courses in microbiology, botany, human physiology, anatomy, organic chemistry, histology, vertebrate biology, physics, instrumental analysis and advanced biological techniques are selected to fine-tune our program to students' specific career goals. Techniques mastered by students include cell and tissue cultures, basics of animal care and small animal surgery, microbiological methods, contemporary laboratory instrumentation, and recombinant DNA methods. Biological technicians have a unique opportunity to be on the cutting edge of contemporary science in industry, medicine and basic biomedical research. In addition, by choosing proper elective courses, students may easily transfer to a variety of four-year programs.

Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

- Students will be able to prepare a professional quality technical report.
- Students will demonstrate a basic understanding of the nature of science.
- Students will demonstrate good lab practice.
- Students will understand and demonstrate standard ethical practices.
- Students will demonstrate knowledge of the fundamental principles common to living systems at the molecular and cellular level: DNA, RNA, protein synthesis, and structure-function relationship of cellular organelles.
- Students will demonstrate knowledge in the principles of microscopy, skill in microscopic technique, and proper care and maintenance procedures.
- Students will demonstrate understanding of the basic concepts in genetic engineering and related methods of bacterial transformation, screening, DNA isolation, DNA characterization, and genetic cloning.
- Students will demonstrate, by experimental design, advanced knowledge of current applications in cell and molecular biology.
- Students will demonstrate mastery of sterile techniques of media preparation for tissue culture.
- Students will demonstrate the ability to perform as part of a team in group activities.
- Students will demonstrate critical thinking skills.

Major Field Requirements:	**35**
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
BIOL 219/219X- Microbiology	4
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
BIOL 117- Botany II	3
Or BIOL 136/136X- Vertebrate Zoology	
Or BIOL 258/258X- Anatomy and Physiology I	
BIOL 364/364X- Biotechnology	4
Specialized Electives chosen from:	8
BIOL, ENHT, CHEM, MATH, PHYS	

Liberal Arts & Sciences:	**21**
ENGL 101- Composition I	3
MATH (111 or higher)	6
Additional Liberal Arts and Sciences	12
General Electives:	**10**
General Electives	9
PHED	1
Total Credits	**66**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Biological Technology (A.A.S.) (Curriculum Code – 0614/HEGIS - 5407)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
ENGL 101	Composition I	3
MATH 111 or higher	College Algebra (or higher)	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 112	Biology II	3
BIOL 112X	Biology II Lab	1
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
MATH 111 or higher	College Algebra (or higher)	3
BIOL 117 **or** BIOL 136/136X **or** BIOL 258/258X	Botany II **or** Vertebrate Zoology **or** Anatomy & Physiology I	3 **or** 3 **or** 4
Anything from PHED		1
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
BIOL 219	Microbiology	3
BIOL 219X	Microbiology Lab	1
Anything from BIOL, ENHT, CHEM, MATH, PHYS		4
Liberal Arts and Sciences		6
General Elective		4

Year 2/SPRING		
Code/Name		**Credits**
BIOL 364	Biotechnology	2
BIOL 364X	Biotechnology Lab	2
Anything from BIOL, ENHT, CHEM, MATH, PHYS		4
Liberal Arts and Sciences		3
General Elective		4

Business-Business Administration (A.A.S.) (Curriculum Code – 0632/HEGIS - 5004)

Associate in Applied Science

Overview

The flexible Business Administration programs at SUNY Cobleskill provide a foundation for a business career by offering the basic training necessary to succeed, while allowing students the opportunity to explore many and varied potential business careers. Students enrolled in Business Administration programs can earn an Associate in Applied Science (A.A.S.) or Associate in Science (A.S.) degree.

Students must complete, with a minimum GPA of 2.00, all required and elective courses bearing the major field course prefixes.

Student Learning Outcomes

- Apply effective oral and written communication skills.
- Understand foundational business principles and practices.
- Demonstrate professional and ethical behavior.
- Facilitate effective team outcomes.

Major Field Requirements:	**33**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
BADM 131- Principles of Business	3
BADM 134- Principles of Marketing	3
BADM 145- Business Communications	3
BADM 223- Business Law I	3
BADM 249- Management	3
CITA 110- Intro to Computer Applications	3
Or CITA 112- Spreadsheet & Database Appl	
ECON 123- Micro-Economics	3
BADM course	3
ACCT, BADM, CITA, FSMA, or ECON 124	3

Liberal Arts & Sciences:	**22**
ENGL 101- Composition I	3
MATH or Science	3
PHED 151	1
Additional Liberal Arts and Sciences	15
General Electives	**5**
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Business-Business Administration (A.A.S.) (Curriculum Code – 0632/HEGIS - 5004)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BADM 131	Principles of Business	3
BADM 145	Business Communications	3
CITA 110 **or** CITA 112	Intro to Computer Applications **or** Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BADM 134	Principles of Marketing	3
ECON 123	Micro-Economics	3
PHED 151	Wellness	1
Liberal Arts and Sciences		6
MATH (111 or higher) or Science		3

Year 2/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
BADM 223	Business Law I	3
BADM 249	Management	3
Anything from BADM		3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting	3
Anything from: ACCT, BADM, CITA, FSMA or ECON 124		3
Liberal Arts and Sciences		3
General Elective		4

Business-Business Administration (A.S.) (Curriculum Code – 0671/HEGIS - 5004)

Associate in Science

Overview

The flexible Business Administration programs at SUNY Cobleskill provide a foundation for a business career by offering the basic training necessary to succeed, while allowing students the opportunity to explore many and varied potential business careers. Students enrolled in Business Administration programs can earn an Associate in Applied Science (A.A.S.) or Associate in Science (A.S.) degree.

Students must maintain a 2.50 GPA in all business courses, with an overall 2.50 cumulative GPA.

Student Learning Outcomes

- Apply effective oral and written communication skills.
- Understand foundational business principles and practices.
- Demonstrate professional and ethical behavior.
- Facilitate effective team outcomes.

Major Field Requirements:	**18**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
BADM 134- Principles of Marketing	3
BADM 223- Business Law I	3
BADM 249- Management	3
CITA 110- Intro to Computer Applications	3
Or CITA 112- Spreadsheet & Database Appl	
Concentration: (choose one)	**12**
Business Administration:	
BADM 137- Professional Selling	
BADM 145- Business Communications	
ECON 123- Micro-Economics	
ECON 124- Macro-Economics	
International Business:	
BADM 305- International Business	
BADM 325- International Marketing	
ECON 124- Macro-Economics	
ENGL 111- Fundamentals of Speech Comm	
Sports Management:	
PERS 201- Foundations of Physical Education	
PERS 211- First Aid and CPR	
PERS 215- Organiz Admin Phys Ed Athl and Rec	
BADM 330- Advertising and Promotion	

Liberal Arts & Sciences:	**32**
ENGL 101- Composition I	3
MATH 125- Statistics	3
MATH 231- Calculus I	4
Lab Science	3
HIST 121- History of the United States I	3
Or HIST 122- History of the United States II	
Humanities	3
Or Foreign Language	
PHED 151	1
PSYC 111- General Psychology	3
Additional Liberal Arts and Sciences	9
Total Credits	**62**
30 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

New York State Coaching Certification

SUNY Cobleskill is approved by the New York State Education Department per section 135.4 of the "Regulations of the Commissioner of Education" to offer a program for the purpose of certifying persons to coach in New York. The following courses must be successfully completed to gain certification:

PERS 211	First Aid and CPR
PERS 213	Current Issues in Health and Wellness
PERS 215	Organization and Administration of Physical Education, Athletics, and Recreation
PERS 216	Theory and Techniques of Coaching

Business-Business Administration (A.S.) (Curriculum Code – 0671/HEGIS - 5004)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
BADM 134	Principles of Marketing	3
CITA 110 **or** CITA 112	Intro to Computer Applications **or** Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
PHED 151	Wellness	1
HIST 121 **or** HIST 122	History of United States I **or** History of United States II	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting	3
Concentration Coursework		6
Liberal Arts and Sciences		3
HUMS or Foreign Language		3

Year 2/FALL		
Code/Name		**Credits**
BADM 223	Business Law I	3
Anything from BIOL, CHEM, PHYS, PSCI		3
PSYC 111	General Psychology	3
MATH 125	Statistics	3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
BADM 249	Management	3
MATH 231	Calculus I	4
Concentration Coursework		6
Liberal Arts and Sciences		3

Communications (A.S.) (Curriculum Code – 1173/HEGIS - 5606)

Associate in Science

Overview

SUNY Cobleskill students may pursue an A.S. degree in Communications. This course of study will prepare students for transfer into four-year programs in mass media, journalism, broadcasting, public relations, technical publications and a number of related programs. As students in this major fulfill many of their basic general education requirements, they have the flexibility to change their major without losing credits.

Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

Goals

Students should have understanding of:

- Communication as a dynamic and culturally situated interactive process with social, cognitive, and rhetorical dimensions.
- Mass communication phenomena, their relationship to popular culture, and the role of technology in the information age.
- The processes and role of academic research as a means of exploring concepts, approaching problems, and framing questions that address broader concerns, and of the relationship between different domains of knowledge.
- Different goals and modes of oral presentation, and be able to competently express relevant ideas.
- The practice, process, and ethics of contemporary news reporting and interviewing.
- The developmental and practical mechanisms of visual Web design and familiarity with various site genres.

Objectives

Students will demonstrate competence in:

- Critical thinking and expression in oral, written, and visual modes
- Vocabulary, concepts, and issues in the mass media, as well as an understanding of the interplay between media and culture.
- Moving from a focal topic to essay and organizing a presentation sequence in support of a goal; demonstrate relevance and ability to revise one's work.
- Conceptual development and oral presentation in various rhetorical and expository modes.
- Story development and written expression through research, interviews, and appropriate rhetorical and ethical stance.
- Demonstrate competence in solving problems of graphic design and composition using distinct forms of visual media and production modes.

Major Field Requirements:	**27**
COMM 108- Intro to Mass Media: Comm Info Age	3
COMM 120- Interpersonal Communications	3
COMM 210- Single Camera Video Production	3
COMM 220- Intercultural Communication	3
COMM 240- Video Studio Production	3
ENGL 102- Composition II	3
ENGL 111- Fundamentals of Speech Communication	3
GART 265- Web Design	3
JOUR 202- Journalism Newswriting/Reporting	3

Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
Social Science: AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	12
Lab Science	3
Humanities	6
Additional Liberal Arts and Sciences	3
General Electives:	**3**
General Electives	2
PHED	1
Total Credits	**60**

30 credits General Education Skills Areas

General Education Core Competencies

Math Competency

Applied Learning Competency

FFCS Competency

Communications (A.S.) (Curriculum Code – 1173/HEGIS - 5606)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
COMM 108 **or** COMM 120	Intro Mass Media: Comm Info Age **or** Interpersonal Communications	3
ENGL 101	Composition I	3
ENGL 111	Fund of Speech Communications	3
MATH 111 (or higher)	College Algebra (or higher)	3
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
COMM 108 **or** COMM 120	Intro Mass Media: Comm Info Age **or** Interpersonal Communications	3
COMM 210	Single Camera Video Production	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3
Anything from PHED		1
General Elective		1

Year 2/FALL		
Code/Name		**Credits**
COMM 220	Intercultural Communication	3
COMM 240	Video Studio Production	3
ENGL 102	Composition II	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3

Year 2/SPRING		
Code/Name		**Credits**
JOUR 202	Journalism Newswriting/Report	3
GART 265	Web Design	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		6
Liberal Arts and Sciences		3

Computer Information Systems (A.A.S.) (Curriculum Code – 0581/HEGIS - 5103)

Associate in Applied Science

Overview

SUNY Cobleskill's Computer Information Systems program is designed to prepare successful graduates for entry level positions as computer, network, and programming support specialists. Students are encouraged to continue their studies to better prepare them for the challenges in an ever-changing field. The College offers four advisement tracks: Web Development, End User Support, Network Support, and Programming. Graduates of SUNY Cobleskill's Computer Information Systems program find employment as help desk technicians, software support specialists, Web site support technicians, and network support assistants.

Student Learning Outcomes

- Provide technical assistance to computer system users.
- Plan, direct, or coordinate information systems, systems analysis, electronic data processing, and computer system development.
- Plan, coordinate and implement security measures to safeguard information in computer files against accidental or unauthorized damage, modification or disclosure.
- Recommend systems and network configurations, and determine hardware or software requirements related to such changes.

Major Field Requirements:	**6**
CITA 112- Spreadsheet and Database Applications	3
CITA 115/115X- Computer Operating Systems	3

Concentration Requirements: (choose one) 24

End User Support

CITA 120/120X- Computer Hardware Concepts
CITA 130- Intro to Web Development
CITA 190/190X- Linux Operating Systems
CITA 220- Systems Analysis
CITA 230/230X- Network Technology
CITA 340- Database Concepts
BADM 249- Management
3 credits from CITA, ACCT, BADM, or GART

Network Support

CITA 120/120X- Computer Hardware Concepts
CITA 190/190X- Linux Operating Systems
CITA 200/200X- Data Communications &Networking
CITA 220- Systems Analysis
CITA 230/230X- Network Technology
CITA 335/335X- Cisco Routing
BADM 249- Management
3 credits from CITA, ACCT, BADM, or GART

Programming

CITA 140- Introduction to Programming
CITA 190/190X- Linux Operating Systems
CITA 210- Visual Programming and Develop Tools
CITA 220- Systems Analysis
CITA 305- Java Programming
CITA 340- Database Concepts
6 credits from CITA, ACCT, BADM, or GART

Web and Graphics Design

CITA 130- Intro to Web Development
CITA 240- Computer Graphics I
CITA 250- Computer Graphics II
CITA 260- Digital Photography
BADM 249- Management
9 credits from CITA, ACCT, BADM, or GART

Liberal Arts & Sciences:	**22**
ENGL 101- Composition I	3
MATH 103 or higher	3
PHED 151	1
Additional Liberal Arts and Sciences	15
General Electives	**9**
Total Credits	**61**

20 credits General Education Skills Areas
General Education Core Competencies
Math Competency
Applied Learning Competency
FFCS Competency

Computer Information Systems (A.A.S.) (Curriculum Code – 0581/HEGIS - 5103)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CITA 112	Spreadsheet & Database Applic	3
CITA 115	Computer Operating Systems	2
CITA 115X	Computer Operating Systems Lab	1
ENGL 101	Composition I	3
MATH 103 or higher	Mathematics of Finance (or higher)	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
Concentration Coursework		9
Liberal Arts and Sciences		6
PHED 151	Wellness	1

Year 2/FALL	
Code/Name	**Credits**
Concentration Coursework	6
Liberal Arts and Sciences	3
General Elective	6

Year 2/SPRING	
Code/Name	**Credits**
Concentration Coursework	9
Liberal Arts and Sciences	3
General Elective	2

Culinary Arts (A.O.S.) (Curriculum Code – 0578/HEGIS - 5404)

Associate of Occupational Studies

Overview

SUNY Cobleskill's Culinary Arts Program is designed to provide rigorous and concentrated training to students who plan to pursue careers in the rapidly expanding food service industry. The primary goal of the program is to prepare students for meaningful positions in the food and restaurant business. Students must pass the ServSafe Manager certification exam in order to graduate.

Students must complete all required and elective courses with prefixes of CAHT, AGBU, ANSC, and NTRN with a minimum GPA of 2.00.

Student Learning Outcomes

- Demonstrate proficiency in classic and contemporary culinary techniques and cooking methods.
- Interpret culinary techniques, foods, and agricultural food systems in American and international cuisines.
- Evaluate nutrition, food safety, and cost control techniques and their importance in menu planning and successful food services.
- Understand dining room service options and fundamentals of wine and beverage management.
- Develop sound hospitality business tactics through studies in marketing, computers, management, communications and finance.

Major Field Requirements:	**51**
AGBU 112- Sel/Cut Meat for Restaurant Use	3
Or ANSC 108/108X- Sel/Cut Meat Restaurant Use	
CAHT 001- Serv Safe Certification Class & Exam	0
CAHT 103- Food Service Sanitation	2
CAHT 104- Service for Restaurant Professionals	1
CAHT 111- Culinary I	3
CAHT 112- Culinary II	3
CAHT 140- Mathematics Hospitality Operations	3
CAHT 145- Food Service Purchasing	3
CAHT 160- Baking and Pastry I	3
CAHT 215- Beverage Management	3
CAHT 235- Catering	3
CAHT 247- Menu Planning and Merchandising	3
CAHT 255- Prin of Mgmt for Service Business	3
Or BADM 249- Management	
CAHT 260- Baking and Pastry II	3
CAHT 262- Garde Manger	3
CAHT 264- International Cuisine	3
CAHT 266- American Cuisine	3
CAHT Course	3
NTRN 122- Nutrition	3

Liberal Arts & Sciences:	**6**
ENGL 101- Composition I	3
Liberal Arts and Sciences	3
General Electives:	**3**
General Electives	2
PHED	1
Total Credits	**60**
5 Required General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Culinary Arts (A.O.S.) (Curriculum Code – 0578/HEGIS - 5404)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CAHT 001	Serv Safe Cert Class & Exam	0
CAHT 103	Food Service Sanitation	2
CAHT 111	Culinary I	3
CAHT 140	Mathematics Hospitality Operat	3
CAHT 160	Baking & Pastry I	3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
CAHT 104	Service for Restaurant Profess	1
CAHT 112	Culinary II	3
CAHT 145	Food Service Purchasing	3
CAHT 247	Menu Planning/Merchandising	3
Liberal Arts and Sciences		3
Anything from PHED		1
General Elective		1

Year 2/FALL		
Code/Name		**Credits**
ANSC 108/108X **or** AGBU 112	Sel/Cut Meat Restaurant Use **or** Select & Cutting Meat Rest Use	3
CAHT 262	Garde Manger	3
CAHT 235	Catering	3
CAHT 266	American Cuisine	3
NTRN 122	Nutrition	3

Year 2/SPRING		
Code/Name		**Credits**
CAHT 215	Beverage Management	3
CAHT 260	Baking and Pastry II	3
CAHT 264	International Cuisine	3
BADM 249 **or** CAHT 255	Management **or** Prin Mgmt for Service Business	3
CAHT Course		3

Diesel Technology (A.A.S.) (Curriculum Code – 0672/HEGIS – 5307)

Associate in Applied Science

Overview

Today's power market is almost exclusively diesel-fueled from 20 to more than 55,000 horsepower. The need for diesel technicians is rapidly increasing, with growing applications in automotive, light trucking and in the lawn and garden equipment fields. Coupled with the strong market applications to meet the industrial, trucking, construction, power generator and agricultural needs, the expanding technology in engines and fuel systems requires trained technicians to maintain them. Courses in System Fundamentals, Nozzles and Injectors, and Diesel Fuel Injection Pumps are complemented with electrical, hydraulic, welding, engine overhaul and transmission education. Courses offered at SUNY Cobleskill require much hands-on training so each student may develop those skills necessary to meet current and future challenges. Students successfully completing the program are highly sought after technicians with the skills to be successful in the industry. The Diesel Technology program has recently been further enhanced by being accredited by the Associated Equipment Distributors (AED).

Student Learning Outcomes

- Demonstrate a depth of knowledge and a proficiency of skill using equipment while working within the following topics outlined by AED standards:
  - Safety concerns and administrative structure of the workplace
  - Electronic/electrical systems
  - Hydraulic/hydrostatic systems
  - Power trains
  - Diesel engines
  - Air conditioning/heating
- Understand the principles of operation of various equipment systems along with advanced technology applications using GPS technology and integrated grade control.
- Work effectively in an equipment dealership by knowing the functions and procedures of service, sales and parts departments.
- Adapt to the needs of the employers who need people that can think critically, manage their time effectively, communicate confidently, problem solve using logic and/or mathematical reasoning, and appreciate the diversity of their surroundings including customers, co-workers, and the environment.

Major Field Requirements:	**33**
AGEN 111/111X- Intro to Computing in Ag Eng Tech	2
AGEN 132/132X- Fund of Diesel Engine Tech	3
AGEN 151/151X- Basic Welding	2
AGEN 166/166X- Agricultural Mechanics	2
AGEN 170/170X- Basic Hydraulics	3
AGEN 231/231X- Electrical/onic System Diag	3
AGEN 232/232X- Power Train Theory Diag/Repair	4
AGEN 245/245X- Air Conditioning	2
AGEN 273/273X- Hydraulic & Hydrostatic Diag	3
AGEN 274/274X- Construction Equipment Systems	3
AGEN 285- Equipment Retailing Management	3
AGEN 292/292X- Fuel Systems	3
Advisement Track: (choose one)	7
Diesel Track:	
AGEN 115 - Supervised Work Experience	1
AGEN (not 105 and 261)	2
AGEN 281/281X – Electrical Power Generation	3
FFCS 101- Foundation for College Success	1
John Deere Track:	
AGEN 007- Industry Work Experience	0
AGEN 116- Manufacturer Orientation	1
AGEN 117- Manufacturer Training 1	1
AGEN 118- Manufacturer Training 2	1
AGEN 119- Manufacturer Training 3	1
AGEN prefix course (not 105 and 261)	2
FFCS 101- Foundation for College Success	1

Liberal Arts & Sciences:	**20**
ENGL 101- Composition I	3
ENGL 102- Composition II or higher	3
PHED 151- Wellness	1
PHYS 101/101X- Principles of Physics I	4
Math/Science	3
Additional Liberal Arts and Sciences	6
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Diesel Technology (A.A.S.) (Curriculum Code – 0672/HEGIS - 5307)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGEN 111	Intro Computing in Ag Eng Tech	1
AGEN 111X	Intro Comp Ag Eng Tech Lab	1
AGEN 116	Manufacturer Orientation**	1
AGEN 151	Basic Welding	1
AGEN 151X	Basic Welding Lab	1
AGEN 166	Agricultural Mechanics	1
AGEN 166X	Agricultural Mechanics Lab	1
AGEN 170	Basic Hydraulics	2
AGEN 170X	Basic Hydraulics	1
ENGL 101	Composition I	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 117	Manufacturer Training 1**	1
AGEN 132	Fund Diesel Engine Tech	2
AGEN 132X	Fund Diesel Engine Tech Lab	1
PHYS 101	Principles of Physics I	3
PHYS 101X	Principles of Physics I Lab	1
ENGL 102 or higher	Composition II (or higher)	3
Math 111 (College Algebra) or higher, or science elective		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGEN 007	John Deere Work Experience**	0
AGEN 118	Manufacturer Training 2**	1
AGEN 231	Electrical/onic Sys Diag	2
AGEN 231X	Electrical/onic Sys Diag Lab	1
AGEN 274	Construction Equipment Sys	2
AGEN 274X	Construction Equip Systems Lab	1
AGEN 285	Equipment Retailing Mgmt	3
AGEN 292	Fuel Systems	2
AGEN 292X	Fuel Systems Lab	1
AGEN Elective		2

Year 2/SPRING		
Code/Name		**Credits**
AGEN 115	Supervised Work Experience*	1
AGEN 119	Manufacturer Training 3**	1
AGEN 232	Pwr Trn Theory Diag/Repair	2
AGEN 232X	Pwr Train Theory Diag&Rep Lab	2
AGEN 245	Air Conditioning	1
AGEN 245X	Air Conditioning Lab	1
AGEN 273	Hydraulics&Hydrostatic Diag	2
AGEN 273X	Hydraulic&Hydrostatic Lab	1
PHED 151	Wellness	1
AGEN 281	Electrical Power Generation*	2
AGEN 281X	Electrical Power Generation Lab*	1

* Indicates courses required for the Diesel advisement tack
** Indicates courses required for the John Deere advisement track.

Early Childhood (A.A.S.) (Curriculum Code – 1327/HEGIS - 5503)

Associate in Applied Science

Overview

The A.A.S. degree in Early Childhood follows the National Association for the Education of Young children (NAEYC) standards, emphasizing best practices in the education and care of young children, birth through age eight. The curriculum offers a solid base of theory and practice through early childhood course work and field experiences, including a 230-hour practicum offered in a range of settings such as public schools, community agencies, childcare centers, and private preschools on and off campus. The program includes a foundation in the liberal arts and career/college transfer preparation. The program is designed for seamless transfer into the B.S. program in Early Childhood Studies: Birth to Age 5.

Students must earn a grade of "C" or better in all major field requirements as well as a minimum of a "C-" in ENGL 101.

Student Learning Outcomes

Students will demonstrate initial competency in:

- Promoting child development and learning
- Building family and community relationships
- Observing, documenting and assessing to support young children and families
- Planning and teaching developmentally appropriate lessons for young children
- Upholding professional standards in the early childhood field

Major Field Requirements:	**33**
ECHD 121- Expressive Arts	3
ECHD 130- Intro to Early Childhood Programs	3
ECHD 150- Curriculum and Methods	3
ECHD 170- Child Growth & Development Theory Pra	3
ECHD 175- Infants and Toddlers	3
ECHD 234- Practicum	6
ECHD 240- Child and Family Wellness	3
ECHD 280- Exceptional Children	3
ECHD 351- Families as Partners EC Programs	3
Or ECHD 352- Positive Child Guidance	
Three credits chosen from:	3
ECHD 251- Anti-Bias Strategies Human App	
ECHD 252- Conflict Resolution: Create Peace Env	
ECHD 260- Foundations of Modern Education	
ECHD 351- Families as Partners EC Programs	
ECHD 352- Positive Child Guidance	

Liberal Arts & Sciences:	**24**
ENGL 101- Composition I	3
HIST 121 or 122- History of United States I or II	3
Or GOVT 242- State and Local Politics	
HUMS (HUMS 243 recommended)	3
Lab Science	3
MATH 111- College Algebra or higher	3
Foreign Language	3
Social Science	3
Additional Liberal Arts and Sciences	3
General Electives	**5**
General Electives	4
PHED	1
Total Credits	**62**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Early Childhood (A.A.S.) (Curriculum Code – 1327/HEGIS - 5503)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ECHD 121 **or** ECHD 150	Expressive Arts **or** Curriculum and Methods	3
ECHD 130	Intro Early Childhood Programs	3
ECHD 170 **or** ECHD 175	Child Growth & Dev Theory Prac **or** Infants and Toddlers	3
ENGL 101	Composition I	3
Anything lab science from BIOL, CHEM, PSCI, PHYS **or** MATH 111 or higher		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ECHD 121 **or** ECHD 150	Expressive Arts **or** Curriculum and Methods	3
ECHD 240	Child and Family Wellness	3
ECHD 170 **or** ECHD 175	Child Growth & Dev Theory Prac **or** Infants and Toddlers	3
Anything lab science from BIOL, CHEM, PSCI, PHYS **or** MATH 111 or higher		3
Anything from Social Science		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
HUMS 243	Children's Literature	3
ECHD 280	Exceptional Children	3
Choose ONE of the following: ECHD 251 Anti-Bias Strategies Human App ECHD 252 Conflict Resol:Create Peace Env ECHD 260 Foundation of Modern Education ECHD 351 Families as Partners EC Programs ECHD 352 Positive Child Guidance		3
ECHD 351 **or** ECHD 352	Families as Partners EC Progms **or** Positive Child Guidance	3
Anything from Foreign Language		3

Year 2/SPRING		
Code/Name		**Credits**
ECHD 234	Practicum	6
HIST 121 **or** HIST 122 **or** GOVT 242	History of United States I **or** History of United States II **or** State and Local Politics	3
Liberal Arts and Sciences Elective		3
General Elective		3

Environmental Studies (A.A.S.) (Curriculum Code – 1016/HEGIS - 5499)

Associate in Applied Science

Overview

Widespread environmental problems and a growing recognition of the importance of sustainable solutions has resulted in an increased demand for environmental managers. An A.A.S. in Environmental Studies at SUNY Cobleskill is a platform for students to learn how to identify and respond to key issues in ecosystem management and conservation. The courses in the major explore natural resource conservation, soil and water conservation, forest ecology, geographic information systems, and entomology. Additionally, a strong foundation in the natural sciences provides students the necessary coursework to enter into bachelor's programs. The Environmental Studies program involves significant hands-on learning experiences through regular field trips, laboratory activities, and interaction with professionals working in the field. The program is housed in the newly constructed Center for Agriculture and Natural Resources facility, which has extensive laboratory and classroom space, a large fish hatchery facility, greenhouses, spaces for environmental experimentation, and a computer lab. The campus farm provides a living laboratory to explore environmental issues on the dairy farm, pastures, and croplands. Also, within close proximity to the campus are extensive State forest lands, numerous wetlands, ponds, streams and rivers, and the campus arboretum.

Student Learning Outcomes

- Articulate the foundational principles of the ecological and environmental sciences.
- Critically assess a wide range of environmental problems and identify threats to native plant and animal communities in temperate ecosystems.
- Demonstrate competency with best management practices and conservation strategies used to address environmental problems.
- Effectively collaborate to solve environmental problems.
- Proficiently communicate both orally and in writing.

Major Field Requirements:	**34**
AGSC 111- Intro to Soil Science	3
BIOL 186- Intro to Entomology	3
BIOL 212- Forest Ecology	3
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
Or CHEM 216/216X- Water Chemistry	or 3
CITA 112- Spreadsheet & Database Applications	3
FWLD 101- Intro to Natural Resource Conservation	3
GIST 130/130X- Geographic Info Systems	3
ORHT 121- Woody Plant Materials	3
PSCI 105- Environmental Science & Technology	3
PSCI 221- Soil & Water Conservation	3

Liberal Arts & Sciences:	**25**
ENGL 101- Composition I	3
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
Or BIOL 131/131X- Natural History of Vertebrates	or 3
MATH 111- College Algebra	3
SUST 101- Introduction to Sustainability	3
Additional Liberal Arts and Sciences	9
General Electives:	**2**
PHED	1
FFCS 101- Foundation for College Success	1
Total Credits	**61**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Environmental Studies (A.A.S.) (Curriculum Code – 1016/HEGIS - 5499)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
BIOL 186	Intro to Entomology	3
FWLD 101	Intro Natural Resource Cons	3
MATH 111	College Algebra	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 112/112X **or** BIOL 131/131X	Biology II **or** Natural History of Vertebrates	3 **or** 4
ENGL 101	Composition I	3
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
PSCI 105	Environmental Sci & Tech	3
SUST 101	Intro to Sustainability	3

Year 2/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science	3
BIOL 212	Forest Ecology	3
CITA 112	Spreadsheet & Database Appl	3
ORHT 121	Woody Plant Materials	3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
PSCI 221	Soil & Water Conservation	3
CHEM 112/112X **or** CHEM 216/216X	General Chemistry II **or** Water Chemistry	3 **or** 4
GIST 130	Geographic Info Systems	2
GIST 130X	Geographic Info Systems Lab	1
Liberal Arts and Sciences		6
Anything from PHED		1

Fisheries and Wildlife Technology (A.A.S.) (Curriculum Code – 0516/HEGIS - 5403)

Associate in Applied Science

Overview

The Fisheries and Wildlife Technology program places an emphasis on hands-on learning. Within most classes students participate in a wide variety of activities very similar to those they will conduct when they join the profession. Examples of activities include radio-tracking wildlife, capture and marking of wildlife, identification of animal sign, and habitat assessment surveys. The curriculum is designed to train technicians to work with professional fish and wildlife biologists in the field and in laboratories. SUNY Cobleskill's natural setting provides students with an "outdoor laboratory." Numerous lakes, ponds, streams and forested areas are close at hand and are regularly used for field work. The largest and most diverse academic aquaculture facilities in the Northeast, including a 40,000-gallon coldwater fish hatchery, quarantine hatchery, tropical fish hatchery, tank farm, and earthen grow out ponds. The College offers field experiences at a fully-equipped biological field station on Otsego Lake in Cooperstown, N.Y., in cooperation with SUNY Oneonta. Additional field experiences take place at SUNY Stony Brook's Marine Sciences Center.

Student Learning Outcomes

Students will be able to:

- Develop content-specific knowledge to prepare for entry into a related four (4) year program.
- Learn and hone technical skills to prepare for entry-level jobs in related fields.
- Demonstrate effective written and oral communication skills related to fisheries and wildlife research or management issues.

Major Field Requirements:	**36**
BIOL 131- Natural History of Vertebrates	3
BIOL 211- Terrestrial Ecology	3
Or BIOL 215- Aquatic Ecology	
CHEM 111/111X- General Chemistry I	4
CITA 112- Spreadsheet & Database Applications	3
FWLD 101- Intro to Natural Resource Conservation	3
FWLD 115- Fisheries Techniques	3
Or FWLD 125- Wildlife Techniques	
FWLD 211- Wildlife Law Enforcement & PR	2
FWLD 220- Wildlife Management	3
FWLD 221- Fisheries Science	3
GIST 130/130X- Geographic Info Systems	3
MATH 125- Statistics	3
ORHT 121- Woody Plant Materials	3

Liberal Arts & Sciences:	**23**
ENGL 101- Composition I	3
PHED 151- Wellness	1
BIOL (BIOL 111/111X strongly recommended)	4
MATH 111- College Algebra (or higher)	3
Additional Liberal Arts and Sciences	12
General Electives	**1**
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Fisheries and Wildlife Technology (A.A.S.) (Curriculum Code – 0516/HEGIS - 5403)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
ENGL 101	Composition I	3
FWLD 101	Intro Natural Resource Cons	3
MATH 111	College Algebra	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 131	Natural History of Vertebrates	3
FWLD 115 **or** FWLD 125	Fisheries Techniques **or** Wildlife Techniques	3
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
CITA 112	Spreadsheet & Database Applic	3
MATH 125	Statistics	3
PHED 151	Wellness	1

Year 2/FALL		
Code/Name		**Credits**
BIOL 211 **or** BIOL 215	Terrestrial Ecology **or** Aquatic Ecology	3
FWLD 220	Wildlife Management	3
ORHT 121	Woody Plant Materials	3
Liberal Arts and Sciences		6

Year 2/SPRING		
Code/Name		**Credits**
FWLD 211	Wildlife Law Enforce & PR	2
FWLD 221	Fisheries Science	3
GIST 130	Geographic Info Systems	2
GIST 130X	Geographic Info Systems Lab	1
Liberal Arts and Sciences		6

Graphic Design Technology (A.S.) (Curriculum Code – 1390/HEGIS - 5012)

Associate in Science

Overview

The Graphic Design Technology program prepares students for employment in the fast-paced and ever-changing design industry. Upon graduation from the program, students have the option of entering the job market or transferring to four-year programs in graphic design, graphic communications, studio art, elementary and secondary art education, photography and fashion design and illustration. The program follows an interdisciplinary approach in which students take courses in the arts, humanities and social sciences, as well as courses in computer technology. SUNY Cobleskill recognizes the increasing importance of computer skills in the professional field, and views the computer as a design tool, one which can only be used to its full potential with a strong foundation in art and design. The program focuses on creative thinking and an understanding of the principles of design rather than simply the technical manipulation of computer software. Students must earn a minimum grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

Goals

- Be proficient in the use of vector-based illustration and raster-based image editing software for the creation of graphic images for both paper-based and Web-based publications.
- Have an understanding and appreciation for the principles of the design as they relate to publication design.
- Be familiar with the typographic principles and techniques needed to create well-designed paper-based publications using industry standard page layout software.
- Be familiar with major developments in the history of art and design and recognize how these developments have influenced the design of printed and on-line publications.
- Be familiar with the techniques required to create, edit and incorporate digital imagery into printed and on-line publications.
- Compile a portfolio of work created during their course work at the College.

Objectives

Students will demonstrate:

- Competence in the utilization of graphics software to complete assignments and create projects that incorporate the application of design principles.
- Competence in the utilization of various media to complete assignments and create projects that incorporate the application of design principles.
- Competence in the utilization of various media, including graphics software, to complete assignments and create projects that incorporate the application of design principles.
- Their knowledge of art and design history by successfully completing exams.
- Competence in the utilization of various media to complete assignments and create projects that incorporate the application of design principles.
- Competence in all courses within the major by creating a well-designed portfolio.

Major Field Requirements:	**25**
ARTS 111- Design I	3
ARTS 114- Drawing I	3
GART 112- Digital Media	3
GART 151- Typography and Layout	3
GART 251- Computer Graphics I	3
GART 252- Computer Graphics II	3
GART 270- Digital Imaging	3
GART 265- Web Design I	3
GART 280- Portfolio Prep and Presentation	1

Liberal Arts & Sciences:	**30**
ENGL 101- Composition I	3
Additional ENGL (102 or higher)	3
ARTS 124- History of Art I	3
ARTS 125- History of Art II	3
MATH 111- College Algebra (or higher)	3
Social Science: AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC	6
Science	3
Additional Liberal Arts and Sciences	6
General Electives:	**5**
General Electives	4
PHED	1
Total Credits	**60**

30 credits General Education Skills Areas

Math Competency
Applied Learning Competency
FFCS Competency

Graphic Design Technology (A.S.) (Curriculum Code – 1390/HEGIS - 5012)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ARTS 114	Drawing I	3
ARTS 124	History of Art I	3
GART 112	Digital Media	3
ENGL by Placement		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ARTS 111	Design I	3
ARTS 125	History of Art II	3
GART 151	Typography and Layout	3
ENGL 102 or higher	Composition II or higher	3
Anything from PHED		.5
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
GART 251	Computer Graphics I	3
GART 270	Digital Imaging	3
MATH 111 or higher	College Algebra (or higher)	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
GART 252	Computer Graphics II	3
GART 265	Web Design	3
GART 280	Portfolio Prep & Presentation	1
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
Anything from PHED		.5
General Elective		4

Health Sciences Studies (A.S.) (Curriculum Code – 1821/HEGIS - 5604)

Associate in Science

Overview

SUNY Cobleskill has an excellent record in producing graduates ready for careers in basic or advanced science and medical areas. Course work in the Health Sciences program prepares students for transfer opportunities leading to careers in physical therapy, respiratory therapy, cardiovascular perfusion, radiation therapy, cytotechnology, medical imaging sciences, medical biotechnology and medical technology.

Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

- Students will be able to prepare a professional quality, technical report.
- Students will demonstrate a basic understanding of the nature of science.
- Students will demonstrate good lab practice.
- Students will understand and demonstrate standard ethical practices.
- Students will demonstrate an understanding of comparative anatomy through dissection, microscopic examination, and macroscopic examination.
- Students will demonstrate knowledge of the fundamental principles common to living things: DNA, RNA, and protein synthesis; structure-function relationship of cellular organelles; and sexual and asexual reproduction.
- Students will demonstrate understanding of the basic concepts in genetic engineering: mechanisms of bacterial DNA exchange, DNA characterization, and genetic cloning.
- Students will demonstrate the ability to perform as part of a team in group activities.
- Students will demonstrate critical thinking skills.

Major Field Requirements:	**31**
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
BIOL 114- Medical Orientation E-T-R	2
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
Additional BIOL/CHEM/PHYS from the following:	13
BIOL 105/105X- Principles of Genetics BIOL 219/219X- Microbiology BIOL 251/251X- Microscopic Anatomy BIOL 258/258X- Anatomy and Physiology I	
BIOL 259/259X- Anatomy and Physiology II BIOL 300- Principles of Parasitology BIOL 375/375X- Cell Biology BIOL/CHEM 395- Topics in Current Research	
BIOL 425/425X- Bioinformatics CHEM 231/231X- Organic Chemistry I CHEM 232/232X- Organic Chemistry II CHEM 351- Biochemistry PHYS 111/111X- College Physics I PHYS 112/112X- College Physics II PHYS 211/211X- Calculus Physics I PHYS 212/212X- Calculus Physics II	

Additional Liberal Arts & Sciences:	**28**
ENGL 101 **Or** 102- Composition I **Or** II	3
PSYC 111- General Psychology **Or**	3
SOSC 111- Introduction to Sociology	
Seven credits of Math chosen from:	7
MATH 125- Statistics	
MATH 131- Pre-Calculus	
MATH 231- Calculus I	
MATH 232- Calculus II	
Additional Liberal Arts and Sciences	15
General Electives:	**2**
FFCS 101- Foundation for College Success	1
PHED	1
Total Credits	**61**
30 credits General Education Skills Areas General Education Core Competencies Math Competency Applied Learning Competency FFCS Competency	

Health Sciences Studies (A.S.) (Curriculum Code – 1821/HEGIS - 5604)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
BIOL 114	Medical Orientation E-T-R	2
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
ENGL 101 or 102	Composition I or II	3
Liberal Arts and Sciences		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 112	Biology II	3
BIOL 112X	Biology II Lab	1
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
Choose ONE of the following: MATH 125 Statistics MATH 131 Pre-Calculus MATH 231 Calculus I MATH 232 Calculus II		 3 4 4 4
PSYC 111 **Or** SOSC 111	General Psychology **Or** Introduction to Sociology	3

Year 2/FALL		
Code/Name		**Credits**
Major Field Elective		6
Choose ONE of the following: MATH 125 Statistics MATH 131 Pre-Calculus MATH 231 Calculus I MATH 232 Calculus II		 3 4 4 4
Liberal Arts and Sciences		6
Anything from PHED		1

Year 2/SPRING	
Code/Name	**Credits**
Major Field Elective	7
Liberal Arts and Sciences	6

Histotechnician (A.A.S.) (Curriculum Code – 2083/HEGIS - 5205)

Associate in Applied Science

Overview

SUNY Cobleskill has the only accredited degree-granting Histotechnician program in the Northeast. The demand for trained histotechnicians exceeds the supply, with employment opportunities in hospital, county, state, federal, private research and industrial laboratories, pharmaceutical companies, and medical schools. Histotechnicians are trained in the preparation and staining of tissues for microscopic examination and disease diagnosis by a pathologist. The tissue may be obtained from an operating room, clinic, doctor's office, emergency room, or a postmortem examination. Histotechnicians may also assist the pathologist in the preparation of frozen tissue sections, which are used to provide rapid diagnosis while the patient is still undergoing surgery.
Histotechnology is a blend of both science and art. It is possible to appreciate the beauty of a perfectly prepared and stained tissue section without any prior knowledge of Histotechnology, but it is impossible to troubleshoot or correct a poorly prepared or stained slide without knowledge of all of the steps involved.

Students must earn a grade of "C-" or better in BIOL 111, BIOL 111X, BIOL 112, BIOL 112X, CHEM 111, CHEM 111X, CHEM 112, CHEM 112X, and ENGL 101 as well as a grade of "C" or better in all other major field requirements.

Student Learning Outcomes

The basic goals of this program are to provide the theoretical as well as the technical aspects of Histotechnology resulting in entry level competence in the following areas:

- Instrumentation
- Accessioning
- Fixation
- Processing
- Embedding
- Microtomy
- Routine and special nuclear and cytoplasmic stains
- Health and safety awareness
- Laboratory math
- Frozen sectioning (cryotomy)
- Decalcification of bone
- Immunohistochemistry

Major Field Requirements:	**43**
BIOL 111/111X- Biology I	4
BIOL 112/112X- Biology II	4
BIOL 114- Medical Terminology Orientation	2
CHEM 111/111X- General Chemistry I	4
CHEM 112/112X- General Chemistry II	4
BIOL 251/251X- Microscopic Anatomy	4
BIOL 258/258X- Anatomy and Physiology I	4
BIOL 259/259X- Anatomy and Physiology II	4
BIOL 268/268X- Microtechniques	6
BIOL 275- Clinical Experience Histotechnology	4
PHIL 305- Ethics Science, Medicine & Tech	3

Additional Liberal Arts & Sciences:	**18**
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
Social Science	3
Additional Liberal Arts and Sciences	9
General Electives:	**1**
PHED	1
Total Credits	**62**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Histotechnician (A.A.S.) (Curriculum Code – 2083/HEGIS - 5205)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
BIOL 114	Medical Terminology/Orient.	2
MATH 111 or higher	College Algebra (or higher)	3
ENGL 101	Composition I	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 112	Biology II	3
BIOL 112X	Biology II Lab	1
CHEM 112	General Chemistry II	3
CHEM 112X	General Chemistry II Lab	1
Anything from PHED		1
Social Science		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
BIOL 251	Microscopic Anatomy	2
BIOL 251X	Microscopic Anatomy Lab	2
BIOL 258	Anatomy & Physiology I	3
BIOL 258X	Anatomy and Physiology I Lab	1
PHIL 305	Ethics Science, Medicine & Tech	3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
BIOL 259	Anatomy & Physiology II	3
BIOL 259X	Anatomy and Physiology II Lab	1
BIOL 268	Microtechniques	3
BIOL 268X	Microtechniques Lab	3
Liberal Arts and Sciences		3

SUMMER CLINICAL (400 hours)		
Code/Name		**Credits**
BIOL 275	Clinical Experience	4

Horticulture (A.A.S.) (Curriculum Code – 0646/HEGIS - 5402)

Associate in Applied Science

Overview

The Associate in Applied Science degree in Horticulture prepares students for careers within the field of commercial horticulture in the areas of nursery management, ornamental horticulture, floriculture, fruit and vegetable production, landscape management as well as careers in public gardens. Students are provided an opportunity to study techniques associated with greenhouse crop production, floral design, fruit and vegetable production, exterior and interior landscaping as well as the production of trees, shrubs, and perennials. Students also study horticultural business operations including greenhouse and nursery management and flower shop operations. SUNY Cobleskill has an extensive greenhouse range including hydroponic production systems, a nursery growing area, an arboretum, display gardens, a well-landscaped campus, a landscape design studio, a floral design lab, and well-equipped plant science laboratories, all of which help students learn in a job-like training environment.

Student Learning Outcomes

- Classify, identify, and select horticultural plants.
- Adjust soil conditions to maximize production of horticultural crops.
- Modify environmental conditions to maximize production of horticultural crops.
- Grow horticultural crops in protected environments.
- Manage biotic and abiotic stresses affecting horticultural crops using integrated and sustainable techniques.
- Use appropriate techniques in planning and maintaining exterior and interior landscapes.
- Demonstrate knowledge of horticultural business operations.

Major Field Requirements:	**34**
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 113/114- Experimental Field Experience	1
ORHT 121- Woody Plant Materials	3
Or ORHT 321- Herbaceous Plants	
ORHT 133- Horticulture Crop Production	3
ORHT 172- Mgmt of Horticulture Business	3
Or Any BADM course	
ORHT 232- Floriculture Production	3
Or ORHT 242- Nursery Management	
ORHT 251- Greenhouse Management	3
Select 9 credits from:	9
AGRN 251- Fruit Science	
AGRN 252- Vegetable Science	
ORHT 111- Basic Floral Design	
ORHT 122- Environmental Design I	
ORHT 215- Interior Plantscapes & Maintenance	
ORHT 282- Arboriculture	
RECM 222- Turfgrass Management	

Liberal Arts & Sciences:	**20**
ENGL 101- Composition I	3
ENGL	3
Science/Math	6
Additional Liberal Arts and Sciences	8
General Electives:	**6**
General Electives	5
PHED	1
Total Credits	**60**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Horticulture (A.A.S.) (Curriculum Code – 0646/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science	3
ORHT 113 **or** ORHT 114	Horticultural Field Experience **or** Horticultural Field Experience	1
ORHT 133	Horticulture Crop Production	3
ENGL 101	Composition I	3
MATH 111 or higher **or** Science	College Algebra (or higher) **or** Anything from BIOL, CHEM, PHYS, PSCI (suggested BIOL 116 or Math 111)	3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
Anything from PHED		1
ORHT 232 **or** ORHT 242	Floriculture Production **or** Nursery Management II	3
Choose ONE of the following: AGRN 251 Fruit Science AGRN 252 Vegetable Science ORHT 111 Basic Floral Design ORHT 122 Environmental Design I ORHT 215 Interior Plantscapes & Maint ORHT 282 Arboriculture		3
Anything from ENGL		3
Anything from BIOL, CHEM, PHYS, PSCI (suggested BIOL 116 or MATH 111)		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology	3
ORHT 121 **or** ORHT 321	Woody Plant Materials **or** Herbaceous Plants	3
ORHT 172 **or** BADM	Mgmt of Horticulture Business **or** Any BADM course	3
Choose ONE of the following: AGRN 251 Fruit Science AGRN 252 Vegetable Science ORHT 111 Basic Floral Design ORHT 122 Environmental Design I ORHT 215 Interior Plantscapes & Maint ORHT 282 Arboriculture		3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
AGSC 186	Entomology	3
ORHT 251	Greenhouse Management	3
Choose ONE of the following: AGRN 251 Fruit Science AGRN 252 Vegetable Science ORHT 111 Basic Floral Design ORHT 122 Environmental Design I ORHT 215 Interior Plantscapes & Maint ORHT 282 Arboriculture		3
Liberal Arts and Sciences		2
General Elective		4

Landscape Development (A.A.S.) (Curriculum Code – 0611/HEGIS - 5402)

Associate in Applied Science

Overview

The landscape industry combines creativity, science, technical skills, and business knowledge. As a designer, horticulturist, installer, manager, owner, technician, or landscape architect, you'll create and maintain outdoor environments. Whether designing, installing, or managing landscapes, you'll need hands-on skills, horticultural knowledge, technical abilities, and strategic thinking to adapt and collaborate. Landscape professionals promote environmental stewardship, resource management, and sustainable spaces. Opportunities to transfer have been consistently strong within Cobleskill, SUNY, or into undergraduate Landscape Architecture programs. This dynamic field shapes the places where we live, work, and play, making a lasting impact on the environment.

Student Learning Outcomes

- Develop and apply knowledge and skills in the plant sciences, including plant identification, plant health, botany, and soil science.
- Apply knowledge of design principles and techniques to create, visualize, and assess landscape designs that meet client needs and industry standards and enhance the built environment.
- Demonstrate a comprehensive understanding of the industry standards, practices, tools, and equipment used in landscape construction, arboriculture, and landscape maintenance.
- Develop landscape services estimates and apply knowledge of project management principles and practices to oversee the implementation of landscape projects, including budgeting, scheduling, and quality control.
- Employ professional oral and written communication through presentations, reports, and collaborative projects to prepare students to work with clients, contractors, and other professionals involved in landscape contracting to deliver successful projects.
- Recognize and apply principles of sustainable land stewardship and ethical leadership regarding the environmental, social, and economic impacts of the landscape industry and be able to evaluate changing perceptions, regulations, and challenges through applied skills, case studies, and field trips.

Major Field Requirements:	**29**
AGEN 112/112X- Surveying & Land Management	2
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 121- Woody Plant Material	3
ORHT 122- Environmental Design	3
ORHT 160- Landscape Contracts	1
ORHT 161- Landscape Graphics	2
ORHT 221/221X- Landscape Construction	3
ORHT 223- Environmental Design II	3
ORHT 282- Arboriculture	3
Lower-Level Technical Electives:	**6**
100-200 level coursework chosen from: AGEN, AGRN, AGSC, BIOL, CITA, ENGR, GART, GIST, ORHT, or RECM	
Business Elective:	**3**
100-200 level coursework chosen from: ACCT, AGBU, BADM	

Liberal Arts & Sciences:	**21**
ENGL 101- Composition I	3
Or ENGL 102- Composition II	
MATH 111- College Algebra (or higher)	3
BIOL 116- Botany I	3
Or BIOL 101/101X- Introduction to Biology	
Communication Oral Course	3
Diversity: Equity, Inclusion, & Social Justice Course	3
Additional General Education Courses	6
General Electives:	**2**
FFCS 101- Foundation for College Success	1
PHED	1
Total Credits	**61**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Landscape Development (A.A.S.) (Curriculum Code – 0611/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111 **or** BIOL 101/101X **or** BIOL 116	Intro to Soil Science **or** Introduction to Biology **or** Botany I	3
ENGL 101	Composition I	3
ORHT 160	Landscape Contracts	1
ORHT 161	Landscape Graphics	2
MATH 111 or higher	College Algebra (or higher)	3
Additional General Education Course		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 112	Surveying & Land Measurement	1
AGEN 112X	Surveying & Land Measure Lab	1
AGSC 111 **or** BIOL 101/101X **or** BIOL 116	Intro to Soil Science **or** Introduction to Biology **or** Botany I	3
ORHT 122	Environmental Design I	3
Communication Oral Course		3
Lower-Level Technical Elective		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology	3
ORHT 121	Woody Plant Materials	3
ORHT 221	Landscape Construction	2
ORHT 221X	Landscape Construction Lab	1
ORHT 223	Environmental Design II	3
Lower-Level Technical Elective		3

Year 2/SPRING		
Code/Name		**Credits**
AGSC 186	Entomology	3
ORHT 282	Arboriculture	3
Diversity: Equity, Inclusion, & Social Justice Course		3
Additional General Education Course		3
Business Elective		3

Liberal Arts & Science: Social Science (A.A.) (Curriculum Code – 0212/HEGIS - 5622)

Associate in Arts

Overview

The Department of Liberal Studies has a long history of effective teaching provided by professors who have done distinguished research in diverse areas from urban history to East Asian economics. With courses that provide a stimulating learning environment and invite students to explore the nature of the human social existence at the individual and society-wide level, SUNY Cobleskill's A.A. program in Social Science is unique and rewarding. In areas such as psychology, sociology, history of the United States, history of Western civilization, economics, and political science, students can take courses which provide a strong foundation for bachelor's level work at any transfer institution in the country. Furthermore, the department offers courses not typically found at a two-year degree granting institution in the areas of anthropology, archeology, African-American and Native-American studies. With its cooperative relationship with the nearby Iroquois Museum and the People's Cultural Center of the Salish and Kootenai tribe of Montana, students have a unique opportunity to explore the vast history and distinctive cultures of the Native Nations of North America.

Students must earn a grade of "C-"or better in all major field and advisement track requirements as well as ENGL 101.

Student Learning Outcomes

- Students will be able to display the ability to think critically and creatively.
- Students will have developed the skills necessary to communicate ideas clearly and effectively.
- Students will have developed a sense of social responsibility and intellectual curiosity.
- Students will have gained an awareness of and an appreciation for his or her individual uniqueness, heritage and environment.
- Students will have come to recognize the multicultural character of the United States society.
- Students will have clearly developed computer technology skills that will give them advantages in their college of transfer and their career.

Major Field Requirements:	**12**
Nine credits from three different course prefixes (students in the Psychology Advisement Track must include PSYC 111- General Psychology) chosen from: AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SPIN, SUST	9
Three credits of 200-Level or higher course work chosen from: ANTH, ECON, GOVT, HIST, NAMS, PSYC, SUST	3

Advisement Track: (choose one)	**15**

Physical Education:
PERS 201- Foundations of Physical Education
PERS 211- First Aid and CPR
PERS 214- Care/Prevent Athletic Injuries
PERS 215- Organiz Admin Phys Ed Athl and Rec
PERS Elective

Psychology:

PSYC 231- Social Psychology
PSYC 320- Personality Psychology
Three credits chosen from:
PSYC 221- Child Psychology
PSYC 222- Adolescent Psychology
PSYC 323- Adult Development and Aging
Six credits chosen from PSYC 200-399 Electives

Social Sciences:

Courses by Advisement chosen from ANTH, ARAB, ARTS, BIOL, CHEM, CHIN, ECON, ENGL, FREN, GOVT, HIST, HUMS, MATH, NAMS, PERS, PHIL, PHYS, PSCI, PSYC, SOSC, and SPAN

Liberal Arts & Sciences:	**27**
ENGL 101- Composition I	3
ENGL 102 or higher	3
MATH 111- College Algebra (or higher)	3
Humanities (two different prefixes)	6
Lab Science	6
Additional Liberal Arts and Sciences	6
General Electives:	**6**
General Electives	5
PHED	1
Total Credits	**60**

30 credits General Education Skills Areas
General Education Core Competencies
Math Competency
Applied Learning Competency
FFCS Competency

New York State Coaching Certification

SUNY Cobleskill is approved by the New York State Education Department per section 135.4 of the "Regulations of the Commissioner of Education" to offer a program for the purpose of certifying persons to coach in New York. The following courses must be successfully completed to gain certification:

PERS 211	First Aid and CPR
PERS 213	Current Issues in Health and Wellness
PERS 215	Organization and Administration of Physical Education, Athletics, and Recreation
PERS 216	Theory and Techniques of Coaching

Liberal Arts & Science: Social Science (A.A.) (Curriculum Code – 0212/HEGIS - 5622)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ENGL 101	Composition I	3
Anything from MATH by Placement or higher		3
Anything from PHED		1
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST *Suggested SOSC 111 or HIST 101/102		3
FFCS 101	Foundation for College Success	1

Year 1/SPRING	
Code/Name	**Credits**
Advisement Track	3
Anything from BIOL, CHEM, PHYS, PSCI	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	3
Anything from ENGL (102 or higher)	3
Liberal Arts and Sciences	3

Year 2/FALL	
Code/Name	**Credits**
Advisement Track	6
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	3
Liberal Arts and Sciences	3

Year 2/SPRING	
Code/Name	**Credits**
Advisement Track	6
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN	3
Anything from AAMS, ECON, GOVT, HIST, NAMS, PSYC, SUST (200-level or higher)	3
General Elective	4

Paramedic (A.A.S.) (Curriculum Code – 1945/HEGIS - 5299)

Associate in Applied Science

Overview

The Paramedic A.A.S. program fills a rapidly expanding medical role that is gaining in demand. As an allied healthcare professional, the paramedic is the most highly trained EMS provider in the pre-hospital setting. The paramedic responds to medical emergencies and provides the critical care necessary to support, sustain and often save lives. Paramedic education includes advanced skills in patient assessment, advanced airway management, cardiac care, and advanced cardiac life support. Students will have the opportunity to become proficient in intubation, ECG monitoring and 12-lead ECG, defibrillation, IV therapy, medical administration, and more. Classes are taught by faculty who are active in the region's EMS community. They are dedicated to helping students learn the essentials of becoming competent entry-level paramedics. During the academic year, the program provides a strong foundation in anatomy and physiology, and basic biology, along with a broad liberal arts education. In the clinical year, required for New York State certification, students focus exclusively on exercises and clinical experience at sites within the student's community. The entire course covers a span of 12 months, culminating in successful students becoming eligible to take the New York State Emergency Medical Technician-Paramedic exam.

Students must earn a grade of "C-"or better in all major field requirements as well as ENGL 101.

Student Learning Outcomes

- Successful students will be prepared for the NYS certification examinations.
- Successful students will be able to treat critically ill and injured patients in a variety of settings.
- Successful students will be able to effectively communicate through oral and written methods in a patient care setting.
- Successful students will be able to lead EMS teams during field operations.
- Successful students will possess essential psychomotor skills of a professional paramedic.

Major Field Requirements:	**46**
EMSC 112- Emergency Medical Tech EMT	4
BIOL 158/158X- Human Anatomy and Physiology I	3
Or BIOL 258/258X- Anatomy and Physiology I	
BIOL 159/159X- Human Anatomy and Physiology II	3
Or BIOL 259/259X- Anatomy and Physiology II	
EMSC 201- Paramedic I	8
EMSC 201X- Paramedic I Lab	4
EMSC 202- Paramedic Hospital Clinical	6
EMSC 203- Paramedic II	8
EMSC 203X- Paramedic II Lab	4
EMSC 204- Paramedic Field Clinical	6

Liberal Arts & Sciences:	**18**
ENGL 101- Composition I	3
MATH 111- College Algebra or higher	3
PSYC 111- General Psychology	3
Or SOSC 111- Introduction to Sociology	
Additional Liberal Arts and Sciences	9
General Electives:	**2**
General Electives	1
PHED	1
Total Credits	**66**
20 credits General Education Skills Areas	
General Education Core Competencies	
Math Competency	
Applied Learning Competency	
FFCS Competency	

Paramedic (A.A.S.) (Curriculum Code – 1945/HEGIS - 5299)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
EMSC 112	Emergency Medical Technician	4
BIOL 158	Human Anatomy & Physiology I	2
BIOL 158X	Human Anatomy/Physiology I Lab	1
FFCS 101	Foundation for College Success	1
Anything from SOSC 111 OR PSYC 111		3
Anything from MATH 111 or higher		3

Year 1/SPRING		
Code/Name		**Credits**
BIOL 159	Human Anatomy & Physiology II	2
BIOL 159X	Human Anatomy/Physiology II Lab	1
ENGL 101	Composition I	3
Anything from PHED		1
Liberal Arts and Sciences		9

Year 2/FALL		
Code/Name		**Credits**
EMSC 201	Paramedic I	8
EMSC 201X	Paramedic I Lab	4
EMSC 202	Paramedic Hospital Clinical	6

Year 2/SPRING		
Code/Name		**Credits**
EMSC 203	Paramedic II	8
EMSC 203X	Paramedic II Lab	4
EMSC 204	Paramedic Field Clinical	6

Agricultural Mechanics (Certificate) (Curriculum Code – 3166/HEGIS - 5301)

Certificate

Overview

Modern agriculture demands skilled technicians who understand the complex designs and applications of power machinery. The Agricultural Mechanics certificate prepares students in component and system knowledge along with service techniques of tractors and associated agriculture machinery. Students develop basic working skills in the mechanics of gas and diesel power units, hydraulics, electrical, diesel and gas engines, and mobile air conditioning as they pertain to modern agriculture equipment. Additional coursework specializes in repair welding as it pertains to equipment. Use of manufacturer technical and service information is incorporated in the curriculum. Practical knowledge of servicing agriculture equipment will prepare students for employment with farms, equipment dealerships, and companies for entry-level service positions.

Student Learning Outcomes

- Service, adjust, and repair agricultural equipment including engines, hydraulic systems, electrical systems, heating and air conditioning systems using current service information and diagnostic equipment.
- Troubleshoot and diagnose basic malfunctions in agricultural equipment using current service information and diagnostic equipment.
- Work safely to avoid accidents that cause damage or injury to themselves, other people, or personal property.
- Use tools properly when repairing equipment, and applied welding knowledge for equipment repair.
- Complete work experience at an equipment dealership or agricultural enterprise to apply learning practices in real world situations.

Major Field Requirements:	**24**
AGEN 111- Intro to Computing in Ag Eng Tech	1
AGEN 111X- Intro Computing in Ag Eng Tech Lab	1
AGEN 115A- Supervised Word Experience	1
AGEN 122- Basic Small Engine Repair	2
AGEN 122X- Basic Small Engine Repair Lab	1
AGEN 132- Fundamentals Diesel Engine Tech	2
AGEN 132X- Fundamentals Diesel Engine Tech Lab	1
AGEN 151 - Basic Welding	1
AGEN 151X- Basic Welding Lab	1
AGEN 166- Agricultural Mechanics	1
AGEN 166X- Agricultural Mechanics Lab	1
AGEN 170- Basic Hydraulics	2
AGEN 170X- Basic Hydraulics Lab	1
AGEN 245- Air Conditioning	1
AGEN 245X- Air Conditioning Lab	1
AGEN Electives by Advisement	2
PHYS 101- Principles of Physics I	3
PHYS 101X- Principles of Physics I Lab	1

Agricultural Mechanics (Certificate) (Curriculum Code –3166 /HEGIS - 5501)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGEN 111	Intro to Computing in Ag Eng Tech	1
AGEN 111X	Intro Computing in Ag Eng Tech Lab	1
AGEN 122	Basic Small Engine Repair	2
AGEN 122X	Basic Small Engine Repair Lab	1
AGEN 151	Basic Welding	1
AGEN 151X	Basic Welding Lab	1
AGEN 166	Agricultural Mechanics	1
AGEN 166X	Agricultural Mechanics Lab	1
AGEN 170	Basic Hydraulics	2
AGEN 170X	Basic Hydraulics Lab	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 115A	Supervised Word Experience	1
AGEN 132	Fundamentals Diesel Engine Tech	2
AGEN 132X	Fundamentals Diesel Engine Tech Lab	1
AGEN 245	Air Conditioning	1
AGEN 245X	Air Conditioning Lab	1
AGEN Electives by Advisement		2
PHYS 101	Principles of Physics I	3
PHYS 101X	Principles of Physics I Lab	1

Child Care Practice (Certificate) (Curriculum Code – 3119/HEGIS - 5503)

Certificate

Overview

The Early Childhood Certificate program prepares students for immediate employment in the field of Child Care. Courses are hands-on, interactive, and allow students to practice skills and develop dispositions required for the field. Students may transfer all credits into the Early Childhood degree programs. To fulfill requirements for the Child Care Practice Certificate, the candidate must complete 24 academic credits, and achieve grades of "C" or higher in ENGL and ECHD courses. Students must achieve an overall minimum GPA of 2.00.

Student Learning Outcomes

- Promoting child development and learning.
- Building family and community relationships.
- Observing, documenting, and assessing to support young children and families.
- Planning and teaching developmentally appropriate lessons for young children.
- Upholding professional standards in the early childhood field.

Major Field Requirements:	**24**
ECHD 130- Introduction to Early Childhood Studies	3
ECHD 150- Curriculum and Methods	3
OR ECHD 101- Basics in Early Childhood	
ECHD 170- Child Growth and Development	3
OR ECHD 175- Infants and Toddlers	
ECHD 240- Child and Family Wellness	3
ECHD 252- Conflict Resolution: Create Peace Env	3
OR ECHD 251- Anti-Bias Strategies Human App	
ECHD 280- Exceptional Children	3
ENGL 101- Composition I	3
OR ENGL 100- Introduction to College Writing	
ENGL 111- Fund of Speech Communications	3
OR HUMS 243- Children's Literature	

Child Care Practice (Certificate) (Curriculum Code – 3119/HEGIS - 5503)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ECHD 130	Intro to Early Childhood Studies	3
ECHD 150 **or** ECHD 101	Curriculum and Methods **or** Basics in Early Childhood	3
ECHD 170 **or** ECHD 175	Child Growth and Development **or** Infants and Toddlers	3
ENGL 101 **or** ENGL 100	Composition I **or** Introduction to College Writing	3

Year 1/SPRING		
Code/Name		**Credits**
ECHD 240	Child and Family Wellness	3
ECHD 252 **or** ECHD 251	Conflict Resolution: Create Peace Env **or** Anti-Bias Strategies Human App	3
ECHD 280	Exceptional Children	3
ENGL 111 **or** HUMS 243	Fund of Speech Communications **or** Children's Literature	3

Farm and Food Entrepreneurship (Certificate) (Curriculum Code – 3077/HEGIS - 5601)

Certificate

Overview

The Farm and Food Entrepreneurship Certificate program at SUNY Cobleskill prepares students for a variety of work experiences in the agricultural sector and beyond, with focus on technical and soft skills required for entrepreneurship and management. Financial management, accounting, marketing, business planning and value-added production figure prominently in the curriculum. The Certificate program is comprised entirely of online courses offered by faculty in the Agricultural Business Management, Business Administration and Animal/Plant Science program areas.

Student Learning Outcomes

- Students will apply business planning, accounting and financial management skills to the development of a business plan.
- Students will apply marketing and promotional best practices to development of effective farm and food product marketing strategies.
- Students will improve oral and written communication capacities through presentation, paper and project assignments.
- Students will identify processes and equipment common to food and beverage processing operations and understand their purposes and techniques for improving efficiency and effectiveness.
- Students will understand the importance of accounting and apply accounting principles to business case studies.
- Students will use financial management know-how to complete farm case study assignments and projects.
- Students will assess the fit between their personal and professional characteristics and those required for successful entrepreneurship.
- Students will use concepts from food product development, food system regulation and marketing to develop novel farm and food products.
- Students will identify and assess federal, state and local laws relevant to farm and food business operations.

Major Field Requirements:	**30**
AGBU 141- Ag Production Management	2
AGBU 141X- Ag Production Management Lab	1
AGBU 242- Ag Bus Financial Management	2
AGBU 242X- Ag Bus Financial Management Lab	1
AGBU 310- Ag Bus Entrepreneurship	3
AGBU 340- Food System Regulation	3
AGBU 395- Value Added Production & Mktg	2
AGBU 395X- Value Added Production & Mktg Lab	1
ACCT 101- Financial Accounting	3
AGEN 265- Food Processing Engineering	2
AGEN 265X- Food Processing Engineering Lab	1
6 credits chosen from: BADM 135- Retailing BADM 330- Advertising and Promotion MKHT 311- E-Marketing	6
3 credits chosen from: AGBU 104- Intro to Ag Microeconomics BADM 305- International Business BADM 334- Marketing Research COMM 301- Technical Communication SUST 101- Introduction to Sustainability	3

Farm and Food Entrepreneurship (Certificate) (Curriculum Code – 3077/HEGIS - 5601)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 141	Ag Production Management	2
AGBU 141X	Ag Production Management Lab	1
AGBU 242	Ag Bus Financial Management	2
AGBU 242X	Ag Bus Financial Management Lab	1
AGBU 310	Ag Bus Entrepreneurship	3
AGBU 395	Value Added Production & Mktg	2
AGBU 395X	Value Added Production & Mktg Lab	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
AGBU 340	Food System Regulation	3
AGEN 265	Food Processing Engineering	2
AGEN 265X	Food Processing Engineering Lab	1
Choose TWO of the following: BADM 315- Retailing BADM 330- Advertising and Promotion MKHT 311- E-Marketing		6
Choose ONE of the following: AGBU 104- Intro to Ag Microeconomics BADM 305- International Business BADM 334- Marketing Research COMM 301- Technical Communication SUST 101- Introduction to Sustainability		3

Histotechnician (Certificate) (Curriculum Code – 3174/HEGIS - 5205)

Certificate

Overview

The SUNY Cobleskill Histotechnician Certificate program helps fill a rapidly expanding medical laboratory health field that is growing exponentially. There are multiple openings throughout New York State for these laboratory health professionals. Histotechnicians are highly trained members of the Anatomic Laboratory and the Histopathology. Under the supervision of a Pathologist, a histotechnician performs all tasks related to the preparation of Histopathologic slides for microscopic examination and disease diagnosis by the licensed Pathologist.

The certificate is designed for individuals with an associate's or bachelor's degree and prerequisite courses, to complete the specialized histotechnician coursework and clinical experience to become eligible for the American Society for Clinical Pathology – Histotechnician examination. The program offers the core coursework in two full- time semesters culminating with a summer clinical rotation. The rotation is a 400-hour clinical experience perfecting skills in an approved hospital, pharmaceutical, or veterinarian histology lab. Successful students will be eligible for the American Society for Clinical Pathology – Histotechnician examination which ultimately grants New York State licensure.

Prerequisites for the Histotechnician Certificate include BIOL 111, BIOL 111X, BIOL 112, BIOL 112X, CHEM 111, CHEM 111X, CHEM 112, CHEM 112X, and ENGL 101 with a grade of C or better. Students must earn a grade of "C" or better in all major field requirements.

Student Learning Outcomes

The Histotechnician Certificate program objectives are to educate and train students for entry-level competence in the field of Histotechnology. Student learning outcomes (SLOs) are:

- Develop entry-level competence in areas of Histotechnology including accessioning, fixation, processing, microtomy, and staining.accessioning
- Identify and troubleshoot common artifacts seen in fixation, processing, microtomy, and staining.
- Follow Standard Operating Procedures (SOP) in all aspects of Histotechnology to ensure that consistent and quality products are being produced for diagnostic purposes.
- Always demonstrate safe practices and universal precautions while working within the laboratory.
- Demonstrate consistency and accuracy within the Histology laboratory setting including quality control and quality assurance.

Major Field Requirements:	**30**
BIOL 114- Medical Terminology Orientation	2
BIOL 251/251X- Microscopic Anatomy	4
BIOL 258/258X- Anatomy and Physiology I	4
BIOL 259/259X- Anatomy and Physiology II	4
BIOL 268/268X- Microtechniques	6
BIOL 275- Clinical Experience Histotechnology	4
BIOL 305- Ethics Science, Medicine & Tech	3
CITA 122- Spreadsheet Application Development	3

Histotechnician (Certificate) (Curriculum Code – 3174/HEGIS - 5205)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 114	Medical Terminology Orientation	2
BIOL 251	Microscopic Anatomy	2
BIOL 251X	Microscopic Anatomy Lab	2
BIOL 258	Anatomy & Physiology I	3
BIOL 258X	Anatomy and Physiology I Lab	1
CITA 122	Spreadsheet Application Dev	3

Year 1/SPRING		
Code/Name		**Credits**
BIOL 259	Anatomy & Physiology II	3
BIOL 259X	Anatomy and Physiology II Lab	1
BIOL 268	Microtechniques	3
BIOL 268X	Microtechniques Lab	3
BIOL 305	Ethics Science, Medicine & Tech	3

SUMMER CLINICAL (400 hours)		
Code/Name		**Credits**
BIOL 275	Clinical Experience	4

Paramedic (Certificate) (Curriculum Code – 1894/HEGIS - 5299)

Certificate

Overview

The Paramedic Certificate program fills a rapidly expanding medical role that is gaining in demand. As an allied healthcare professional, the paramedic is the most highly trained EMS provider in the pre-hospital setting. The paramedic responds to medical emergencies and provides the critical care necessary to support, sustain and often save lives. Paramedic education includes advanced skills in patient assessment, advanced airway management, cardiac care, and advanced cardiac life support. Students will have the opportunity to become proficient in intubation, ECG monitoring and 12-lead ECG, defibrillation, IV therapy, medical administration, and more. Classes are taught by faculty who are active in the region's EMS community. They are dedicated to helping students learn the essentials of becoming competent entry-level paramedics. In the clinical year, required for New York State certification, students focus exclusively on exercises and clinical experience at sites within the student's community. The entire course covers a span of 12 months, culminating in successful students becoming eligible to take the New York State Emergency Medical Technician-Paramedic exam. The Paramedic Certificate is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

To contact the CoAEMSP:
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX 75088
214-703-8445
Fax: 214-703-8992
www.coaemsp.org

Student Learning Outcomes

- Successful students will be prepared for the NYS certification examinations.
- Successful students will be able to treat critically ill and injured patients in a variety of settings.
- Successful students will be able to effectively communicate through oral and written methods in a patient care setting.
- Successful students will be able to lead EMS teams during field operations.
- Successful students will possess essential psychomotor skills of a professional paramedic.

Major Field Requirements:	**39**
BIOL 158- Human Anatomy and Physiology I	2
Or BIOL 159- Human Anatomy and Physiology II	2
BIOL 158X- Human Anatomy and Phys I Lab	1
Or BIOL 159X- Human Anatomy and Phys II Lab	1
EMSC 201- Paramedic I	8
EMSC 201X- Paramedic I Lab	4
EMSC 202- Paramedic Hospital Clinical	6
EMSC 203- Paramedic II	8
EMSC 203X- Paramedic II Lab	4
EMSC 204- Paramedic Field Clinical	6

Paramedic (Certificate) (Curriculum Code – 1894/HEGIS - 5299)

Suggested Course Sequencing

Year 1/SUMMER		
Code/Name		**Credits**
BIOL 158	Human Anatomy & Physiology I	2
BIOL 158X	Human Anatomy/Physiology I Lab	1
OR		
BIOL 159	Human Anatomy & Physiology II	2
BIOL 159X	Human Anatomy/Physiology II Lab	1

Year 1/FALL		
Code/Name		**Credits**
EMSC 201	Paramedic I	8
EMSC 201X	Paramedic I Lab	4
EMSC 202	Paramedic Hospital Clinical	6

Year 1/SPRING		
Code/Name		**Credits**
EMSC 203	Paramedic II	8
EMSC 203X	Paramedic II Lab	4
EMSC 204	Paramedic Field Clinical	6

Supply Chain Management (Certificate) (Curriculum Code – 3134/HEGIS - 0506)

Certificate

Overview

The Supply Chain Management Certificate program at SUNY Cobleskill prepares students for employment opportunities across various domains of the supply chain including logistics, warehousing, distribution, purchasing, transportation, and inventory management. The program has a strong emphasis on the foundations of management with a focus on technical and soft skills. Management, communications, and Excel skills are embedded in the curriculum. The certificate program may be completed entirely online or a combination of online and face-to-face classes.

Student Learning Outcomes

- Students will explain the business functions required to successfully manage a supply chain process.
- Students will identify and assess regulatory compliance and regulations necessary for any business function.
- Students will identify operational procedures for effective supply chain management.
- Students will identify effective oral and written communication capacities through presentations, papers, and project assignments.
- Students will identify and assess the basic business functions and operations of management.
- Students will explain how to develop and maintain effective interpersonal relationships.

Major Field Requirements:	**31**
AGBU 207- Ag Business Operations	3
AGBU 207X- Ag Business Operations Lab	1
BADM 223- Business Law I	3
BADM 249- Management	3
BADM 259- Supply Chain Management	3
BADM 320- Ethics and Management	3
Or BADM 360- Business Sustainability: TBL	
BADM 349- Strategic Management for Quality	3
BADM 355- Logistics Management	3
BADM or AGBU 365- Purchasing	3
CITA 122- Spreadsheet Application Development	3
CITA 405- Project Management	3

Supply Chain Management (Certificate) (Curriculum Code – 3134/HEGIS - 0506)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 207	Ag Business Operations	3
AGBU 207X	Ag Business Operations Lab	1
BADM 223	Business Law I	3
BADM 249	Management	3
BADM 259	Supply Chain Management	3
CITA 122	Spreadsheet Application Dev	3

Year 1/SPRING		
Code/Name		**Credits**
BADM 349	Strategic Management for Quality	3
BADM 355	Logistics Management	3
BADM 365	Purchasing	3
CITA 405	Project Management	3
BADM 320 **or** BADM 360	Ethics and Management **or** Business Sustainability: TBL	3

Course Descriptions Key

To go directly to a subject, click on the subject below.

Accounting (ACCT)
African American Studies (AAMS)
Agricultural Business (AGBU)
Agricultural Education (AGED)
Agricultural Engineering Technology (AGEN)
Agriculture Science (AGSC)
Agronomy (AGRN)
American Sign Language (AMSL)
Animal Science (ANSC)
Anthropology (ANTH)
Arabic (ARAB)
Art (ARTS)
Biological Sciences (BIOL)
Biotechnology (BIOT)
Business Administration (BADM)
Canine Training and Management (CANI)
Chemistry (CHEM)
Communications (COMM)
Culinary Arts, Hospitality, and Tourism (CAHT)
Cybersecurity (CYBR)
Early Childhood (ECHD)
Economics (ECON)
Emergency Medical Services (EMSC)
Engineering (ENGR)
English (ENGL)
Environmental Health (ENHT)
Environmental (ENVR)
Financial Services Management (FSMA)
Fisheries and Wildlife – Natural Resources (FWLD)
Foundation for College Success (FFCS)
French (FREN)
Geographic Information Systems Technology (GIST)
Government (GOVT)
Graphic Arts and Design (GART)
History (HIST)
Honors (HONR)
Humanities (HUMS)
Information Technology (CITA)
Internship Preregistration (INTR)
Journalism (JOUR)
Marketing (MKHT)
Mathematics (MATH)
Music (MUSC)
Native American Studies (NAMS)
Nutrition (NTRN)
Ornamental Horticulture (ORHT)
Physical Education (PHED)
Physical Education, Recreation and Sport Studies (PERS)
Philosophy (PHIL)
Physical Science (PSCI)
Physics (PHYS)
Psychology (PSYC)
Recreation and Sports Area Management (RECM)
Sociology (SOSC)
Spanish (SPAN)
Sport Industry (SPIN)
Sustainability Studies (SUST)

African American Studies

AAMS 111 | Intro African Amer Studies (C)

This course seeks to provide a survey of African American culture in seven core components: 1) History 2) Sociology 3) Religion 4) Aesthetics and Art 5) Psychology 6) Economics and 7) Political Science. This course will introduce students to examining the Black experience from a multi- disciplinary perspective, and enhance clarity and substance of African diasporic history and culture. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

Accounting

ACCT 101 | Financial Accounting (C)

An introduction to fundamental theory, principles and procedures for service and merchandising enterprises with emphasis on such topics as merchandise inventory, plant assets, promissory notes, accounting systems, payroll, internal control, bad debts, adjustments and financial statements. Students may receive one credit or three credits but not both. Students enrolling for one credit will cover approximately one-third of the course. [Fall, Spring] Applied Learning-Entrepreneurship [3 credits] [4 contact hours]

ACCT 102 | Princ of Accounting II (C)

An expansion of fundamental theory, principles, and procedures applicable to the corporate entity, with emphasis on such topics as bonds, investments, cost accounting, financial statement analysis, and managerial use of accounting information. Prerequisite: ACCT 101 [3 credits] [4 contact hours]

ACCT 103 | Managerial Accounting (C)

This course is designed to meet the needs of internal management in the decision-making process. Emphasis will be on the interpretation of accounting data and approaches to problem solving. Topics covered will include theory and behavior of costs, cost-profit-volume relationships, decision-making, costing systems, and financial statement analysis. Not open to students receiving credit in ACCT 102. Prerequisite: ACCT 101 [Fall, Spring] Applied Learning-Other [3 credits] [4 contact hours]

ACCT 150 | QuickBooks- Comprehensive

This course is an online, three-credit hour, modular course that introduces students to the basics of accounting for and reporting on the operations of a small business. Students will be guided through three modules of five weeks in length each. In the first module, students will study the essence of recording transactions and the preparation of financial statements as well as experiencing the use of QuickBooks in a simulated real-life case study. The second five-week module will enhance the student's QuickBooks experience by expanding the case-study to include transactions of a merchandising company where such topics as inventory tracking, sales tax, bad debts, bank reconciliations, and the creation of a budget are explored. In the third five-week module, advanced QuickBooks topics such as tracking profitable operations, billing for time and expenses, customizing forms, preparing a payroll, and exporting forms and reports to customized Excel spreadsheets are experienced. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ACCT 280A | Accounting Work Internship

Students may earn credit for approved work experience which is related to the study of accounting. This course is repeatable up to 2 times. Prerequisite: A grade of "C" or better in ACCT 101 and ACCT 102 or ACCT 103 and prior consent of the Accounting Department. [Fall, Spring] [1 credit] [1 contact hour]

ACCT 280B | Accounting Work Internship

Students may earn credit for approved work experience which is related to the study of accounting. This course is repeatable up to 2 times. Prerequisite: A grade of "C" or better in ACCT 101 and ACCT 102 or ACCT 103 and prior consent of the Accounting Department. [Fall, Spring] [2 credits] [2 contact hours]

ACCT 280C | Accounting Work Internship

Students may earn credit for approved work experience which is related to the study of accounting. This course is repeatable up to 2 times. Prerequisite: A grade of "C" or better in ACCT 101 and ACCT 102 or ACCT 103 and prior consent of the Accounting Department. [Fall, Spring] [3 credits] [3 contact hours]

ACCT 290A | Spec Projects Accounting

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. This course is repeatable up to 2 times. This course is S/U graded only. Prerequisite: Open to second year students who have completed at least nine hours in accounting and have the approval of the department. [Fall, Spring] [1 credit] [1 contact hour]

ACCT 290B | Spec Projects Accounting

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. This course is repeatable up to 2 times. This course is S/U graded only. Prerequisite: Open to second year students who have completed at least nine hours in accounting and have the approval of the department. [Fall, Spring] [2 credits] [2 contact hours]

ACCT 290C | Spec Projects Accounting

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. This course is repeatable up to 2 times. This course is S/U graded only. Prerequisite: Open to second year students who have completed at least nine hours in accounting and have the approval of the department. [Fall, Spring] [3 credits] [3 contact hours]

ACCT 303 | Intermediate Accounting I (C)

An advanced study of accounting principles. Major topics include financial statements, the accounting process, cash and temporary investments, receivables, inventory cost and valuation procedures, and other assets. Appropriate references to applicable APB and FASB opinions are an integral part of the course. Prerequisites: ACCT 101 and ACCT 102 or ACCT 103 [Fall] Applied Learning [3 credits] [4 contact hours]

ACCT 311 | Cost Accounting (C)

Cost accounting concepts and theory with emphasis on the use of data in the decision-making process. Topics include job order, processing and activity-based cost systems, budgeting, cost-profit-volume relationships and standard costing. Prerequisites: ACCT 101 or ACCT 103. [Spring] Applied Learning [3 credits] [4 contact hours]

ACCT 335 | Financial Management (C)

An evaluation of the financial functions as they are related to the management processes of a business. Opportunities and problems that confront financial managers and the decisions they must make are developed and explained. Topics included are: objectives of financial management; financial analysis and planning; operating and capital budgeting; and working capital management. Prerequisite: ACCT 103 or consent of the department [Fall] Applied Learning-Other [3 credits] [3 contact hours]

ACCT 370 | Not-for-Profit Accounting (C)

An introduction to the accounting principles and practices of governmental and non-profit organizations. The course considers financial reporting standards for state and local governments and non-profit organizations. Fund accounting principles and other unique financial reporting requirements for non-profit agencies including state and local governments, colleges and universities, health and welfare agencies, churches, and other organizations will be covered. Prerequisites: ACCT 101 and ACCT 102 or ACCT 103 [Fall] Applied Learning [3 credits] [4 contact hours]

ACCT 390C | Spec Projects Accounting

An advanced independent study of topics of special interest to the Bachelor of Business Administration student. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [Fall, Spring] [3 credits] [3 contact hours]

Agricultural Business

AGBU 100 | Beginning Agricultural Bus (C)

This course is designed to introduce students to various aspects of Agricultural Business. Students are given the opportunity to learn about the many skills that are necessary to be successful in the broad range of careers stemming from an education in agricultural business. In order to be eligible to receive three credits, the student must have completed a sequence in a high school agricultural program, defined as the completion of five courses at least one-half year in length or three courses one year in length. Additionally, the student must have attained a combined average of at least 85.0 in all high school agriculture courses and must be enrolled for studies within a curricular area of Agriculture Business and be in good standing as defined by the college at the completion of the first semester of matriculation at SUNY Cobleskill. [Spring] [3 credits] [3 contact hours]

AGBU 101 | Intro to Agricultural Bus (C)

A study of the nature and functions of the agricultural business industry. The component parts of the industry will be identified and studied in terms of size, purpose, functions performed, and interrelationships with other components. [Fall] [3 credits] [4 contact hours]

AGBU 103 | Intro to Ag Macroeconomics (C)

AGBU 103 centers on Agricultural Macroeconomics, focusing on the broader aspects of economic growth within the agricultural sector. It explores the U.S. food production, marketing, and consumption dynamics from a macroeconomic perspective. Applying foundational economic principles to agriculture, the course examines the production function, input-output analysis, supply-demand dynamics, price determination, and provides an overview of the global agricultural situation. The course critically analyzes farm policy problems while emphasizing the intricate connections between agricultural and non-agricultural industries. [Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

AGBU 104 | Intro to Ag Microeconomics(C)

This course will comprise studies of the economic framework within which all agribusinesses operate and the nature and scope of the agricultural business complex within the U.S. Economic theory will be used to understand the incentives that dictate producer and consumer behavior in markets and the growing importance of the global marketplace. Within the context of producer behavior, introductory business management principles including functional marketing and marketing costs will be addressed as they relate to firm objectives of profit maximization, cost minimization, and growth. [Fall] Liberal Arts/Science Elective [3 credits] [3 contact hours]

AGBU 116 | Intro to Dairy Processing

This course is an introduction to the dairy processing industry. Students will study the makeup and handling of raw milk, the process of drug-testing of raw milk and pasteurization, bottling, and labeling in the campus Dairy Processing Center. Students will be introduced to the common terminology and equipment used in the process of producing safe and high-quality dairy products in accordance with the NYS Safe Milk Ordinance. Throughout the course, students will be introduced to value-added dairy products such as butter, yogurt, kefir, and soft and hard cheeses, and will learn to conduct a consumer sensory analysis of these products. This course is cross-listed with ANSC 126 and CAHT 116. [Spring] Applied Learning-Other [3 credits] [5 contact hours]

AGBU 121 | Marketing Ag Products (C)

A comprehensive study of the organization and functioning of the nation's food marketing system. Institutional, functional, market level, and commodity approaches to analyzing marketing problems are used. Farm product prices, marketing costs, and food prices are studied based on analysis of economic principles. Practice in futures trading is featured. [Spring] Applied Learning-Other [3 credits] [4 contact hours]

AGBU 122 | Milk Mktg & Dairy Policy (C)

A study of the structure and operation of the market for milk and milk products in the United States with special emphasis on marketing in the Northeast. Supply of milk, consumption of milk and milk products, pricing mechanisms, role of government, and role of dairy cooperatives will be investigated. Students will also be exposed to the influences of the global dairy product marketplace and how the factors affecting foreign markets impact our domestic markets. A semester course designed primarily for students interested in milk marketing. [Fall] [3 credits] [3 contact hours]

AGBU 123 | Fruit & Vegetable Mktg (C)

The primary methods of marketing fruits and vegetables will be analyzed, such as contract sales, terminal markets, and roadside markets. Emphasis will be placed on roadside markets of commercial scale. Analysis of consumer characteristics, site selection, layout of facilities, sales techniques, and record keeping included. A five-week modular course designed primarily for students interested in fruit and vegetables. [Spring] [1 credit] [3 contact hours]

AGBU 141 | Ag Production Management (C)

The focus of this course is on management principles for agricultural businesses that grow or produce food and fiber products using land, labor, and capital. Students will be introduced to various options for beginning a production- oriented business and made aware of the interconnectedness of the global agricultural economy. Discussion of profitability, scale economics, economic capacity, and enterprise balance will be included with development and interpretation of financial statements as students foster strategic planning and decision-making skills through creation of a whole farm plan. In addition, students will be exposed to behavioral marketing as a critical management strategy. Partial budgeting, cost benefit analysis, and transition planning will be examined. [Spring] Applied Learning-Entrepreneurship [2 credits] [2 contact hours]

AGBU 141X | Ag Production Mgmt Lab (C)

As a co-requisite to AGBU 141, this laboratory course will facilitate working understanding of the management concepts presented in AGBU 141 through group and instructor-led activities. Co-requisite: AGBU 141 [Spring] Applied Learning-Entrepreneurship [1 credit] [2 contact hours]

AGBU 160 | Introduction to Food Systems

The "food system" encompasses all of the processes and the institutions involved in producing and distributing food products. Focus in this course will be on the current design and economic, social, political and environmental implications of the American and global food systems. Physical aspects of food system design, including the geography of production and distribution, will be discussed in light of the costs and benefits of system design. Students will also explore alternative food system design paradigms through global case study analysis. [Fall] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 207 | Ag Business Operations (C)

This course is designed to introduce students to the importance and nature of the "operations" function within all agricultural firms and operations management's role in determining firm performance. Quantitative methods, including mathematical programming, will be used to understand the processes of scientific decision making, forecasting and planning. Further, decision making processes regarding operations design, inventory management, scheduling and personnel management will be introduced in the context of a broad array of agricultural firms. Co-requisite: AGBU 207X. [Fall] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 207X | Ag Business Operations Lab (C)

As a co-requisite to AGBU 207, this laboratory course will facilitate a working understanding of the mechanical and quantitative material presented in AGBU 207 through group and instructor-led activities. Co-requisite: AGBU 207. [Fall] Applied Learning-Other [1 credit] [2 contact hours]

AGBU 208 | Agricultural Business Mgmt (C)

Designed to prepare the student for eventual agribusiness employment, this course emphasizes the operational function of management unique to the agribusiness industry. Management theory and microeconomic analyses are applied to practical settings in agribusiness. The role of the cooperative business structure is examined as one aspect of the uniqueness of agricultural business in the United States. Prerequisite: AGBU 104, ABGU 121, or AGBU 141 [Spring] [3 credits] [4 contact hours]

AGBU 219 | Ag Retail Practicum

Students in AGBU 219 will learn best management practices for ag/food retail operations and will be responsible for management and staffing of the SUNY Cobleskill agricultural retail facility, Carriage House Cafe & General Store. Through hands-on experience, students will put theory to practice in inventory management, merchandising, market research, and facility management. In addition to one compulsory hour of class time each week, students will be assigned four weekly

work hours in the retail facility via the co-requisite AGBU 219X and will rotate through work/management roles throughout the semester. Co-requisite: AGBU 219X [Fall, Spring] Applied Learning-Practicum [1 credit] [1 contact hour]

AGBU 219X | Ag Retail Practicum Lab

AGBU 219X is the required lab component to AGBU 219, Ag Retail Practicum. In the lab, students will learn best management practices for ag/food retail operations and will be responsible for management and staffing of the SUNY Cobleskill agricultural retail facility, Carriage House Cafe & General Store. Through hands-on experience, students will put theory to practice in inventory management, merchandising, market research, and facility management. For successful completion of AGBU 219X, students will be assigned four weekly work hours in the retail facility via the co-requisite AGBU 219X and will rotate through work/management roles throughout the semester. Co-requisite: AGBU 219 [Fall, Spring] Applied Learning-Practicum [2 credits] [4 contact hours]

AGBU 230 | Food Justice

This course explores the multifaceted connections between food, social equity, race, class, and sustainability. Through engaging discussions, readings, and real-world case studies, students will examine the disparities in food access and production systems. This course investigates how historical, cultural, and economic factors influence these inequalities and explores grassroots movements and policy interventions working towards equitable and sustainable food systems. By the course's conclusion, students will possess a critical understanding of food justice issues and the tools to analyze and contribute to the ongoing pursuit of fairer, more sustainable food practices.[Fall, Spring] Gen Ed Diversity: Equity, Inclusion, and Social Justice [3 credits] [3 contact hours]

AGBU 240 | Equine Farm Management

Fundamentals of organization and operation of different types of horse farms, efficiency factors, size considerations, farm organizations, and specific horse farm operations will be examined. [Fall] Applied Learning-Field Study [3 credits] [4 contact hours]

AGBU 242 | Ag Bus Financial Mgmt (C)

This course details business management practices for meeting short-term and long-term cash obligations of an agricultural business while providing students with specific study in credit utilization, employee compensation, employee insurance, and retirement planning. Study of current income tax guidelines and strategies associated with income tax management and development of an individual comprehensive retirement plan will be of central focus to the course. Co-requisite: AGBU 242X. Prerequisite: AGBU 141/141X or permission of the instructor. [Fall] Applied Learning-Entrepreneurship [2 credits] [2 contact hours]

AGBU 242X | Ag Bus Financial Mgmt Lab (C)

As a co-requisite to AGBU 242, this laboratory course will facilitate working understanding of the management concepts presented in AGBU 242 through group- and instructor-led activities. Co-requisite: AGBU 242. [Fall] Applied Learning-Entrepreneurship [1 credit] [2 contact hours]

AGBU 245 | Equine Business Management (C)

This course will focus on the functions of the owner or manager in the equine industry. Students will acquire a basic business skill set in the area of profit and cost analysis as well as delve into other issues associated with equine-based enterprises. Students will utilize their new skill set by examining various case studies and real-life situations throughout the semester. Prerequisite: Completion of at least 30 credits of coursework. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

AGBU 245X | Equine Business Management Lab

As a co-requisite to AGBU 245, this laboratory course will facilitate a working understanding of the management concepts presented in AGBU 245 through group- and instructor-led activities. Co-requisite: AGBU 245. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Entrepreneurship [1 credit] [2 contact hours]

AGBU 270 | Agricultural Bus Field Studies

This course is designed for students who desire a broader outlook in agriculture by examining actual agribusinesses and related agricultural practices and issues. Travel may be a required component of the field studies. At the culmination of the

course, the student will be required to submit a journal, prepare a written report and/or make a presentation summarizing their findings. Instructor's permission is required for enrollment. Student expense ($100 to $600) will vary depending upon the length of study and/or travel destinations. Students may enroll more than one time up to a maximum of four credits. This course is repeatable up to 1 time. [Spring] Applied Learning-Field Study [2 credits] [2 contact hours]

AGBU 280 | Niche Mktg and AgriTourism

Students in this course will explore the management and marketing principles utilized by a quickly-growing segment of the agricultural complex - small, differentiated food, fiber and "farm experience" producers who market to local or regional consumers and operate with a fundamentally different "marketing mix" than their commodity-producing counterparts. Marketing and management concepts learned in lecture will be complemented by travel to actual firms of this type and instruction from and collaboration with firm owners/managers. Prerequisite: 30 credit hours of coursework completed. [Summer] [2 credits] [2 contact hours]

AGBU 290A | Special Projects Ag Bus

An independent study of topics of problems of special interest to the second-year student in Agricultural Business. Student must have prior approval from his/her advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

AGBU 290B | Special Projects Ag Bus

An independent study of topics of problems of special interest to the second-year student in Agricultural Business. Student must have prior approval from his/her advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

AGBU 290C | Special Project Ag Bus

An independent study of topics of problems of special interest to the second-year student in Agricultural Business. Student must have prior approval from his/her advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

AGBU 310 | Ag Business Entrepreneurship (C)

This course is designed to allow students to apply management and economic concepts gleaned from their Agricultural Business courses to the unique challenges of entrepreneurship in food- and fiber-focused businesses. Course content will include identification and analysis of market opportunities and threats, business start-up financing, regulations related to entrepreneurship in agriculture, business planning, and feasibility analysis. Entrepreneur guest speakers will be utilized throughout the course. Prerequisites: AGBU 104, 141/141X, and 242/242X or permission of the instructor. [Fall] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

AGBU 321 | Agricultural Marketing Mgmnt

The course emphasizes marketing decision-making at the farm commodity producer level. Aspects of timing of sale, effects of product characteristics, development of market strategies involving storage, contract sales, hedging and futures options are included. Evaluation of buyer practices, new product development and producer bargaining efforts will be conducted. Application of techniques to selected commodity groups will be made. [Spring] Applied Learning-Research [3 credits] [3 contact hours]

AGBU 327 | Farm Appraisal (C)

A study of the various methods of real and personal property appraisal. Course work is combined with practice in the everyday application of these appraisal methods in actual business situations. Emphasis is placed on a familiarity with the terminology and concepts used in a broad spectrum of agricultural enterprises. Prerequisites: AGBU 141, AGBU 208, or AGBU 245 [Spring] Applied Learning-Field Study [3 credits] [4 contact hours]

AGBU 328 | Agri Sales & Promotion (C)

Students in this course will learn the theory and practical techniques critical for success in agricultural selling and sales management. Further, the critical link between marketing and sales will be explored with focus on the behavioral framework within which all marketing and sales strategies are designed. Prerequisite: AGBU 121. [Fall] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 330 | Commodity Supply & Mktg (C)

This course will comprise a comprehensive study of the physical commodity marketing process in the United States for all broad categories of agricultural commodities. Focus will be on the movement of agricultural commodities from primary producer to end-user and the economic and regulatory principles that dictate the nature of relationships throughout the complex. The role of commodities futures markets will be explored in great detail. Prerequisite: 60 credit hours of coursework completed. [Spring] Applied Learning-Research [3 credits] [3 contact hours]

AGBU 340 | Food System Regulation

Topics presented in this course will expand upon the general policy/law framework established throughout the AGBU curriculum to address the specific and often complex regulatory environment faced by businesses within the US food system. Both state and federal regulations that address food safety, food entrepreneurship and marketing, environmental conservation and international trade will be explored in ways that facilitate comprehensive understanding of this extensive legal framework. Prerequisite: Must have completed 60 credit hours. [Spring] [3 credits] [3 contact hours]

AGBU 342 | Intermediate Ag Economics (C)

This course will involve analysis of micro- and macro-economic principles at the intermediate level that together determine the nature and dispersion of agricultural economic activity globally. Students will be exposed to mechanically rigorous content that builds naturally on the principles established in Introductory Agricultural Economics. Prerequisite: AGBU 104 or permission of the instructor. [Fall] [3 credits] [3 contact hours]

AGBU 350 | Equine Business Mgmt (C)

A study of real-life situations and their resolutions as confronted on a daily basis by the equine farm manager. Areas covered will include organizational types, animal syndication, legal ramifications of various actions and how equine organizations, both national and regional, affect the equine farm and its manager's decisions. Prerequisites: ANSC 161 and AGBU 240 [Fall] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 355 | Logistics Management

This course explores the role of logistics as a critical link in the Global Supply Chain Management process. This course provides an in-depth analysis of the required skills, resources, and techniques needed to solve complex problems in the area of logistics management. Topics covered include transportation and the economy, costing and pricing, third party logistics, risk management, global transportation management, the governmental role in transportation, and the critical transportation issues. Each student will prepare a formal logistics plan. This course is cross-listed with BADM 355. Prerequisite: BADM 249 or AGBU 207 and AGBU 207X or permission of the instructor [Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 365 | Purchasing

This course explores the role of purchasing as a critical link in the Global Supply Chain Management process. This course provides an in-depth analysis of the required skills, resources, and techniques needed to solve complex problems in the area of purchasing management. The course will examine transportation and distribution concerns including production scheduling, third party logistics, calculating costs of services, warehousing, material management, analyzing value of services, staffing and supervision, and technology. Topics covered include the purchasing process, supply management for corporate advantage, supplier selection and evaluation, global sourcing, contract negotiation, lean supply chain, and purchasing laws. Each student will prepare a formal purchasing plan. This course is cross-listed with BADM 365. Prerequisite: BADM 249 or AGBU 207 and AGBU 207X or permission of the instructor [Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 380 | Internship Orientation Ag Bus

Bachelor of Technology students will be introduced to acceptable methods of establishing an internship. Successful and less than successful activities noted by previous interns will be evaluated. Interview skills will be enhanced and agreements developed. The course is intended for students planning to intern the following semester. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGBU 385 | Agricultural Retail Mgmt (C)

The content of this course will focus on the unique managerial challenges faced in the retail section of the agricultural complex. The finance, operations and marketing functions of these firms, including greenhouse/nursery operations, grocery operations, restaurants, input suppliers, and auction houses will be discussed using real-world applications and case studies. [Spring] [3 credits] [3 contact hours]

AGBU 390A | Spec Projects Ag Bus

An advanced independent study of topics of special interest to the Bachelor of Technology student in Agricultural Business. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

AGBU 390B | Spec Projects Ag Bus

An advanced independent study of topics of special interest to the Bachelor of Technology student in Agricultural Business. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

AGBU 390C | Spec Projects Ag Bus

An advanced independent study of topics of special interest to the Bachelor of Technology student in Agricultural Business. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

AGBU 395 | Value Added Production & Mktg

The content of this course will be focused on the processes that happen at the farm level and beyond to increase the value of primary agricultural commodities. Here, the concept of "value-added" will be presented as inclusive of minimal and complex processing activities, non-conventional production practices (e.g., "organic", "natural" or "grass-fed") and regional branding. Students will receive intensive instruction in both the economic and physical aspects of value-added production, best management practices and marketing strategies. Co-requisite AGBU 395X. Prerequisite: Must have completed 30 credit hrs (sophomore status). [Spring] Applied Learning-Entrepreneurship [2 credits] [2 contact hours]

AGBU 395X | Value Added Prod & Mktg Lab

The content of this laboratory course will be focused on value-added food product development processes, consumer panel assessment, trained sensory panel assessment and the encompassing process of launching and succeeding with a novel value-added food business. Students will receive intensive instruction in both the economic and physical aspects of value-added production, best management practices and marketing strategies. Co-requisite: AGBU 395. Prerequisite: Must have completed 30 credit hours (sophomore status). [Spring] Applied Learning-Entrepreneurship [1 credit] [2 contact hours]

AGBU 399 | Applications in Ag Mktg & Mgmt

Students will study and apply techniques essential for excelling in Agricultural Marketing. This comprehensive course comprises class lecture periods and practical experience hours. It covers a wide range of topics, including market analysis, business financial evaluation, business monitoring and measurement, written executive presentation, and live presentation skills. Successful completion of this course may lead to participation in the NAMA competition, demonstrating expertise in agricultural marketing. This course may be repeated for a maximum of six credits. Prerequisites: AGBU121 or permission of the instructor [Fall, Spring] Applied Learning-Other [2 credits] [4contact hours]

AGBU 399A | Aesthetics of Agribusiness

The interdisciplinary course offers an innovative exploration of the dynamic relationship between art, design, and the agricultural industry, delving into the historical, visual, and cultural dimensions of agribusiness marketing, sustainability, and entrepreneurship. We will examine how agricultural businesses use design, branding, and visual elements to communicate their values, mission, and products. Through a blend of lectures, discussions, workshops/case studies, field trips, and hands-on projects in the practical and theoretical aspects of the aesthetics of agribusiness, students will develop a comprehensive understanding of how design and agricultural practices can combine to promote novel and sustainable agribusiness ventures. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

AGBU 420 | Ag & Environmental Policy (C)

This course will constitute a study of the purpose, history, and importance of public policy in agriculture and the environment. Focus will be on utilizing economic principles to understand the intent, nature, and consequences of policy in addition to non-policy solutions to contemporary problems in the farm economy and the environment. Prerequisite: AGBU 104 or permission of the instructor. [Fall] [4 credits] [4 contact hours]

AGBU 430 | Agvocacy

This course is designed to prepare students to understand, analyze, and communicate about complex issues in food, agriculture, and the environment. This course will focus on building student's knowledge and skills in advocacy in order to help promote healthier, more sustainable, and more equitable food systems. It will comprise a comprehensive study of the advocacy role in the word of "agriculture" in the United States. Focus will be on addressing different audiences, from elected officials to fellow farmers and general public. The role of data and story-telling will be explored as well. Prerequisite: 60 credit hours of coursework completed [Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 440 | Environmental Issues in Ag (C)

A study of current environmental issues and concerns in agriculture. An appraisal of efficiency and equity issues in resolving rural environmental problems with agricultural origin. Analysis of general concepts and techniques for the evaluation of alternative pollution abatement policies in relation to changing social, economic and political structure. Seminar discussions. Prerequisites: AGBU 103 or permission of the instructor. [Spring] [3 credits] [4 contact hours]

AGBU 441 | Agricultural Law

Examination of those areas of law especially applicable to agriculture. Fundamentals of contract law, torts law, and property law will accompany discussion of major areas of agricultural law: acquisition and disposal of farmland; farm tenancies; rights and limitations in the use and ownership of farmland; water law; environmental protection; protection of the productivity of agricultural land; and the law of sales and secured transactions in an agricultural context. Prerequisite: Students must be enrolled in the fifth academic semester or higher as a Bachelor degree candidate. [Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGBU 442 | Agricultural Credit (C)

The principles and practices used in financing a farm business will be the focus of this course. The perspective will be that of both the farm manager and the agricultural lender. This course will also include sources of capital, leasing, credit instruments, long and short term credit, and collection. Prerequisites: AGBU 242/242X [Fall] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

AGBU 443 | Agricultural Business Fellows

Students will work with Cobleskill faculty to explore global economic issues generated by readings and real-world case studies in global economic development and business responsibility. This course deals with advanced management philosophies in production agriculture and agri-business applicable in the face of changing population structure, political dynamics and resource availability and is designed to act in conjunction with existing Agricultural Business curriculum to prepare graduating BT and BS students for work or graduate study. Course includes lecture, case studies and intensive reading and discussion. Course materials will be provided. Prerequisite: AGBU 104 or permission of the instructor. [Spring] [3 credits] [3 contact hours]

AGBU 450 | Internship in Ag Business

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager, or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. Prerequisites: BT students only, AGBU380, approximately 90 credit hours completed including nine credits of upper-level AGBU courses, and a minimum GPA of not less than 2.00 within the major and 2.00 overall. This course is S/U graded only. [Fall, Spring, Summer] Applied Learning-Internship [12 credits] [12 contact hours]

AGBU 460 | Advanced Ag Business Mgmt (C)

This course is intended for third- and fourth-year students interested in application of advanced management practices intended to strategically position the agricultural business for long-term profitability and continuation. Case study analysis and real-life businesses will be used as students explore situational analysis for strengths and weaknesses to make consultative recommendations for the future direction of contemporary agricultural businesses. Prerequisites: AGBU 104, AGBU 207/207X, AGBU 141/141X and AGBU 242/242X. [Fall] [3 credits] [3 contact hours]

AGBU 470 | Quantitative Methods in Ag Bus

This course constitutes a rigorous extension of the quantitative methods covered in AGBU 107 and will serve as an introduction to other mathematical and statistical procedures utilized in managerial decision-making and market research. Algebraic, Calculus, and Statistical concepts will be presented as they relate to successful management of agricultural firms including primary production, manufacturing, retailing, and marketing. Students will utilize software applications common in business management and will achieve competency in the quantitative mechanics that comprise those applications. Prerequisites: AGBU 207/207X and 60 credit hours of coursework completed. [Spring] [3 credits] [3 contact hours]

AGBU 475 | Farm Credit East Fellows

Learning the principles and practices used in providing key financial services to an agricultural business will be the focus of this course. The perspective will be from both the farm manager and the farm financial services providers. The course utilizes formal instruction, Farm Credit East guest speakers, case studies and assignments including a final presentation to Farm Credit East management at their headquarters in Enfield, Connecticut. Prerequisites: AGBU 141/141X, AGBU 242/242X, AGBU 442 and instructor permission. [Spring] Applied Learning-Other

Agricultural Education

AGED 307 | Intro Agricultural Educ (C)

This course will provide future agricultural leaders with a comprehensive overview and investigation into the opportunities available in the field of agricultural education. Formal and informal education will be investigated. Particular foci will surround teaching and communicating effectively in formal and informal settings, and leadership theories as they integrate into the classroom. Prerequisites: PSYC 111, BT students only, or permission of the instructor. [Fall] [3 credits] [3 contact hours]

AGED 309 | Teaching/Learning Ag Educ (C)

This course is designed to introduce students to the field of agricultural education and how people learn. Discussion in class will encompass philosophies and theories that are employed in today's agricultural classrooms and in business and industry. Methods of presenting information will also be discussed, and students will be able to practice these methods through classroom experiences. Prerequisite: AGED 307, PSYC 111, BT students only, or permission of the instructor. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [4 contact hours]

AGED 309X | Teaching/Learning Ag Educ Lab

The lab component for AGED 309. Co-requisite: AGED 309 Prerequisite: AGED 307, PSYC 111, BT Students only, or permission of the instructor. [Spring] [0 credits] [2 contact hours]

AGED 411 | Ag Ed/Community Leadership (C)

A dynamic and interactive course focusing on agricultural leadership, literacy, and promotion in addition to the components of successful presentations with meaningful outcomes. Students in the course will identify a number of key issues affecting the various segments of the agricultural community, and along with educational theory will develop skills to effectively educate and communicate with various groups within society. Prerequisites: PSYC 111, BT students only, or permission of the instructor. [Spring] Gen Ed Comp-Critical Thinking & Reasoning [3 credits] [3 contact hours]

Agricultural Engineering Technology

AGEN 007 | John Deere Work Experience

This course provides students with a work experience at a relevant equipment business. Program arrangements are made individually with and for each student and their partnering business. The location and work experience must be approved

by the student's advisor. During the work experience, the student will build upon their industry knowledge and skills development. The student will perform a minimum of 400 hours of work at the approved location. This course is S/U graded only. Prerequisite: AGEN Majors in a John Deere Track [Fall] Applied Learning-Internship [0 credits]

AGEN 101 | Int Ag Engineering Technology

This course is designed to introduce students to various aspects of the Agricultural Engineering Technology industry. Students are given the opportunity to learn about the many skills that are necessary to be successful in the broad range of careers stemming from an education including Agricultural Engineering Technology. A grade point average of 85 or above in an approved high school program will demonstrate acceptable achievement of the requirements for this course. A portfolio may be presented for evaluation by the Agricultural Engineering Technology Department. [Fall, Spring] [3 credits] [3 contact hours]

AGEN 105 | Farm Equip Operatn/Safety (C)

This course is designed for students planning to seek employment in any farming operation such as a cash crop or horse industry. It will cover procedures necessary for the operation of equipment and daily maintenance of tractors, mowers, manure spreaders, etc. Students will be expected to develop the skills and confidence for safe operation of such equipment. Not open to Agricultural Engineering Technology majors. This course is a 5-week modular course. Applied Learning-Other [1 credit] [3 contact hours]

AGEN 111 | Intro Computing Ag Eng Tech(C)

This course is designed to introduce students to computer applications in the agricultural equipment industry. Students will use various software applications to construct computer-aided design drawings, gather information through electronic parts catalogs and electronic service manuals, and diagnose/test equipment systems using desktop and laptop computers and mobile processors. Students will also use other computer applications to construct reports, organize data, perform calculations, and make presentations that are part of the many various equipment-related careers. Co-requisite: AGEN 111X [Fall] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 111X | Intro Comp Ag Eng Tech Lab (C)

Hands-on application of the topics covered in AGEN 111. Lab fee of $50 required. Co-requisite: AGEN 111 [Fall] Applied Learning-Other [1 credit] [2 contact hours]

AGEN 112 | Surveying&Land Measurement (C)

This course emphasizes the field use of the level, transit and related equipment to establish pond sites, drainage structures, building site surveys and erosion control measures. Also included are taping, leveling and mapping activities. Field procedures will cover excavation computations as well as the care and use of the appropriate equipment. Co-requisite: AGEN 112X [Fall, Spring] Applied Learning-Field Study [1 credit] [1 contact hour]

AGEN 112X | Surveying&Land Measure Lab (C)

Hands-on application of the topics covered in AGEN 112. Co-requisite: AGEN 112X [Fall, Spring]Applied Learning-Field Study [1 credit] [2 contact hours]

AGEN 115A | Supervised Work Experience

Students work for experience in a wholesale or retail equipment business. Program arrangements are made individually with and for each student and business. A minimum of 44 hours of approved work experience is required per credit hour. Hours by arrangement. This course is S/U graded only. Prerequisite: Restricted to AGEN majors only. [Spring] Applied Learning-Internship [1 credit][1 contact hour]

AGEN 115B | Supervised Work Experience

Students work for experience in a wholesale or retail equipment business. Program arrangements are made individually with and for each student and business. A minimum of 44 hours of approved work experience is required per credit hour. Hours by arrangement. This course is S/U graded only. Prerequisite: Restricted to AGEN majors. [Spring] Applied Learning-Internship [2 credits] [2 contact hours]

AGEN 115C | Supervised Work Experience

Students work for experience in a wholesale or retail equipment business. Program arrangements are made individually with and for each student and business. A minimum of 44 hours of approved work experience is required per credit hour. Hours by arrangement. This course is S/U graded only. Prerequisite: Restricted to AGEN majors. [Spring] Applied Learning-Internship [3 credits] [3 contact hours]

AGEN 116 | Manufacturer Orientation

The course is designed to prepare students and guide them through their partnership with their specific manufacturer. It will consist of orienting the student with the specific software, training, and products of that manufacturer. Prerequisite: Power & Machinery John Deere advisement track or Diesel Tech John Deere advisement track only. [Fall] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 117 | Manufacturer Training 1

This course consists of manufacturer-specific training related to the students sponsoring dealer. The students will work on specific learning modules of the path identified by the dealer. The course will continue training on manufacturer-specific products. Prerequisite: AGEN 116 [Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 118 | Manufacturer Training 2

A continuation of dealer-specific training. The students will work on specific learning modules of the path identified by the dealer. The course will continue training on manufacturer-specific products. Prerequisites: AGEN 117 [Fall] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 119 | Manufacturer Training 3

A continuation of dealer-specific training. The students will work on specific learning modules of the path identified by the dealer. The course will continue training on manufacturer-specific products. Prerequisites: AGEN 118 [Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 121 | Turf & Grounds Care Equip (C)

Students will learn mechanical systems commonly found on turf and grounds care equipment. Actual experience will enable the student to properly adjust, maintain, set-up, service and select the equipment. Co-requisite: AGEN 121X [Spring] Applied Learning-Field Study [2 credits] [2 contact hours]

AGEN 121X | Turf & Grounds Care Equip Lab

Hands-on application of the topics covered in AGEN 121. Co-requisite: AGEN 121 [Spring] Applied Learning-Field Study [1 credit] [4 contact hours]

AGEN 122 | Basic Small Engine Repair (C)

Principles of operation of two-and four-cycle small gasoline engines. Emphasis on maintenance, operation, adjustment and troubleshooting small engines used on outdoor power equipment. Co-requisite: AGEN 122X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 122X | Basic Small Eng Repair Lab (C)

Hands-on application of the topics covered in AGEN 122. Co-requisite: AGEN 122 [Fall] Applied Learning-Other [1 credit] [4 contact hours]

AGEN 132 | Fund Diesel Engine Tech (C)

A study of the design, operation, and components of a modern, diesel-powered, internal combustion engine. Working with both engine components and running engines, students will develop an understanding of the operation, assembly, troubleshooting, and rebuilding skills required of service technicians. Emphasis will be placed on testing, troubleshooting, horsepower output, and emission standards. Extensive use of technical information in written and electronic format will be incorporated in all aspects of the course. Co-requisite: AGEN 132X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 132X | Fund Diesel Engine Tech Lab(C)

Hands-on application of the topics covered in AGEN 132. Co-requisite: AGEN 132 [Spring] Applied Learning-Other [1 credit] [3 contact hours]

AGEN 151 | Basic Welding (C)

A study of metal fastening by welding methods. Oxyacetylene and electric welding procedures and their effects on metal properties will be discussed. Laboratory provides experience in the use of arc and oxyacetylene welding and oxyacetylene cutting. Co-requisite: AGEN 151X [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 151X | Basic Welding Lab (C)

Hands-on application of the topics covered in AGEN 151. Lab fee of $50 required. Co-requisite: AGEN 151 [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

AGEN 166 | Agricultural Mechanics (C)

A course designed to study the selection, use and maintenance of tools and equipment found in the repair shop. Students will gain experience in using industry-accepted procedures and materials. Co-requisite: AGEN 166X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [1 contact hour]

AGEN 166X | Agricultural Mechanics Lab (C)

Hands-on application of the topics covered in AGEN 166. Co-requisite: AGEN 166 [Fall] Applied Learning-Other [1 credit] [2 contact hours]

AGEN 170 | Basic Hydraulics (C)

An introduction to the fundamental principles of hydraulics, fluid power components and their design, application, operation and maintenance. This course includes a study of terminology, industrial standards, symbols and basic circuitry design as related to fluid power. Application of hydraulics to both agricultural and light industrial equipment is emphasized. This course consists of 2 class hours and 1 one-hour recitation. Prerequisite: Math Competency, concurrent enrollment in MATH 101, or permission of instructor. Co-requisite: AGEN 170X [Fall] Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [3 contact hours]

AGEN 170X | Basic Hydraulics Lab (C)

Hands-on application of the topics covered in AGEN 170. [Fall] Applied Learning-Other [1 credit] [2 contact hours]

AGEN 170Y| Basic Hydraulics Recitation

The recitation component for AGEN 170. Co-requisite: AGEN 170 [Fall] [0 credits] [1 contact hour]

AGEN 200 | Computer Aided Design & 3D Rep

This course will provide students with broad applied knowledge in 2 and 3 dimensional computer aided design (CAD) and modeling software and 3 dimensional replication techniques. Students will learn current CAD software packages used by professionals in the engineering and architectural fields to develop proficiency in computer aided technical drawing and design. Students will also learn techniques to produce and evaluate prototypes using 3D printers and digitizers. This course is cross-listed with ENGR 200. [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGEN 200X | Computer Aided Design & 3D Rep Lab

The lab component for AGEN 200 Computer Aided Design & 3D Rep. Co-requisite: AGEN 200. [Spring] Applied Learning-Other [0 credits] [3 contact hours]

AGEN 220 | Composting Princ & Appl

Students will learn the fundamental principles, science and technology associated with composting and compost use. Composting will provide a vehicle for students to learn and apply principles of basic scientific disciplines including biology, chemistry, soil science, applied technology, sustainability and mechanics. Topics include the composting process (e.g. biology and chemistry), characteristics of feedstocks, composting methods and equipment, process management, site

management and mechanical operations used to manufacture compost, the functions and use of compost, compost quality and compost markets. [1 credit] [1 contact hour]

AGEN 231 | Electrical/onic Sys Diag (C)

Students will gain an in-depth understanding of current electrical and electronic systems found on modern tractors and machinery. Through the use of agricultural equipment, trainer circuits, and available testing equipment, the technician's DC circuit diagnostic skills will be honed. Equipment system troubleshooting and repair will be emphasized. It is understood that the students have a basic understanding of electrical components, test equipment, and schematic diagrams. Prerequisite: PHYS 101. Co-requisite: AGEN 231X [Fall] Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

AGEN 231X | Electrical/onic Sys DiagLab(C)

Hands-on application of the topics covered in AGEN 231. Co-requisite: AGEN 231 [Fall] Applied Learning-Other [1 credit] [3 contact hours]

AGEN 232 | Pwr Trn Theory Diag/Repair (C)

A study of power transmission, clutch through final drive, as utilized in agricultural, construction, forestry, lawn, and garden equipment. Students will develop knowledge of the design and operation of various types of clutches, mechanical, and powershift transmissions, differentials, and final drives. Hands-on learning will be applied to diagnostic methods used for troubleshooting as well as proper repair and overhaul procedures. Prerequisite: AGEN 132 or permission of the instructor. Co-requisite: AGEN 232X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 232X | PwrTrain Theory Diag&Rep Lab(C

Hands-on application of the topics covered in AGEN 232. Co-requisite: AGEN 232 [Spring] Applied Learning-Other [2 credits] [4 contact hours]

AGEN 241 | Agricultural Machinery

The course covers the principles of design, operation, and adjustments of modern agricultural machinery. Topics of study will include tillage, planting, harvesting, and processing machines. Precision farming applications of global information systems will be included in each area. Extensive use of technical manuals in printed and electronic formats will be incorporated. Prerequisite: AGEN 170 or permission of instructor. Co-requisite: AGEN 241X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 241X | Agricultural Machinery Lab

Hands-on application of the topics covered in AGEN 241. Co-requisite: AGEN 241 [Fall] Applied Learning-Other [2 credits] [4 contact hours]

AGEN 245 | Air Conditioning (C)

The course covers the principles of refrigeration and mobile air conditioning applications in agriculture. Environmental and governmental regulations concerning handling and recovery of refrigerant as well as troubleshooting electrical controls and sensors are included as they impact the systems covered. Primary focus is on mobile units such as air conditioned cabs in combines, tractors, and other related applications. Co-requisite: AGEN 245X [Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 245X | Air Conditioning Lab (C)

Hands-on application of the topics covered in AGEN 245. Lab fee of $15 required. Co-requisite: AGEN 245 [Spring] Applied Learning-Other [1 credit] [2 contact hours]

AGEN 248 | GNSS Apps in Agriculture

The course will incorporate Global Navigation Satellite System (GNSS) Technology as it relates to agricultural field applications that increase field efficiency. Topics will include basic GNSS theory, operation and setup, tractor and implement setup and adjustments, calibration, field operations, and mapping. Classroom instruction will be complemented with hands-on experience in a 2-hour laboratory. Students should be familiar with operation of modern agricultural tractors. Co-requisite: AGEN 248X [Fall] Applied Learning-Field Study [2 credits] [1 contact hour]

AGEN 248X | GNSS Apps in Agriculture Lab

Hands-on application of the topics covered in AGEN 248. Co-requisite: AGEN 248 [Fall] Applied Learning-Field Study [0 credits] [2 contact hours]

AGEN 253 | Advanced Welding (C)

A study of the properties of metals and common welding processes used in the manufacture and repair of farm and light industrial equipment. Experience will emphasize repair and all position welding with arc and oxyacetylene processes. Prerequisite: AGEN 151 or by permission of instructor. Co-requisite: AGEN 253X [Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGEN 253X | Advanced Welding Lab (C)

Hands-on application of the topics covered in AGEN 253. Co-requisite: AGEN 253 [Spring] Applied Learning-Other [1 credit] [2 contact hour]

AGEN 273 | Hydraulic&Hydrostatic Diag(C)

A systems approach to recognizing and diagnosing hydraulic and hydrostatic issues as they relate to mobile off-road equipment and machinery. A study of the components and hydraulic/hydrostatic circuits dealing with external cylinder operation, lift, steering, braking, and drive systems. Inspecting, troubleshooting, and servicing of hydraulic/hydrostatic components and systems will be included. Prerequisite: AGEN 170. Co-requisite: AGEN 273X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 273X | Hydraulic&Hydro Diag Lab(C)

Hands-on application of the topics covered in AGEN 273. Co-requisite: AGEN 273 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [3 contact hours]

AGEN 274 | Construction Equipment Sys (C)

The course is a continuation of studies in hydraulic and mechanical applications dealing with industrial equipment such as loaders, backhoes, excavators, crawler dozers, and forklifts. Experience will be gained in pre-delivery service, site preparation, and operation of equipment on job sites. Prerequisite: AGEN 170. Co-requisite: AGEN 274X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 274X | Construction Equip Sys Lab (C)

Hands-on application of the topics covered in AGEN 274. Co-requisite: AGEN 274 [Fall] Applied Learning-Other [1 credit] [3 contact hours]

AGEN 281 | Electrical Power Generation

This course is designed to introduce students to electrical power generation systems used in residential and commercial application as a standalone or back up power source do to grid power interruption/failure. Instruction is provided in the area of: safe work practices, alternating current fundamentals, generator and alternator fundamentals, voltage regulators, transfer switches, systems sizing, governor speed load control and generator protection. Students will develop the necessary skills to properly install, service and diagnose electrical power generation systems. Prerequisite: PHYS 101 and PHYS 101X or permission of the instructor. Co-requisite: AGEN 281X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 281X | Electrical Power Generatn Lab

This course is designed to introduce students to electrical power generation systems used in residential and commercial application as a standalone or back up power source due to grid power interruption/failure. Instruction is provided in the area of: safe work practices, alternating current fundamentals, generator and alternator fundamentals, voltage regulators, transfer switches, systems sizing, governor speed load control and generator protection. Students will develop the necessary skills to properly install, service and diagnose electrical power generations systems. Prerequisites: PHYS 101 and PHYS 101X or permission of the instructor. Co-requisite: AGEN 281 [Spring] Applied Learning-Other [1 credit] [3 contact hours]

AGEN 285 | Equipment Retailing Mgmt (C)

A course dealing with requirements of the retail agricultural equipment business for farm equipment, industrial equipment or farmstead mechanization, physical facilities, organization, supervision and managerial aspects of the equipment business including parts, service and sales departments. Students incorporate the above by planning in detail for an equipment business. [Fall] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

AGEN 290A | Spec Projects Ag Eng

An independent study of topics or problems of special interest to the second-year student in Agricultural Engineering Technology. Student must have prior approval from his/her advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

AGEN 290B | Spec Projects Ag Eng

An independent study of topics or problems of special interest to the second-year student in Agricultural Engineering Technology. Student must have prior approval from his/her advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

AGEN 290C | Spec Projects Ag Eng

An independent study of topics or problems of special interest to the second-year student in Agricultural Engineering Technology. Student must have prior approval from his/her advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

AGEN 292 | Fuel Systems (C)

Students will study the design and construction of nozzles, injectors, and fuel pumps used in agricultural and construction equipment. Emphasis will be placed on the design, testing, cleaning, repair and adjustment of the different styles of nozzles and pumps available. Troubleshooting and malfunction diagnosis is included for mechanical and electronically-managed fuel systems. On-engine troubleshooting and malfunction diagnosis is included. Prerequisite: AGEN 132. Co-requisite: AGEN 292X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 292X | Fuel Systems Lab (C)

Hands-on application of the topics covered in AGEN 292. Co-requisite: AGEN 292X [Fall] Applied Learning-Other [1 credit] [3 contact hours]

AGEN 299 | Stationary Refrigeration

Students will investigate the operation, design, and servicing of stationary refrigeration systems. This course assumes prior knowledge of the operation and servicing of mobile air conditioning systems. Students will be prepared for completion of the EPA 608 certification exam which will allow them to service stationary refrigeration systems. This 8-week course meets once a week for a single, two-hour lecture. Corequisites: AGEN 245 and AGEN 245X [Spring] Applied Learning-Other [1 credit] [2 contact hours]

AGEN 299B | Diesel Fuel & Emission Systems

Students will study the design and construction of nozzles, injectors, fuel pumps, and emissions components used in agricultural and construction equipment. Emphasis will be placed on the design, testing, cleaning, repair, and adjustment of the different styles of nozzles and pumps available. Troubleshooting procedures and malfunction diagnosis is included for mechanical, electronically managed fuel and emission systems. This course is restricted to John Deere students only. Prerequisite: AGEN 132. Co-requisite: AGEN 292X [Fall] Applied Learning-Other [3 credits] [3 contact hours]

AGEN 310 | Waste Mgmt and Technology

Students will learn the principles, processes, technologies, and the social and environmental impacts associated with managing wastes. The course will cover, with equal weight, management wastes from agricultural activities (e.g. livestock production) and non-agricultural activities, including municipal, residential and industrial. Both solid and liquid wastes will be covered. Options for sustainable use of organic wastes will be emphasized. Topics will include the waste sources, characterization of waste materials, nutrient balances, biology and chemistry of wastes, impacts on the environment (water and air), odor management, collection methods, storage, land application, landfills, wastewater treatment, materials

recycling, energy recovery, nutrient recycling, waste reduction and public and community interaction. Labs will involve site visits to facilities on campus and in the Cobleskill area plus hands-on activities and analysis. Students will complete a campus-based research project. [Fall] Applied Learning-Field Study [2 credits] [2 contact hours]

AGEN 310X | Waste Mgmt & Technology Lab

Hands-on application of the topics covered in AGEN 310. [Fall] Applied Learning-Field Study [1 credit] [2 contact hours]

AGEN 331 | Ag Eq Elec Hydrlc Ctrl Sys (C)

Students will apply fundamental electrical and hydraulic knowledge to the testing, diagnosis and repair of electrical, electronic, hydraulic and related mechanical components. Diagnostic equipment and procedures as used in industry will be stressed. Prerequisites: AGEN 231 and AGEN 273, or permission of the instructor. Co-requisite: AGEN 331X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

AGEN 331X | AgEq ElecHydrl Ctrl Sys Lab(C)

Hands-on application of the topics covered in AGEN 331. Co-requisite: AGEN 331 [Fall] Applied Learning-Other [2 credits] [4 contact hours]

AGEN 332 | Engine Dynamics Seminar (C)

An in-depth study of the internal combustion engine as it pertains to application, power, and construction. Topics include analysis of engine operation, timing, exhaust gas analysis and emission control, combustion efficiency, horsepower output, torque and torque rise. Design characteristics and extensive dynamometer testing will be studied. Prerequisite: AGEN 132. Co-requisite: AGEN 332X [Spring] Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

AGEN 332X | Engine Dynamics Seminar Lab(C)

Hands-on application of the topics covered in AGEN 332. Co-requisite: AGEN 332 [Spring] Applied Learning-Other [2 credits] [4 contact hours]

AGEN 333 | Equipment Test & Develop (C)

Students will combine fundamental welding and machining skills with knowledge gained from peer team research and study to resolve an engineering design problem. Topics studied will include: properties of materials such as heat stress, treatments, and the effects of manufacturing processes on engineering materials. Other topics will include CAD, blueprint reading, engineering materials, and material design, fabrication, and implementation to a known product. Students will work in mock engineering teams responsible for "field testing" their design solutions. A research component will be assigned by the instructor and will focus on the design, fabrication, and testing of student's solutions. Students will create an engineering report which will be presented to the instructor and peer teams at the conclusion of the class. Prerequisites: AGEN 166, AGEN 151, and PHYS 102. Co-requisite: AGEN 333X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [2 credits] [2 contact hours]

AGEN 333X | Equipment Testing & Dev Lab(C)

Hands-on application of the topics covered in AGEN 333. Co-requisite: AGEN 333 [Spring] Applied Learning-Other [2 credits] [4 contact hours]

AGEN 348 | Precision Ag Applications

Students will investigate fundamental concepts and current topics in precision agriculture, and the use of associated computer tools to make crop management recommendations in production agriculture settings. Topics covered include geographic information systems and data mapping, electronic sensors and controllers, variable rate application technologies, integration of spatially based soil fertility and yield data, and the interpretation of data collected from these systems. Prerequisites: AGSC 111, or permission of instructor. [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGEN 348X | Precision Ag Applications Lab

The lab component for AGEN 348. Co-requisite: AGEN 348 [Spring] [0 credits] [2 contact hours]

AGEN 380 | Career Preparation in Ag Eng

This course prepares students for professional employment in the construction and agricultural equipment industry. Topics will include student internship experiences, employability skills and portfolio development, project management, and professional communications. Field trips to representative sites will be a part of the course. Prerequisite: Junior standing, or permissions of instructor [Fall] Applied Learning-Other [2 credit] [2 contact hours]

AGEN 390A | Spec Proj Ag Equip Tech

An advanced independent study of topics of special interest to the Bachelor of Technology student in Agricultural Equipment. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

AGEN 390B | Spec Proj Ag Equip Tech

An advanced independent study of topics of special interest to the Bachelor of Technology student in Agricultural Equipment. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up 2 times. [Fall, Spring] [2 credits] [2 contact hours]

AGEN 390C | Spec Proj Ag Equip Tech

An advanced independent study of topics of special interest to the Bachelor of Technology student in Agricultural Equipment. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

AGEN 450 | Intern Ag Equip Technology

The Agricultural Engineering Equipment Internship is a supervised field work experience in which a Bachelor of Technology student takes part in an internship at an approved agriculture-related business that relates to student's major field of study. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business within a 600 hour time frame. Each intern will be supervised by a member of the faculty on a regular basis. Evaluation will be based on attendance, attitude and quality of work performed during the internship. Intern will be assigned an S/U grade. Prerequisites: Minimum overall GPA 2.0, successful completion with a grade of "D" or better in, AGEN 380, AGEN 331/331X, AGEN 332/332X, AGEN 333/333X and AGEN 480 or Agricultural Engineering Dept. approval. Co-requisite: AGEN 451. [Fall, Spring, Summer] Applied Learning-Internship [9 credits] [9 credits] [9 contact hours]

AGEN 451 | Ag Eng Internship Reporting

The internship reporting is part of the student's internship experience. Requirements will consist of reporting to faculty supervisor and a final presentation at the conclusion of the internship. The presentation will consist of an in-depth oral presentation summarizing his or her educational internship experience. The student will also be required to communicate during the internship by submitting daily logs and completing periodic and final evaluations. Intern will be assigned a letter grade (A-F). Prerequisites: Minimum overall GPA 2.0, successful completion with a grade of "D" or better in AGEN 380, AGEN 331/331X, AGEN 332/332X, AGEN 333/333X and AGEN 480 or Agricultural Engineering Department Approval. Co-requisite: AGEN 450. [Fall, Spring, Summer] Applied Learning-Internship [6 credits] [6 contact hours]

AGEN 460 | Internship Ag Equipment Tech

Supervised work experience and applied learning at an approved agriculture or equipment-related business, government agency, non-governmental organization, or education setting that relates to the student's major field of study. Students carry out a planned program of educational experiences under the direct supervision of the internship supervisor. Each intern will be supervised by a member of the faculty on a regular basis. A daily journal reflecting on, and quantifying work activities, and final reporting are required elements of the internship. The course is S/U graded only. Internship credit hours may range from 4 credit hours to a maximum of 15 credit hours. Course may be repeated to a maximum of 15 credit hours. Each credit hour requires 45 hours of relevant work and reporting experience. Prerequisites: minimum overall GPA 2.0, AGEN 380, AGEN 331/331X, AGEN 332/332X, AGEN 333/333X, and AGEN 480, or department approval. [Fall, Winter, Spring, Summer] Applied Learning-Internship [4-15 credits] [4-15 contact hours]

AGEN 480 | Ag Equip Tech Seminar

Seminar course designed for students to study current issues within the equipment industry. This course will include an exploration of organizational, communication, and managerial techniques commonly applied in the equipment industry. Additionally, research evaluating new technologies affecting the equipment industry as well as personnel requirements and interactions governed by the current society laws and ethics. Group activities will improve collaboration abilities and the knowledge gained in this course will be used to help students become a more valuable and successful employee. Students will be accountable for recording and logging all activities for the course. This course will help students become more effective managing their time as this will be critical throughout the semester. Prerequisite: AGEN 380, or permission of instructor. [Spring] Applied Learning-Research [2 credits] [2 contact hours]

Agronomy

AGRN 135 | Cannabis Management

An introduction to the products and services produced and sold by the cannabis industry. Emphasis will be placed on historical perspectives, regulatory compliance, laws and policies, licenses and permits, and contracts. Lastly, an appreciation of environmental and economic implications for production and society will be highlighted. This ten-week course is fully online. [Fall, Spring, Summer] Applied Learning-Other [2 credits] [3 contact hours]

AGRN 232 | Plant Ecology (C)

A study of global and local plant communities and their development in response to environmental conditions. The impacts of climate, topography, soil conditions, geographic locations and interactive biotic influences on plant community stability and succession are investigated in detail. Plant ecological principles are applied to the management of specific ecosystems including agricultural, silvicultural, recreational and natural systems. College land laboratory, audio-visual materials and field trips are utilized for laboratory activities. [Fall] Liberal Arts/Sciences Elective, Applied Learning-Field Study [3 credits] [4 contact hours]

AGRN 240 | Equine Forage Mgmt Prac (C)

This course will focus on the production and management of forage enterprises associated with the equine industry. Legume and grass species selection for pastures and hay crops will be stressed. Appropriate soil management practices including forage growing conditions, drainage, fertilization and liming will also be emphasized. Co-requisite: AGRN 240X [Fall] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 240X | Equine Forage Mgmt Prac Lab

The lab component for AGRN 240. Co-requisite: AGRN 240 [Fall] [0 credits] [2 contact hours]

AGRN 242 | Forage & Seed Crops (C)

Economical management practices including tillage, seedbed preparation, planting, liming, fertilizing and harvesting of feed and silage crops, hays and pastures are investigated. Selection and adaptation of various cool season grasses, legumes and mixtures to soil types, moisture conditions and fertility levels are studied. Insects and diseases associated with northeastern forage and seed crops are discussed in reference to thresholds and production costs. Co-requisite: AGRN 242X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 242X | Forage & Seed Crops Lab

The lab component for AGRN 242. Co-requisite: AGRN 242 [Spring] [0 credits] [2 contact hours]

AGRN 251 | Fruit Science (C)

A study of the cultural techniques used in the production of fruit crops grown in the U.S. with an emphasis on the Northeast and New York State. Management practices, varieties, pollination requirements, rootstocks, harvest, storage, marketing, pruning and pest control are discussed. Course fee of $15 is required. Co-requisite: AGRN 251X [Fall] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 251X | Fruit Science Lab

The lab component for AGRN 251. Co-requisite: AGRN 251 [Fall] [0 credits] [2 contact hours]

AGRN 252 | Vegetable Production (C)

A course dealing with the fundamental practices and principles involved in the production of vegetable crops grown in New York State and the Northeast. Vegetable cultivars, seeding methods, transplant production, soil management, environmental modification, pest management, harvest and storage are studied in detail. Lab fee of $22 required. Co-requisite: AGRN 252X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 252X | Vegetable Production Lab

The lab component for AGRN 252. Co-requisite: AGRN 252 [Spring] [0 credits] [2 contact hours]

AGRN 253 | Orchard Management

This course provides practical experience in critical aspects of orchard management with a focus on apple production. Contents of the course covers; planting, training, and pruning of apple trees for modern high-density production systems and existing, semi-dwarf low-density orchards; disease, pest, and nutrition management using organic, sustainable, and conventional techniques. Co-requisite: AGRN 253X. Prerequisite: AGRN 251 or permission of instructor. [Spring – 8 weeks] Applied Learning-Practicum [2 credits] [2 contact hours]

AGRN 253X | Orchard Management Lab

The lab component for AGRN 253. Co-requisite: AGRN 253. [Spring – 8 weeks] [0 credits] [4 contact hours]

AGRN 254 | Organic Farming Fundamentals

An in depth look at current organic definitions, practices and the future prospects of organic farming. The emphasis in lecture is on the definition and history of organic agriculture, specific procedures and methods of growing organic produce, organic standards, as well as organic certification processes such as record keeping, budgeting and marketing of commonly grown agricultural crops. The focus of the laboratory section will be on practical skills associated with the management of organic farms. Co-requisite: AGRN 254X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 254X | Organic Farming Fundamentals Lab

The lab component for AGRN 254. Co-requisite: AGRN 254 [Spring] [0 credits] [2 contact hours]

AGRN 255 | Cannabis Harvest & Analysis

Field work in the cannabis industry under the direct supervision of the instructor or manager; most field work will be on campus, and field trips to hemp and cannabis businesses may be required. This is a ten-week course designed to focus on the harvesting methods of cannabis to fully maximize certain cannabinoids, the methods of extractions, and methods of analyzing cannabinoids and terpenes in plant tissue. Students will be required to participate in harvesting of campus-grown plants. Prerequisites: A score of 75 or higher in high school chemistry, or CHEM 101 with a grade of "C" or better [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Field Study [2 credits] [3 contact hours]

AGRN 270 | Agronomic Field Studies

This course is designed for students who desire a broader outlook in agronomy and agriculture by examining actual agribusinesses and related agronomic issues. Travel may be a required component of the field studies. This course will also have a lecture component of 15, one-hour lectures that will have a web component available. The lectures will supplement and provide insight to the topics seen on the travel portion of the course. At the culmination of the course, the student will be required to prepare a written report and/or make a presentation summarizing her/his findings. Instructor's permission required for enrollment. Student expense ($100-$600) will vary depending upon the length of study and/or travel destinations. Students may enroll more than one time up to a maximum of four credits. [Spring] Applied Learning-Field Study [3 credits] [3 contact hours]

AGRN 290A | Spec Proj Agronomy

An opportunity for independent study under the guidance of a department faculty member. Student should have a strong inclination toward a particular topic based on interest and experiences. Further, the faculty member with whom the student chooses to work must agree with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGRN 290B | Spec Proj Agronomy

An opportunity for independent study under the guidance of a department faculty member. Student should have a strong inclination toward a particular topic based on interest and experiences. Further, the faculty member with whom the student chooses to work must agree with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

AGRN 290C | Spec Proj Agronomy

An opportunity for independent study under the guidance of a department faculty member. Student should have a strong inclination toward a particular topic based on interest and experiences. Further, the faculty member with whom the student chooses to work must agree with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGRN 312 | Plant Breeding Techniques (C)

An introduction to plant improvement through the use of standard plant breeding methods. Laboratory emphasis will be placed on developing and using phenotype evaluation tools, gene manipulation techniques and character perpetuation methods. Lecture emphasis is placed on the relationship between genotype and phenotype and on developing improvement programs for specific crop species. Prerequisites: BIOL 116 and one college-level math course[Fall] Applied Learning-Practicum [3 credits] [4 contact hours]

AGRN 313 | Soil Fertility (C)

An advanced course emphasizing the role of soil as a source of essential plant nutrients. Properties of clay and humus, organic matter decomposition, soil pH, soil physical properties and activities of soil organisms are considered as they relate to soil fertility and pollutant movement. Biological and chemical transformations of nutrient elements are studied in detail. Components of soil management involving the use of soil amendments, liming materials, compost and fertilizers as well the use of soil as a repository for organic wastes are discussed. Co-requisite: AGRN 313X. Prerequisite: AGSC 111 or equivalent: Inorganic Chemistry recommended. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [2 contact hours]

AGRN 313X | Soil Fertility Lab

The lab component for AGRN 313. Co-requisite: AGRN 313 [Spring] [0 credits] [2 contact hours]

AGRN 335 | Agricultural Chemicals (C)

This course is designed to familiarize students with agricultural chemicals used in the management of weeds, disease and insect pests of agricultural crops. The use, nature and effect of crop protectants will be studied with emphasis on mode of activity, safety, toxicity, application and selection of appropriate compounds. Prerequisite: One unit of college chemistry and AGSC 186 and AGSC 281 recommended. [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 335X | Agricultural Chemicals Lab

The lab component for AGRN 335. Co-requisite: AGRN 335 [Spring] [0 credits] [2 contact hours]

AGRN 338 | Weed Ident & Control (C)

Students will identify common weed species found in the northeastern United States. The growth, reproduction and dissemination of weeds will be studied. Mechanical, biological and chemical methods of control including safe herbicide use will be introduced. Sprayer calibrations will be made and the effect of herbicide applications will be discussed. Prerequisite: AGSC 111; BIOL 116 recommended. [Fall] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 338X | Weed Ident & Control Lab

The lab component for AGRN 338. [Fall] [0 credits] [2 contact hours]

AGRN 350 | Plant Nutrition (C)

A course emphasizing the study of plant nutrient uptake and assimilation in relation to plant yield and quality. Nutrient interactions, antagonisms and metabolic roles of essential elements are discussed. Nutrient deficiency symptoms expressed

by plants are studied as well as crop response to soil pollutants and salinity. Prerequisites: AGSC 111 and BIOL 116 and CHEM 111 or equivalent of any of these three courses. [Spring] Applied Learning-Other [3 credits] [2 contact hours]

AGRN 350X | Plant Nutrition Lab

The lab component for AGRN 350. Co-requisite: AGRN 350. [Spring] [0 credits] [2 contact hours]

AGRN 351 | Cannabis Cultivation

In this course, students focus on the fundamentals of the production cycle of cannabis including horticultural management, identification of crop issues, elite feminized seed production, seed propagation, vegetative propagation, pruning, training, optimization of cannabinoid content, and the chemical pathways of cannabinoids. Agricultural production of hemp for food, fiber, and medicinal production will be the main focus of the course. Focus will be on variety selection, planting strategies, fertility, weed control, pest management, and propagation methods. At the end of the course, students will gain a higher understanding and appreciation for cannabis production and propagation, and will gain the knowledge necessary to start or improve their own operation. Prerequisites: AGRN 135 or AGRN 255, and AGSC 111, and BIOL 116. Co-requisite: AGRN 351X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [2 contact hours]

AGRN 351X | Cannabis Cultivation Lab

Hands-on application of the topics covered in AGRN 351. Co-requisite: AGRN 351 [Spring] [0 credits] [2 contact hours]

AGRN 362 | Applied Plant Physiology (C)

The physiology of plant growth, development and senescence will be investigated in relation to cultural and environmental influences. Co-requisite: AGRN 362X. Prerequisites: BIOL116, CHEM111 or equivalent [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [2 contact hours]

AGRN 362X | Applied Plant Physiology Lab

The lab component for AGRN 362. Co-requisite: AGRN 362 [Spring] [0 credits] [2 contact hours]

AGRN 390A | Spec Projects Agronomy

An advanced independent study of topics of special interest to the Bachelor of Technology student with focus in Agronomy. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGRN 390B | Spec Projects Agronomy

An advanced independent study of topics of special interest to the Bachelor of Technology student with focus in Agronomy. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

AGRN 390C | Spec Projects Agronomy

An advanced independent study of topics of special interest to the Bachelor of Technology student with focus in Agronomy. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGRN 425 | Watershed Management

Watershed management is an advanced three-credit course that provides the student with a comprehensive understanding of the scientific, technical, and policy-related fundamentals in the management of watersheds. Principles of hydrology and resource conservation are applied to the study of watersheds and their sustainable management for water quality protection. Emphasis is placed upon the roles of watershed soil and vegetation as influencing water quality. Prerequisites: PSCI 221 and PSCI 324. [Spring] Applied Learning-Other [3 credits] [4 contact hours]

AGRN 450 | Internship in Agronomy

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation

will be based on the quality and quantity of the experiences gained from the internship. This course is S/U graded only. Prerequisite: Minimum of 30 upper-division credits, concurrent enrollment in AGRN 451 [Fall, Spring] Applied Learning-Internship [12 credits] [12 contact hours]

AGRN 451 | Agronomy Internship Reporting

Plant Science Bachelor of Technology students enrolled in AGRN 450 - Internship in Agronomy - must be concurrently enrolled in this course. Students will prepare their internship agreement paperwork; submit daily log entries while on their internship; submit periodic, mid-term, and final evaluations; and give their final presentation at the conclusion of the internship. Internship advisors may assign additional reports as well. This course will be letter graded (A-F). Prerequisite: Minimum of 30 upper-division credits, concurrent enrollment in AGRN 450. [Fall, Spring] Applied Learning-Internship [3 credits] [3 contact hours]

AGRN 452 | Internship Agronomy I

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality and quantity of experiences gained from the internship. Prerequisite: Minimum of 60 credits completed [Fall, Spring, Summer] Applied Learning-Internship [3 credits] [3 contact hours]

AGRN 453 | Internship Agronomy II

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality and quantity of experiences gained from the internship. 15 weeks. This course is S/U graded only. Prerequisite: Minimum of 90 credits completed [Fall, Spring, Summer] Applied Learning-Internship [12 credits] [12 contact hours]

Agriculture Science

AGSC 111 | Intro to Soil Science (C)

An introductory course which stresses the function of soil as a medium to support plant life. The biological, chemical and physical aspects of soil will be studied in detail. The influence of these properties on plant nutrition and soil health will be considered. Basic laboratory procedures associated with soil properties/functions, land use, agricultural productivity, and environmental quality will be conducted. Course fee of $9 is required. Co-requisite: AGSC 111X [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [2 contact hours]

AGSC 111X | Intro to Soil Science Lab

The lab component for AGSC 111. Co-requisite: AGSC 111 [Fall, Spring] [0 credits] [2 contact hours]

AGSC 131 | Intro to Sustainable Agric

This course explores the defining principles and practices of sustainable agriculture, its scientific, historical and philosophical roots, and its potential environmental and economic impacts. Diverse approaches to agricultural production including conventional, organic, low-input, and precision agriculture are evaluated and compared in terms of sustainable use of land, soil, water and energy resources, using existing indicators of sustainability. The current status of sustainable agriculture is explored at local, national, and global levels, and consideration is given to the influencing effects of technological developments and policy measures. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGSC 141 | Career Opportunities in Ag Ind

This course gives the student an opportunity to explore career opportunities in the agricultural industry. Through a self-assessment of interests, values and abilities students will develop an educational plan to meet career objectives. Students will learn about effective resume and portfolio building. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

AGSC 168 | Maple Syrup Production

This 8-week survey course exposes students to multiple facets of the maple sugar and other tree sugar industries. This hands-on course covers the science of maple sap flow, forest management, sap collection, processing, economics, and marketing of maple products. At the end of the course students will gain a higher understanding and appreciation for the maple syrup industry and will gain the knowledge necessary to start or improve their own operation. [Spring] Applied Learning-Other [1 credit] [1 contact hour]

AGSC 186 | Entomology (C)

The anatomy, identification, life cycles, and control of insects detrimental to both plants and humans are studied. Both chemical and biological control methods are discussed. Insect identification is stressed in the laboratory portion of the course. Proper handling and application of insecticides is emphasized. An insect collection is required. This course is cross-listed with BIOL 186. Co-requisite: AGSC 186X [Spring] Liberal Arts/Science Elective, Applied Learning-Field Study [3 credits] [2 contact hours]

AGSC 186X | Entomology Lab

The lab component for AGSC 186. Co-requisite: AGSC 186 [Spring] [0 credits] [2 contact hours]

AGSC 241 | Ag Careers Preparation

This course transitions students from their college environment to the workplace. Job search strategies, resume and portfolio completion, planning the job search and/or further education will be emphasized. Prerequisites: Sophomore status and AGSC 141 or permission of the instructor. [Spring] [1 credit] [2 contact hours]

AGSC 281 | Plant Pathology (C)

A study of the major parasitic agents capable of causing plant diseases, their modes of action, their potential hosts and effective means of control. Laboratory experiences allow the student to make extensive investigations of diseases of particular concern to the horticulturist and agronomist. Special projects include a collection of economics plant diseases. Prerequisite: BIOL 116 or BIOL 101 [Fall] Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [2 contact hours]

AGSC 281X | Plant Pathology Lab

The lab component for AGSC 281. Co-requisite: AGSC 281 [Fall] [0 credits] [2 contact hours]

AGSC 311 | Multicultural HR Mgmt in Agric

The course will provide an exposure to the culture and language of primarily Spanish speaking * groups living and working in agriculture in the United States. Topics presented will foster and understanding of the challenges of adapting to and working in a foreign culture for both employees and employers. Students will learn about best practices for human resource management of migrant and/or immigrant agricultural employees. Bilingual guest lecturers will present pertinent information as to how they serve agricultural employers with Latino employees. Employers of Latino employees will present on the opportunities and challenges of working with the Latino labor force. Prerequisites: This course is only open to second year or greater students. [Fall] *other languages/cultures as needed, Applied Learning-Other [3 credits] [3 contact hours]

AGSC 312 | Applied Agricultural Spanish

This advanced course will provide for practice and skill development in a Spanish language experience pertinent to specialized agricultural workplaces. Students will learn basic phrases, vocabulary, and conversations useful for the employer-employee work relationship in an agricultural environment. Language skills such as listening, speaking, reading, writing and grammar, as well as geography, will all be covered in this course. It is highly recommended that students register concurrently for AGSC 311 - Multicultural Human Resource Management in Agriculture. Prerequisites: SPAN 101 and/or SPAN 102 or recent completion of four years of high school Spanish or permission of the instructor. COMM 220 or HIST 205 recommended, but not required. This course is only open to second year or greater students. [Fall] Liberal Arts/Science Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

AGSC 313 | Immigration Issues in Agric

This cinema based course will provide insight and understanding into differing cultural characteristics of various immigrant groups, including Spanish speakers, coming to work in the U.S. past and present. Students will view, listen, and learn through visual, auditory, and written exercises to foster understanding of a foreign culture. Students are highly recommended to register for this course after completing AGSC 311 (AGSC 399A) - Multicultural Human Resource Management in Agriculture and/or AGSC 312 (AGSC 399B) - Applied Agricultural Spanish. This course is open to second year students or greater. [Spring] Applied Learning-Other [3 credits] [3 contact hours]

AGSC 390A | Special Projects in Ag Science

An advanced independent study of topics of special interest to the Bachelor of Technology student with focus in Agricultural Science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

AGSC 390B | Special Projects in Ag Science

An advanced independent study of topics of special interest to the Bachelor of Technology student with focus in Agricultural Science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

American Sign Language

AMSL 145 | American Sign Language I (C)

An introductory focus upon American Sign Language techniques, emphasizing receptive, expressive and interactive skills. Students utilize eyes, hands, facial and body postures in transmitting and receiving grammatical information. Additional topics include culture and heritage of deaf people in America. [Fall, Spring] Gen Ed Foreign Language, Gen Ed World Languages, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

AMSL 146 | American Sign Language II (C)

This course will continue the introduction to American Sign Language techniques. The focus is on receptive skills, and students are required to give presentations, concentrating on interactive skills. Additional vocabulary is introduced, and increased utilization of body language and posture is encouraged. Students are required to read and discuss articles on deaf education and main-streaming. Deaf guests are an integral part of this course. Prerequisite: AMSL 145 [Fall, Spring] Gen Ed Foreign Language, Gen Ed World Languages, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

AMSL 290A | Special Proj American Sign Lan

An independent study of topics of special interest to the student with a focus in American Sign Language. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

AGSC 290B | Special Proj American Sign Lan

An independent study of topics of special interest to the student with a focus in American Sign Language. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

Animal Science

ANSC 101 | Foundations in Animal Science

As an introduction to the various disciplines of Animal Science, students will be exposed to the following topic areas: domestication, animal roles in society, internal and external anatomy, animal restraint and safe handling, animal housing facilities, reproduction management, feeding, health, genetic selection and evaluation, welfare and animal rights, animal products, and career exploration. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ANSC 107 | Meat Products

Introductory course addresses concepts to federal meat processing. Cutting and packaging of livestock carcasses for home or resale use. Sanitation and HACCP requirements for meat handling are included. A lab fee of $50 is required. Co-requisite: ANSC 107X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 107X | Meat Products Laboratory

Hands-on laboratory designed to complement the material presented in ANSC 107 utilizing livestock carcasses and the USDA-inspected meat processing lab on campus. Lab focuses on knife handling, carcass and retail meat cut identification, and product packaging. Co-requisite: ANSC 107 [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 108 | Sel/Cut Meat Restaurant Use

Emphasis will be on buying, cutting, grading and identification of institutional and restaurant cuts of beef, pork and lamb. Included in the course are the sanitation aspects of meat handling. Portion control of meat productions will also be emphasized. This course is intended for culinary arts majors. A lab fee of $50 is required. Co-requisite: ANSC 108X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 108X | Select/Cut Meat for Rest - Lab

One credit laboratory designed to complement the material presented in ANSC 108. Co-requisite: ANSC 108 [Fall] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 109 | Meat Animal Slaughtering

A practical two-hour laboratory slaughtering and/or processing various livestock species. Slaughtering and processing will be performed in accordance with Federal Meat Inspection regulations. This course is repeatable up to 4 times. [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 111 | Intro to Animal Science (C)

A study of animal science with special emphasis on the importance of large animals as a major phase of agriculture. Fundamentals related to the care and management, conformation, evaluation and handling of dairy, beef, sheep, goats, swine and horses will be presented. Co-requisite: ANSC 111X [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 111X | Intro to Animal Sci - Lab (C)

One credit laboratory designed to complement material presented in ANSC 111. Co-requisite: ANSC 111 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 112 | Dairy Science Techniques I (C)

Students study as well as perform the actual milking and/or feeding and care of the College-owned dairy cattle under a practical management situation. The course format will include both a weekly class lecture period and direct work hours by arrangement in the College dairy facility. Course fee of $25 is required. [Fall, Spring] Applied Learning-Other [2 credits] [4 contact hours]

ANSC 113 | Meat Processing Techniques

Students interested in the field of meat science and meat processing will gain further hands-on experiences in the processing of meat animal products from harvesting, cutting, maintaining HACCP plans and federal and state regulations, supply inventory, product inventory, and marketing of college raised animals via meat sales. Meeting hours are variable and will be arranged after initial meeting in semester. Prerequisite: ANSC 107 or ANSC 108 or ANSC 109 or permission of the instructor. Course may be repeated once to develop skills and proficiency. [Fall] Applied Learning-Other [2 credits] [5 contact hours]

ANSC 114 | Canine Management (C)

A five-week modular course which examines various aspects of living with and caring for dogs. [Fall] Applied Learning-Practicum [1 credit] [3 contact hours]

ANSC 115 | Animal Science Techniques I

Students study, as well as perform the care and management procedures required during the fall or spring semesters, of the College livestock animals (beef, sheep, goats, hogs, rabbits, and poultry). One two-hour laboratory per week and other hours to be arranged. Course fee of $25 is required. [Fall, Spring] Applied Learning-Practicum [2 credits] [4 contact hours]

ANSC 116 | Equine Science Techniques I

This course is designed to give students hands-on experience working in the College horse barns. Students will spend time refining their skills and knowledge in horse handling, feeding and medical care. Hours by arrangement. Equine Studies and Thoroughbred Management students are required to take twice (2 credits), preferably the fall and spring of their freshman year. This course is repeatable up to 7 times. [Fall, Spring] Applied Learning-Practicum [1 credit] [1 contact hour]

ANSC 117 | Intro to Livestock Prodctn (C)

The foundation course for the livestock science area at SUNY Cobleskill. This course will address concepts at the introductory level of principles of nutrition, breeding, physiology, health and marketing as applied to the understanding of the livestock industry. Co-requisite: ANSC 117X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 117X | Intro to Livestock Prod Lab (C)

The College herds and flocks will be utilized for demonstrations and handling experiences complementing lecture material. Co-requisite: ANSC 117 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 119 | Livestock Selection/Evaluation

A course for students who are interested in the practical background in livestock animal evaluation. The course will familiarize students to desirable qualities of type, function and productivity in beef, sheep, swine and meat goats. Students will expect to become aware of terminology used in these industries and be able to apply them in their own experiences of evaluation. Co-requisite: ANSC 119X [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 119X | Livestock Judging/Eval Lab

Students will be evaluating beef, sheep, swine, and meat goats. Oral discussion and reasoning will be emphasized with practical outcomes of livestock evaluation emphasized. Co-requisite: ANSC 119 [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 124 | Poultry Sci and Production (C)

This course will focus upon the production of poultry for egg or meat marketing. An exploration of the science behind embryology, anatomy and physiology of the bird, nutrition, growth, and health management will be addressed. Comparison of traditional and emerging production techniques (cage, barn and pasture models) will be completed. Co-requisite: ANSC 124X [Fall] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 124X | Poultry Sci & Prod Lab (C)

Practical application of content from class will also be supplemented with small group projects raising some type of poultry for a learning experience. Project birds will be raised throughout the course using practices discussed in lecture and marketed at the conclusion of the course. Co-requisite: ANSC 124 [Fall] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 126 | Intro to Dairy Processing

This course is an introduction to the dairy processing industry. Students will study the makeup and handling of raw milk, the process of drug-testing of raw milk and pasteurization, bottling, and labeling in the campus Dairy Processing Center. Students will be introduced to the common terminology and equipment used in the process of producing safe and high-quality dairy products in accordance with the NYS Safe Milk Ordinance. Throughout the course, students will be introduced to value-added dairy products such as butter, yogurt, kefir, and soft and hard cheeses, and will learn to conduct a consumer sensory analysis of these products. This course is cross-listed with AGBU 116 and CAHT 116. [Spring] Applied Learning-Other [3 credits] [5 contact hours]

ANSC 132 | Select & Show Dairy Cattle (C)

Selection and judging of cattle based on conformation in order to evaluate individual animals in one's herd or select desirable replacements. The preparation of animals for an annual show. Co-requisite: ANSC 132X [Fall] Applied Learning-Practicum [2 credits] [1 contact hours]

ANSC 132X | Select & Show Dairy Cattle Lab

The lab component for ANSC 132. Co-requisite: ANSC 132 [Fall] [0 credits] [2 contact hours]

ANSC 134 | Advanced Dairy Cattle Judging

An eight-week modular course designed for students who have had extensive experience judging and selecting dairy cattle. This course will continue to develop skills for evaluating dairy animals based on the conformation. [Spring] Applied Learning-Practicum [1 credit] [4 contact hours]

ANSC 140 | Small Animal Mgmt (C)

A course examining the principles and practices of caring for small animals. The course will include feeding and breeding practices as well as care and management. [Fall] Applied Learning-Other [3 credits] [3 contact hours]

ANSC 142 | Care & Train of Wkg Dog (C)

This course examines known behavioral patterns of the dog and how they can be used to effectively train and manage canines. Co-requisite: ANSC 142X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 142X | Care & Train/Wkg Dog Lab (C)

One credit laboratory designed to complement material presented in ANSC 142. Emphasis will be placed on positive methods of teaching obedience, tracking and trailing. A lab fee of $60 is required. Co-requisite: ANSC 142 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 144 | Canine Techniques (C)

Students will study and perform techniques required to care for dogs housed in the college kennel. The course will include both class lecture periods and direct work hours in the kennel as assigned. This course may be repeated for a total of two credits. Prerequisite: ANSC 142 and ANSC 142X or permission of the instructor [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 145 | Basic Canine Care and Uses

A course examining basic canine care from puppies to adults. It will also discuss how canines are used in society today. [Spring] [3 credits] [3 contact hours]

ANSC 146 | Canine Career Opportunities

This course will give the student an opportunity to explore career opportunities in the canine training and management industry. It will focus on self-assessment of interests and goals in the field as well as exposure to new opportunities through direct contact with professionals. Students will learn about effective resume building as well as developing an educational plan to meet their career objectives. The course is restricted to Canine majors only. [Fall, Spring] [1 credit] [1 contact hour]

ANSC 150 | Intro to Dairy Cattle Mgmt (C)

A study of the history and economics of the dairy cattle industry. This course will discuss selection, breeding, feeding and management of the calf, heifer and milking cow. The course also will include production of quality milk, milk secretions, sanitation and milking parlor selection. Co-requisite: ANSC 150X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [2 contact hours]

ANSC 150X | Intro to Dairy Cattle Mgmt Lab

The lab component for ANSC 150. Co-requisite: ANSC 150 [Fall] [0 credits] [2 contact hours]

ANSC 155 | Dairy Record Management (C)

An in-depth study of methods of testing and recording production of dairy cattle. Students will understand types of record systems available, analyze records for profitability and implement decisions based on recorded information available. Special emphasis will be placed upon usage of computer-based dairy herd management software and the development of related skills including accurate herd data entry, effective custom management information report design, and analysis of generated management reports and graphs. Students will also gain experience with and understanding of the AFIMILK data collection hardware and software incorporated into the milking parlor within the College milking center. The concept of cow deviation and analysis of such on an individual cow and herd basis will be presented. Co-requisite: ANSC 155X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ANSC 155X | Dairy Record Management Lab (C)

The lab component to Dairy Record Management lecture. Co-requisite: ANSC 155 [Spring] Applied Learning-Other [0 credits] [2 contact hours]

ANSC 161 | Light Horse Management (C)

Practical aspects of managing horses, both in large operations and the backyard environment. Emphasis is placed on skills necessary to operate and manage a large facility. Topics will include proper handling techniques, stable design, fire prevention, stable routine, fence construction and repair, record keeping, basic nutrition, basic hoof care, methods of exercising, transportation, grooming and clipping horses, basic conformation and horse identification. Co-requisite: ANSC 161X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 161X | Light Horse Management Lab (C)

The one credit laboratory designed to accompany ANSC 161. Emphasis is placed on the skills necessary to manage an equine facility. Skills learned include safe horse handling techniques, grooming techniques, conformation evaluation, health assessment, bandaging, feed evaluation, bedding and facilities evaluation. Co-requisite: ANSC 161 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 164 | Intro to Equine Training (C)

An introduction to the psychological processes of the horse and how they are used in basic training. Students will be required to use this knowledge in the actual training of horses in the laboratory sessions. Co-requisite: ANSC 164X [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 164X | Intro to Equine Training Lab (C)

Laboratory designed to accompany ANSC 164. This course is designed to apply information covered in lecture to working hands-on with horses. Students will use a variety of training techniques, with an emphasis on the safe handling of horses in training. Experiences are designed to aid students in gaining the confidence and knowledge necessary to continue their development as equine trainers. Co-requisite: ANSC 164 [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 168 | Equine Assisted Services

This course is designed for greater exposure and practice of teaching riding to typically developing riders and riders with special needs. Students will assist with riding instruction through involvement in the community based horsemanship program at the College equine center. Students taking this course prior to ANSC 268 will serve by assisting side walkers for therapeutic riding instruction. While this course may be repeated for credit, only a total of three credits may fulfill major field requirements. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Service Learning [1 credit] [2 contact hours]

ANSC 181 | Fundamentals of Forward Riding

This course develops and reinforces the skills necessary for riding in a forward manner, with the motion, establishing balance and control. Placement intended for riders possessing control and safety at walk, trot, and center while riding an unfamiliar horse in a group. A lab fee of $450 is required. [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 199 | Horseback Rider Strength & Conditioning

In this course, students will perform bodyweight and weighted exercise with the goal of increasing strength and will take part in cardiovascular and interval training with the goal of improving conditioning. Topics such as body image, nutrition, importance of macronutrients, and adaptations of the body will be discussed. This is a required course for members of the Hunt Seat riding team but is open to all students. It can be repeated up to 8 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 200 | Applied Animal Reproduction

A study of the field of animal science that emphasizes the applied natural and artificial reproductive processes in major farm livestock animals. Fundamentals related to the knowledge of anatomy, basic endocrinology and genesis of sex cells, and applied management of males and females before, during and after the breeding event will be presented. We will also explore advanced technologies in reproduction as well as explore potential career areas that involve animal reproduction. Co-requisite: ANSC 200X. Prerequisite: ANSC 111 or ANSC 150 or permission of instructor. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Practicum [3 credits] [2 contact hours]

ANSC 200X | Applied Animal Reproduction Lab

The lab component for ANSC 200. Co-requisite: ANSC 200 [Spring] [0 credits] [2 contact hours]

ANSC 203 | Meat Processing Techniques II

Allows students interested in the field of meat science and meat processing to gain further hands-on experiences in the processing of meat animal products, sanitation of meat processing facility and general operation of a federal meat processing establishment. Meeting hours are variable and will be arranged after initial meeting in semester. Course may be repeated once to develop skills and proficiency. Prerequisite: ANSC 113 [Fall, Spring] Applied Learning-Other [2 credits] [5 contact hours]

ANSC 212 | Dairy Cattle Management (C)

ANSC 212 presents a comprehensive examination of the various aspects of dairy farm management. The decision-making processes that affect the dairy herd will also be emphasized. Topics include business management, feeding management, transition and lactating cow management, managing young stock, emerging technologies and the assessment of dairy industry trends. Class discussions, lectures, speakers and field trips offer variety in the presentation of material. Co-requisite: ANSC 212X. Prerequisite: ANSC 150 [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ANSC 212X | Dairy Cattle Management Lab

The lab component for ANSC 212. Co-requisite: ANSC 212 [Spring] [0 credits] [2 contact hours]

ANSC 215 | Animal Science Techniques II

ANSC 215 is designed to provide additional experience for livestock students. Students will assist in the care, maintenance and management of the beef herd and goat and sheep flock. A report summarizing the student's experience is required. Prerequisite: ANSC 115. Hours by arrangement. Course fee of $25 is required. [Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 216 | Equine Science Techniques II

This course is designed for second-year students to give them further experience in the College horse barns. Students will have an opportunity to study, in detail, the practices necessary for managing an equine stable including preventative health care, nutrition, hoof care and record keeping. Opportunity for projects in an area of interest is possible. Hours by arrangement. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 218 | Livestock Prod, Eval & Mkg (C)

This course will build upon the basic livestock industry content introduced in ANSC 117 and other livestock courses in the ANSC area to emphasize the management practices involved with meat producing animal production. Principles of managing animal enterprises for breeding, nutrition, health, handling, facilities and target markets will be explored. Co-requisite: ANSC 218X. Prerequisite: ANSC 117 or permission of the instructor. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 218X | Livestock Prod/Eval/Mkg Lab(C)

Students will be involved with College livestock animals that will include beef, sheep, goats, hogs and poultry to demonstrate principles covered in lecture. Students will design and follow through with a farmer-based research project that will apply knowledge from previous courses and assist in developing skills in raising livestock animals. Co-requisite: ANSC 218 [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 219 | Adv Livestock Evaluation (C)

Examines applied selection of livestock species under different scenarios of production. The course will stress functional type, productivity and performance in livestock animals, and serve to develop skills of identifying these qualities within individual animals or groups of animals. Opportunities to evaluate livestock and expand decision making skills in presenting effective reasons for course content will be provided. Co-requisite: ANSC 219X. Prerequisite: ANSC 119 or permission of the instructor. [Spring] Applied Learning-Practicum [2 credits] [2 contact hours]

ANSC 219X | Adv Livestock Evaluation Lab

The lab component for ANSC 219. Co-requisite: ANSC 219 [Spring] [0 credits] [2 contact hours]

ANSC 221 | Equine/Companion Anim Nutr (C)

The course will involve the application of basic principles to equine and companion animal feeding. Comparisons in digestive systems, physiology and feeding practices will be made. Common rations will be evaluated. Computers will be used to evaluate and formulate appropriate rations. [Spring] Applied Learning-Other [3 credits] [3 contact hours]

ANSC 222 | Behavior Prob Companion Animal

A comprehensive look at the causes and treatments of the common behavior problems of companion animals. Co-requisite: ANSC 222X. Prerequisites: ANSC 142 and ANSC 142X with a C- or above. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 222X | Behavior Prob/Companion An Lab

Laboratory designed to complement material presented in ANSC 222. Emphasis will be placed on counseling owners with pets exhibiting problem behaviors. A lab fee of $35 is required. Co-requisite: ANSC 222. Prerequisites: ANSC 142 and ANSC 142X with a C- or above. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 223 | Principles of Animal Nutrition

ANSC 223 presents an introductory overview of the principles of animal nutrition, specifically regarding nutrients, the various types of feeds and their uses, and the formulation of rations for livestock animals. Instruction and coursework will highlight the anatomical differences and corresponding feeding methods between species, and explore the pertinent aspects of feed processing, storage, and quality analysis. Co-requisite: ANSC 223X. Prerequisite: ANSC 111, or ANSC 117, or ANSC 150. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ANSC 223X | Principles of Animal Nutrition Lab

ANSC 223X is a laboratory course that corresponds directly to ANSC 223. Hands-on learning activities will involve the various types of feeds and their uses, and the formulation of rations for livestock animals. Coursework will highlight the anatomical differences and corresponding feeding methods between species, and explore the pertinent aspects of feed processing, storage, and quality analysis. Co-requisite: ANSC 223. Prerequisite: ANSC 111X, or ANSC 117X, or ANSC 150X. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 224 | Detector Dog Teams

A college level course in canine target scent detection. Topics include, but are not limited to: target odor training, alert and final response behavior, search patterning, handling and placing training aids and deploying a dog in realistic search environments. Course fee of $110 is required. Prerequisite: ANSC 242 with a C- or above. [Spring] Applied Learning-Other [1 credit] [3 contact hours]

ANSC 225 | Canine Aggression (C)

A one credit modular course examining the causes of aggression in dogs, common treatments and management strategies. Emphasis will be placed on humane methods of stimulating and maintaining aggression for training purposes and non-compulsive methods of reducing aggression in management situations. Course fee of $300 is required. Prerequisite: ANSC 142 and ANSC 142X with a C- or above, and two semesters of ANSC 242 with a C- or above. [Spring] Applied Learning-Practicum [1 credit] [3 contact hours]

ANSC 226 | Canine Search Area (C)

A one credit modular course examining the training and use of air scenting dogs to search large areas for human beings in law enforcement and search and rescue operations. This will include common training methods, search patterns and basic land navigation skills. A course fee of $25 is required. Prerequisite: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above. [Spring] Applied Learning-Other [1 credit] [3 contact hours]

ANSC 240 | Equine Breed/Breed Farm Mgt(C)

This course covers the anatomy and physiology of the mare and stallion as well as the practical application of this information to today's breeding farm. Daily management of mares, foals, stallions and youngstock including farm design for efficient and productive management will be discussed. The College's herd and breeding facilities will be used to assist the student in gaining hands-on experience in the use of techniques commonly used on the breeding farm. Co-requisite: ANSC 240X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 240X | Equine Brdg/Brdg Farm Mgt Lab(C)

ANSC 240X is a one credit laboratory designed to accompany topics covered in ANSC 240 lecture. The College horse herd and breeding facility will be used to assist students in gaining hands-on experience in the care and management of breeding animals including foaling, teasing methods and evaluating of stallions. A lab fee of $20 is required. Co-requisite: ANSC 240 [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 241 | Dairy Cattle Breeding (C)

The goal of dairy cattle breeding is to produce replacements for the dairy herd that will provide the owner with the greatest possibility to make a profit. This is achieved by identifying an animal's genetic merit and developing breeding strategies through culling and selection to maximize genetic progress in the herd. Accessibility to dairy genetic information available via the Internet will be incorporated in this course and corrective mating systems currently available will be presented and analyzed. Interbull genetic evaluations will be discussed as part of the global nature of contemporary dairy record evaluations. Historic perspectives of dairy pedigree genetics will supplement the course information. Prerequisite: ANSC 150 [Fall] Applied Learning-Other [3 credits] [3 contact hours]

ANSC 242 | Canine Training (C)

A repeatable hands-on independent project course designed to allow students to train dogs for different tasks. Class meetings will be used to evaluate progress and to develop plans for the coming week. Repeatable a maximum of four times. May only be challenged for a maximum of one credit hour. A course fee of $60 is required. Prerequisite: ANSC 142 and ANSC 142X with a C- or above. [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 243 | Canine Tracking & Trailing (C)

A one-credit modular course examining current theories and methods of training dogs to track and trail human beings for sport, law enforcement, and search and rescue purposes. Emphasis will be placed on the difference between tracking and trailing, how they relate to each other, and how each can be used in real-world searches. A course fee of $25 required. Prerequisite: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above. [Fall] Applied Learning-Other [1 credit] [3 contact hours]

ANSC 244 | Training Canine Good Citizen

This course will introduce students to the AKC Canine Good Citizen certification program, and teach the training techniques to prepare a dog to complete the required 10 essential skills tested. Lab fee of $25 required. Prerequisite: ANSC 142 and ANSC 142X [Fall] Applied Learning-Other [1 credit] [3 contact hours]

ANSC 245 | Intro Rally Obedience (C)

This 5-week course will introduce students to the popular AKC Companion Event of Rally Obedience and teach the skills and training techniques to prepare a dog for the novice level of competition. Lab fee of $25 required. Prerequisite: ANSC 242 or permission of instructor [Fall, Spring] Applied Learning-Other [1 credit] [3 contact hours]

ANSC 252 | Ruminant Health (C)

A study of ruminant health and the principles and practices necessary to optimize production and performance of the herd or flock. Students will learn the effects of environment, nutrition and disease on ruminant health. Major emphasis in this course will be on the health of dairy and beef cattle, goats and sheep. Prerequisite: Students should be at least second year status in an Animal Science major or obtain instructor permission. Co-requisite: ANSC 252X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 252X | Ruminant Health Lab (C)

Laboratories will complement material covered in ANSC 252 lecture. Routine practices that a manager or herdsperson can perform to maintain ruminant health will be stressed. Co-requisite: ANSC 252 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 254 | Equine Health (C)

A study of unsoundness and diseases affecting equine species. The course will concentrate on symptoms, care and prevention, and treatment of the major diseases and problems affecting horses. Terminology will be stressed in order to assist the horse student to understand the prescribed medications of a veterinarian. Co-requisite: ANSC 254X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 254X | Equine Health Lab (C)

Laboratories will complement material covered in lecture. Routine practices that a horse farm manager or owner can perform to maintain horse health will be stressed. Co-requisite: ANSC 254 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 256 | Canine Health

This course is a study of canine health and the principles a practices necessary to optimize health and performance of the canine. The course will focus on routine practices that an owner or manager can perform to maintain canine health; along with prevention, symptoms and treatment of the major disease processes affecting canines. Anatomy, physiology and terminology will be stressed. Major emphasis in this course will be on the health of working, performance, and pet dogs. Students should be second year status, Animal Science major with concentration in Canine or obtain instructor permission. Co-requisite: ANSC 256X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ANSC 256X | Canine Health Lab

The lab component for ANSC 256. Co-requisite: ANSC 256 [Spring] [0 credits] [2 contact hours]

ANSC 257 | Saratoga Summer

This is a six-week summer horsemanship work experience program. Students will be immersed in Saratoga's thoroughbred racing activity by being placed in a number of approved work settings. Sites typically will include The National Museum of Racing and Hall of Fame, thoroughbred race horse trainer's shedrows, commercial thoroughbred breeding farm and bloodstock sales consignments. [Summer] Applied Learning-Internship [3 credits] [3 contact hours]

ANSC 266 | Dressage Principles

This course is designed to improve a student's understanding of the basic elements of dressage. The relationship of dressage to the early education of the horse and to work over fences will be stressed. Topics will include effective equitation and the logical, systematic development of the horse. Course fee of $450 is required. Co-requisite: ANSC 266X [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 266X | Dressage Principles Lab

One credit laboratory designed to complement the material presented in ANSC 266. Co-requisite: ANSC 266 [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 268 | Intro to Riding Instruction(C)

A course open to selected students who are interested in learning to teach riding. The course is designed to prepare the student to instruct at the beginner level. Psychological attitude of the rider, safety factors for horse and rider, role of horse and responsibility of instructor will be stressed. Co-requisite: ANSC 268X. Prerequisites: ANSC 168 and one of the following: ANSC 181, ANSC 230, ANSC 266, ANSC 283, ANSC 284, ANSC 285, or ANSC 286 or Permission of Instructor [Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 268X | Intro Riding Instruction Lab

Students will gain practical teaching experience in riding instruction. Co-requisite: ANSC 268. Prerequisites: ANSC 168 and one of the following: ANSC 181, ANSC 230, ANSC 266, ANSC 283, ANSC 284, ANSC 285, or ANSC 286 or Permission of Instructor [Spring] Applied Learning-Other [2 credits] [4 contact hours]

ANSC 270 | Animal Science Field Studies

This course is designed for students who desire a broader outlook in agriculture. During the semester, the student will be required to present a written report including an oral or slide presentation depicting agricultural practices. Instructor's permission only. Limited enrollment. Student expense ($100-$500) will vary depending upon the length of study. Students may enroll for a maximum of four credits. This course is repeatable up to 1 time. [Spring] Applied Learning-Field Study [2 credits] [2 contact hours]

ANSC 272 | Artificial Insemination Tech

This course is designed to study the techniques needed to successfully implement an artificial insemination program for cattle. Common breeding practices designed to improve reproductive efficiency will also be discussed. Co-requisite: ANSC 272X [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [1 contact hour]

ANSC 272X | Artificial Inseminat Tech Lab

This course is designed to practice the techniques needed to successfully artificially inseminate cattle. Practice of all artificial insemination techniques will be carried out on live animals. In addition, students will be required to conduct heat detection in the College dairy herd for two, 30-minute sessions each week as part of their laboratory experience in the course. These sessions will be scheduled by arrangement with the instructor. Co-requisite: ANSC 272 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [2 credits] [3 contact hours]

ANSC 274 | Bovine Hoof Care & Maint (C)

Students enrolled in this course will develop the skills needed to identify and successfully treat hoof health problems in cattle. The biomechanics of normal bovine movement and the causes of lameness will be represented. Prevention of lameness through proper trimming techniques and appropriate treatment protocols will be emphasized. The interrelationships between proper management of the dairy herd nutrition program as it relates to overall hoof health and the benefits of superior housing design concepts that reduce cow stress will also be discussed. Students will gain an understanding of hoof and leg anatomy through lab dissections and perform established hoof trimming techniques through hands-on lab experience, using both hand and power trimming tools. This course is restricted to Animal Science majors only. Co-requisite: ANSC 274X. Prerequisite: BIOL 104 [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 274X | Bovine Hoof Care/Maint Lab (C)

Students enrolled in the course will develop the skills needed to accurately identify and successfully treat hoof health problems in cattle. Students will gain an understanding of hoof and leg anatomy through lab dissections and perform established hoof trimming techniques through hands-on experience, using hands-on and power trimming tools. A lab fee of $50 is required for in-lab instructional materials. Students should anticipate an approximate cost of $120 for personal lab materials (two trimming knives, Kevlar gloves, one Kevlar sleeve, safety eyewear, hearing protection). Co-requisite: ANSC 274 [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 284 | Forward Riding Progression

The course offers the student opportunity for continued development of their ability to ride horses in a rational manner, efficient in effort and effective in response. Content will include the complexities of riding the horse forward and straight, with a deep, secure seat and quiet hands. This course is repeatable up to 8 times. Lab fee of $450 is required. [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 285 | Hunter Seat Equitation

This course provides a platform for participation in intercollegiate Hunter Seat competition. This course is repeatable up to 8 times. Lab fee of $450 is required. [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 290A | Spec Projects Animal Science

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences in the field of animal science. Each student will complete a problem under the direction and guidance of the faculty advisor. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other or Research [1 credit] [1 contact hour]

ANSC 290B | Spec Projects Animal Science

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences in the field of animal science. Each student will complete a problem under the direction and guidance of the faculty advisor. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other or Research [2 credits] [2 contact hours]

ANSC 290C | Spec Projects Animal Science

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences in the field of animal science. Each student will complete a problem under the direction and guidance of the faculty advisor. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other or Research [3 credits] [3 contact hours]

ANSC 299 | Dairy Cattle Hlth, Calf to Cow

Dairy Cattle Health provides a life-stage based approach to dairy cattle health, welfare, production and/or performance. Practices that a manager or caretaker can perform to maintain animal health; along with prevention, symptoms and basic treatment methods of the major disease processes affecting dairy cattle will be stressed. Major emphasis in this course will be on the health of dairy cattle through specific life stages; from calf to lactation. Prerequisite: ANSC 111. ANSC 150, ANSC 155, and BIOL 104; students should be at least second-year status in an Animal Science major or obtain instructor permission. Co-requisite: ANSC 299X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 299A | Canine Nutrition

This course is a study of canine nutrition. The canine digestive system, anatomy, and physiology will be reviewed. Essential nutritional requirements will be identified. Life-stages and other nutritional considerations of the canine diet will be reported. Nutritional calculations based on life-stage and health of the canine will be investigated. Interpretation of canine food labels will be reviewed. Laws and myths of canine nutrition will be recognized. This course is restricted to Canine Majors. Prerequisites: BIOL 104 and BIOL 104X with a grade of C or above [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ANSC 299D | Canine Cooperative Care

This class is an introduction to Cooperative Care Training, where dogs learn to actively participate in their own health care behaviors. This training reduces stress for dogs allowing for more efficient, effective, and safer care by owners, veterinarians, and groomers. Students will create management and training plans for dogs struggling with behavior like nail trimming, tooth brushing, and receiving injections. The lab portion of the class will complement material covered in the lecture. This course is restricted to Canine Majors. Prerequisites: ANSC 142 and ANSC 142X with a grade of C or above or permission of the instructor. Co-requisite: ANSC 299X Canine Cooperative Care Lab [Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 299E | Engagement, Motivation, Reward

The course will teach students why engagement is the foundation for all dog training. Students need to learn how to change their dog's state of mind so the dog wants to be with them and that the dog wants what the handler has. When a trainer can get and keep his dog engaged and motivated, training exercises are easy. This course in restricted to Canine Majors. Prerequisites: ANSC 142 and ANSC 142X with a grade of C or above [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 299X | Dairy Cattle Health Laboratory

Laboratories will complement material covered in Dairy Cattle Health lecture. Routine practices that a manager or caretaker can perform to maintain dairy health and prevent disease will be demonstrated and practiced. Prerequisites: ANSC 111, ANSC 150, ANSC 155, and BIOL 104X; students should be at least second-year status in an Animal Science major or obtain instructor permission. Co-requisite: ANSC 299X [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 299XD | Canine Cooperative Care Lab

This class is an introduction to Cooperative Care Training, where dogs learn to actively participate in their own health care behaviors. This training reduces stress for dogs allowing for more efficient, effective, and safer care by owners, veterinarians, and groomers. Students will create management and training plans for dogs struggling with behavior like nail trimming, tooth brushing, and receiving injections. The lab portion of the class will complement material covered in the lecture. This course is restricted to Canine Majors. Prerequisites: ANSC 142 and ANSC 142X with a grade of C or above or permission of the instructor. Co-requisite: ANSC 299 Canine Cooperative Care Lecture [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 300 | Scientific Research Inquiry

This course is an introduction to scientific research through lectures, discussions, and readings about the design of projects, the understanding of the scientific literature, and the ethics of research and publication as it relates to animal science. Students will explore a range of topics including; scientific and technical writing, research design and hypothesis testing, and presenting relevant research to various audiences. Prerequisites: ENGL 101 and Junior status in Animal Science BS major. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 318 | Sheep & Goat Product & Mgt (C)

This course will examine the sheep and goat industries in depths that address concepts in the areas of principles of nutrition, breeding, physiology, and health and marketing as applied to the understanding of the sheep and goat industries. Co-requisite: ANSC 318X. Prerequisite: ANSC 117 or permission of the instructor. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 318X | Sheep/Goat Product/Mgt Lab (C)

The College flock and herd will be utilized for demonstrations and handling experiences to complement material presented in the lecture. Field trips to sheep and goat producers will be used to address advanced or specialized concepts in the area of small ruminant production and science. Co-requisite: ANSC 318 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 320 | Swine Production & Mgmt (C)

This course will offer an in-depth view of the swine industry from breeding to marketing. Topics which will be stressed are reproduction, nutrition, health and marketing. The Pork Quality Assurance program will be integrated in this course, and students will be certified as a result of positive completion of course requirements. Co-requisite: ANSC 320X. Prerequisite: ANSC 117 or permission of the instructor. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 320X | Swine Production & Mgt Lab (C)

Using the College swine herd, practical experience will be gained in farrowing, feeding and evaluation of hog growth through both live and harvested animals. Field trips may also be used to expand experiences in the swine industry. Co-

requisite: ANSC 320. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 322 | Advanced Ruminant Nutrition

ANSC 322 presents a comprehensive exploration of ruminant nutrition, specifically regarding the various nutritional parameters and feeding strategies. Instruction and coursework will highlight the anatomical features of the ruminant digestive system and explore the pertinent aspects of feed selection, ration formulation, and feed quality assessment. Co-requisite: ANSC 322X. Prerequisites: ANSC 223, and CHEM 101 with a grade of C or better or CHEM 111. [Fall] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 322X | Adv Ruminant Nutrition Lab

Current concepts in carbohydrate, fat, protein, mineral, and vitamin nutrition will be applied in lab to the formulation of rations and the development of feeding programs for ruminants. Co-requisite: ANSC 322 [Fall] [1 credit] [2 contact hours]

ANSC 340 | Competition Obedience&Show (C)

This course will introduce students to the different levels of AKC Obedience Trial Competition and teach traditional canine training techniques for both the Beginner Novice, and Novice levels of showing. Co-requisite: ANSC 340X. Prerequisite: ANSC 242, and 45 or more earned credits, or permission of instructor. [Spring] [2 credits] [2 contact hours]

ANSC 340X | Competition Obed&Show Lab (C)

This course will introduce students to the different levels of AKC Obedience Trial Competition and teach traditional canine training techniques for both the Beginner Novice, and Novice levels of showing. Lab fee of $55 required. Prerequisite: ANSC 242, and 45 or more earned credits, or permission of instructor. Co-requisite: ANSC 340 [Spring] [1 credit] [2 contact hours]

ANSC 342 | Sporting Dogs

A college level course in canine competition sports. Topic disciplines assigned by the instructor include, but are not limited to, agility, jumping sports, protection sports, sight and scent sports, herding sports, hunting sports, obedience sports and pulling sports. Co-requisite: ANSC 342X. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 342X | Sporting Dogs Laboratory

Laboratory section designed to support ANSC 342 Sporting Dogs Lecture. Topic disciplines assigned by the instructor include, but are not limited to, training a dog in a competitive dog sport. A lab fee of $55 required. Co-requisite: ANSC 342. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 343 | Canine Training Technologies

An advanced-level course examining canine training technology and how it is utilized during training and deployments. This course will explore technology strengths and weaknesses. Students will analyze and assess canine training technologies in various contexts. Co-requisite: ANSC 343X. Prerequisites: 2 sections of ANSC 242 completed in different semesters with a C- or above, and 45 or more earned credits. Limited to Canine Training and Management BT majors or Animal Science BT majors in the Canine Advisement Track. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 343X | Canine Training Tech Lab

An advanced-level lab course examining canine training technology and how it is utilized during training and deployments. Students will apply and practice theoretical material presented in lecture. A lab fee of $100 is required. Prerequisites: 2 sections of ANSC 242 completed in different semesters with a C- or above, and 45 or more earned credits. Limited to Canine Training and Management BT majors or Animal Science BT majors in the Canine Advisement Track. Co-requisite: ANSC 343. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credits] [2 contact hours]

ANSC 344 | Dogs in the Helping Profession

This course is designed to explore Animal Assisted Interventions (AAI) with canines for professionals in the fields of education, mental health, human service, law enforcement, and health care fields. Students will learn the overarching goals of each profession and how AAI can support the achievement of these goals. Canine Assisted program designs,

implementation, and evaluation in a variety of systems and facilities will be taught. The course is restricted to Canine majors only. Co-requisite: ANSC 344X. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits, or permission of the instructor. [Fall] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 344X | Dogs in Helping Profession Lab

Dogs In the Helping Professions lab focuses on developing targeted intervention training plans to support a professional in achieving the goals for their clients. Implementing training plans around targeted intervention will be the focus of canine labs. This course is restricted to Canine majors only. Lab fee of $55 is required. Co-requisite: ANSC 344. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits, or permission of the instructor. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 345 | Canine Detection

A comprehensive introduction into dog odor detection including how odors act in the environment, how dogs perceive odors, and how to train and troubleshoot training a detection dog. This course is restricted to Canine majors only. Co-requisite: ANSC 345X. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 345X | Canine Detection Lab

A comprehensive introduction into dog odor detection including how odors act in the environment, how dogs perceive odors, and how to train and troubleshoot training a detection dog. This course is restricted to Canine majors only. A lab fee of $370 is required. Co-requisite: ANSC 345. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 352 | Animal Health

ANSC 352 provides a multi-species approach to animal health, welfare, production and/or performance. Practices that a manager or caretaker can perform to maintain animal health; along with prevention, symptoms and basic treatment methods of the major disease processes affecting animals will be stressed. Published research related to animal health management will be analyzed, reviewed and presented. Major emphasis in this course will be on the health of ruminant, equine and canine species. Co-requisite: ANSC 352X. Prerequisites: ANSC 111 and BIOL 104. Students should be at least third year status in the Animal Science BS major or obtain instructor permission. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 352X | Animal Health Laboratory

Laboratories will complement material covered in ANSC 352 lecture. Routine practices that a manager or caretaker can perform to maintain animal health and prevent disease will be demonstrated and practiced. Co-requisite: ANSC 352. Prerequisites: ANSC 111X and BIOL 104X. Students should be at least third year status in an Animal Science BS major or obtain instructor permission. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 354 | Physiology of Lactation

ANSC 354 presents a comprehensive investigation of the many facets of lactation with emphasis placed on anatomy, physiology, milk composition, management and health of dairy animals. Current concepts and industry trends will also be presented, with a focus on contemporary research and discussion of published literature. Prerequisites: ANSC 252 or ANSC 352; and BIOL 104, or permission of instructor. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ANSC 362 | Equine Bodywork I

A course aimed at building a solid foundation for performing effective equine bodywork. Students will participate in a team approach to assisting owners and trainers in improving comfort, performance, and longevity in their equine partners through effective bodywork. Modalities covered include sports massage, rehabilitation, structural balancing, myofascial release, pressure and reflect points, kinesiotaping, and cupping. Class will be a combination of classroom lecture,

assessment of equine, and practicing of the treatment modalities. Prerequisites: ANSC 116 or a riding class and BIOL 104 or permission of the instructor. [Fall, Spring] Applied Learning-Practicum [3 credits] [3 contact hours]

ANSC 363 | Equine Bodywork Practicum

The course will allow students the opportunity to work on assigned horses weekly to improve posture, soundness, and health with bodywork that reflects an understanding of the interactions between posture, muscle tension and texture, foot balance, TMJ tightness, saddle fit, comfort, and performance gained in Equine Bodywork I. Prerequisite: ANSC 362 [Spring] Applied Learning-Practicum [2 credits] [2 contact hours]

ANSC 364 | Domestic Animal Behavior (C)

This course examines the natural behavior patterns of domestic animals and how they can be used to solve behavioral problems. Co-requisite: ANSC 364X. Prerequisites: ANSC 142 or ANSC 163 or ANSC 222; and 45 or more earned credits or permission of the instructor. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [2 credits] [2 contact hours]

ANSC 364X | Domestic Animal Behav Lab (C)

Laboratory designed to complement material presented in ANSC 364. Emphasis will be placed on common behavioral tests; designing, conducting and analyzing a small research project; and clicker training chickens. Lab fee of $25 required. Co-requisite: ANSC 364. Prerequisites: ANSC 142 or ANSC 163 or ANSC 222; and 45 or more earned credits or permission of the instructor. [Fall] Applied Learning-Research [1 credit] [2 contact hours]

ANSC 368 | Therapeutic Riding Instruction

This course explores various forms of therapeutic riding intervention. Teaching format will include discussions, guest speakers and videotape review of disabilities such as: attention to deficit hyperactivity disorder, autism, intellectual disabilities, learning disabled, motor impairments, etc. Co-requisite: ANSC 368X. Prerequisite: ANSC 268 [Fall] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 368X | Therapeutic Riding Instruc Lab

Students will gain practical experience in laboratory settings by assisting the riding instructor and/or therapist while they use the horse to enhance physical, emotional, social and cognitive development of individuals with special needs. Students will also gain experience in the selection and training of the suitable therapeutic riding horse. Lab fee of $100 is required. Co-requisite: ANSC 368. [Fall] Applied Learning-Other [1 credit] [2 contact hours]

ANSC 374 | Adv Equine Reproduction (C)

This course is designed for the student interested in expanding his/her knowledge of the equine breeding industry. It will investigate the latest technologies utilized to maximize reproductive performance in the horse. Basic care and management of the mare, foal and stallion from breeding to foaling also will be stressed. The nutrition of the horse for reproduction and growth will be covered. Co-requisite: ANSC 374X. Prerequisites: ANSC 220, ANSC 240 and college level biology. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 374X | Adv Equine Reproduct Lab (C)

The laboratory experience will allow the student to practice techniques used in the breeding industry including collection of stallions, evaluation and processing of semen, teasing of mares, and foaling out of mares. Out of class time is expected. Lab fee of $20 is required. . Co-requisite: ANSC 374. [Spring] [1 credit] [2 contact hours]

ANSC 375 | Veteran Programming in EAS

Veteran programming in Equine Assisted Services (EAS - both ground and mounted program) has been steadily growing in the United States. Students will learn basic information about the population, military culture, and specific conditions Veterans may experience. Students will work hands-on with dually diagnosed Veterans and learn training techniques to be effective with ground programming. The class will be taught in collaboration with the Stratton VA Hospital staff and Veterans and requires a mandatory field trip. This is a five-week class. Prerequisites: ANSC 168 and ANSC 268 or permission of the instructor. [Fall, Spring] Applied Learning-Service Learning [1 credit] [3 contact hours]

ANSC 377 | Thoroughbred Industry

This course will involve in-depth study of management and business aspects of thoroughbred breeding and racing. In conjunction with the New York Thoroughbred Breeders, students will gain valuable exposure to racing operations at NYRA and Finger Lakes, Fasig-Tipton Sales, NY breeding farms, and NYTB professional seminars. This course is restricted to third and fourth year students. Co-requisite: ANSC 377X. Prerequisites: ANSC 111. [Fall] Applied Learning-Field Study [3 credits] [2 contact hours]

ANSC 377X | Thoroughbred Industry Lab

The lab component of ANSC 377 Thoroughbred Industry. Co-requisite: ANSC 377 [Fall] [0 credits] [2 contact hours]

ANSC 380 | Internship Orient An Science

Bachelor of Technology students will establish the skills necessary to obtain a meaningful internship. This course will provide students the opportunity to study business etiquette and other work place related behaviors. Students will also research career and employment opportunities as well as develop an up-to-date resume. Interview skills will be enhanced and internship agreements will be developed. The course is intended for students planning to intern in the following semester. Prerequisite: Junior or Senior status. This course is S/U graded only. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ANSC 390A | Spec Projects Animal Science

An advanced independent study of topics of special interest to the Bachelor of Technology student in Animal Science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning Other or Research [1 credit] [1 contact hour]

ANSC 390B | Spec Projects Animal Science

An advanced independent study of topics of special interest to the Bachelor of Technology student in Animal Science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other or Research [2 credits] [2 contact hours]

ANSC 390C | Spec Projects Animal Science

An advanced independent study of topics of special interest to the Bachelor of Technology student in Animal Science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other or Research [3 credits] [3 contact hours]

ANSC 399 | Animal Breeding and Genetics

This course will include major topics involved in animal breeding and genetics, including the history of animal breeding, molecular processes related to inheritance, artificial and natural selection, breed classification, and technological advances in the field. It is designed for students with a knowledge base that includes basic biology, and therefore is restricted to third- and fourth-year students. Co-requisite: ANSC 399X. Prerequisites: 75 or more earned credits and animal science major. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [4 credits] [3 contact hours]

ANSC 399X | Animal Breeding & Genetics Lab

The lab component of ANSC 399 Animal Breeding and Genetics. Co-requisite: ANSC 399 [Spring] [0 credits] [2 contact hours]

ANSC 400 | Farm Animal Reproduction

This course will emphasize an in-depth study of the anatomy and physiology of the reproductive system as it applies to cattle, swine, small ruminants, poultry and rabbit reproduction, and herd management strategies designed to maximize reproductive efficiency. Topic areas presented will include the latest technological advances in postpartum reproductive therapy, estrous synchronization protocols, reproductive records analysis using herd management computer software, embryo transfer, and pregnancy awareness. Co-requisite: ANSC 400X. Prerequisites: BIOL 104, BIOL 112, and ANSC 252 or ANSC 254 or permission of instructor [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Practicum [4 credits] [3 contact hours]

ANSC 400X | Farm Animal Reproduction Lab

The lab component for ANSC 400. Co-requisite: ANSC 400 [Fall] [0 credits] [2 contact hours]

ANSC 404 | Applied Animal Anatomy & Physiology

This course is an applied approach to study of the anatomy (structure) and physiology (function) of the domestic animal body. Case studies, focusing upon group investigations and clinical problem-solving skills, will allow for the presentation of, and development of, working knowledge of anatomical and physiological relationships. Each body system and its metabolism will be covered in depth. Written communication and oral presentation using medical terminology will be emphasized. Lab fee of $105 is required. Prerequisite: ANSC 111 and BIOL 104 or BIOL 258 and BIOL 111 and 112. Students should be at least third year status in the Animal Science BS major or obtain instructor permission. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [3 credits] [4 contact hours]

ANSC 411 | Animal Science Ethics Seminar

This course examines both practical and ethical concerns in the field of Animal Science. Students will be expected to identify, research, and present both sides of a topic currently of concern to the animal sciences. Prerequisites: ANSC 111 or ANSC 142, and one of the following: ANSC 252, ANSC 254, ANSC 256, or ANSC 352; and Jr/Sr status or permission of the instructor. [Fall, Spring] Gen Ed Diversity: Equity, Inclusion, and Social Justice, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [3 credits] [3 contact hours]

ANSC 412 | Dairy Herd Mgmt Seminar I

ANSC 412 presents a comprehensive investigation of the many facets of dairy business management, specifically regarding the analysis of farm facilities as well as herd health, and nutritional, reproductive, financial, and organizational practices. Instruction and coursework will highlight the aforementioned practices with analysis occurring during several dairy farm visits throughout the semester. Major emphasis will be placed on the use of computer programs and application of dairy business techniques in assessing the status of existing operations. A major facet of the course will be the development of oral and written communication skills via presentations and analytical reports. The course also serves to prepare students for the Intercollegiate Dairy Challenge competitions. Prerequisite: ANSC 212 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [3 credits] [3 contact hours]

ANSC 413 | Dairy Herd Mgmt Seminar II

Part two of a two-part dairy herd management seminar. Continuation of in-depth analysis of dairy herd management principles and practices using a case farm study format. This will be accomplished by discussions, field trips, guest lecturers, problem-solving and fieldwork as well as information gained from the student's internship and recent research. Students will have the opportunity for extensive team-building experience in a critical thinking and labor-diverse environment. Attendance at industry conferences and Dairy Challenge may be required; student expense may be $100. Prerequisite: ANSC 412 or permission of instructor [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Field Study [3 credits] [3 contact hours]

ANSC 418 | Advanced Beef Production (C)

This course will offer an in-depth view of the beef industry from breeding to marketing. Topics which will be stressed are reproduction, nutrition, health and marketing. Co-requisite: ANSC 418X. Prerequisite: ANSC 117 or permission of instructor. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 418X | Adv Beef Production Lab (C)

Using the College beef herd, practical experience will be gained in feeding, calving, breeding, selection, management and evaluation of calf growth. Co-requisite: ANSC 418. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 425 | Therapy Dog Teams

This course will provide the students with an understanding of what a therapy dog is; choosing the proper dog for this work; training and socializing their dog; preparing themselves for entering into the world of AAT (Animal Assisted Therapy) and

AAA (Animal Assisted Activities. Co-requisite: ANSC 425X. Prerequisite: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Fall] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 425X | Therapy Dog Teams Lab

The lab component of Therapy Dog Teams. This class is designed to introduce students to typical tasks that a therapy dog team needs to be successful and what is involved in this type of volunteer work. Time will be spent on handler skills and exposing dogs to situations that may arise in the field. A lab fee of $55 is required. Co-requisite: ANSC 425. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 427 | Service Dog Teams (C)

A college-level course in the basics of Service Dog Teams. Topic disciplines assigned by the instructor include, but not limited to, Service Dog categories, law, selection, training basic Service Dog skills. Co-requisite: ANSC 427X. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 427X | Service Dog Teams Lab

This course will provide the students with an understanding of what a Service Dog is; choosing the proper dog for this work; training and socializing their dog; preparing themselves for entering the world of Service Dogs. A lab fee of $55 is required. Co-requisite: ANSC 427. Prerequisites: ANSC 142 and ANSC 142X with a C- or above, and ANSC 242 with a C- or above, and 45 or more earned credits. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 450 | Internship in Animal Science

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Students are expected to return to campus and participate in a mid-internship seminar and final seminar. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. This course is S/U graded only. Co-requisite: ANSC 451. Prerequisite: ANSC 380 [Fall, Spring, Summer, Winter] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Internship [12 credits] [480 contact hours]

ANSC 451 | Internship Reporting in Animal Science

The internship in the Bachelor of Technology Program in Animal Science is the culminating experience for students and focuses on the integration and application of the concepts and skills acquired in courses and laboratory experiences during the first three years of the program. ANSC 451, Internship Reporting, is a two credit course taken simultaneously with ANSC 450, Internship. It is designed to facilitate communication with the intern, faculty supervisor and site supervisor through problem solving, discussion, reflection. The main goal for the students is to maximize learning while working in the field and to ensure the internship is a sound academic experience for the baccalaureate student. Co-requisite: ANSC 450. Prerequisite: 90 credits and GPA of 2.0 or better [Fall, Spring, Summer] Applied Learning-Internship [2 credits] [2 contact hours]

ANSC 464 | Equine Exercise Physiology (C)

This course will cover the basic physiological principles involved with exercise and performance. It integrates these principles into the care and training of the equine athlete to maximize the horse's performance. Topics to be studied will include muscle, cardiovascular and respiratory systems, energetics, nutrition and sports medicine. Co-requisite: ANSC 464X. Prerequisite: BIOL 104 or BIOL 111 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

ANSC 464X | Equine Exercise Phys Lab (C)

The laboratory allows for more in-depth study and practice of the principles covered in the lecture. Use of sports medicine techniques and heart rate monitors are demonstrated. Students learn to gather data and analyze its significance as it relates to exercise physiology. Co-requisite: ANSC 464. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 465 | Canine Fitness and Strength

This course introduces canine fitness principles, including how to perform a canine fitness assessment and the foundation skills needed to complete most exercises. Students will also learn exercise variables, functional movement, how to turn foundation movements into exercises, how to increase the challenge of each exercise, and when to go back to basics if needed. Co-requisite: ANSC 465X. Prerequisites: BIOL 104 or BIOL 111 or equivalent, and ANSC 242 with C- or above, and 45 or more earned credits. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ANSC 465X | Canine Fitness/Strength Lab

This course introduces canine fitness principles, including how to perform a canine fitness assessment and the foundation skills needed to complete most exercises. Students will also learn exercise variables, functional movement, how to turn foundation movements into exercises, how to increase the challenge of each exercise, and when to go back to basics if needed. Lab fee of $75 required. Co-requisite: ANSC 465. Prerequisites: BIOL 104 or BIOL 111 or equivalent, and ANSC 242 with C- or above, and 45 or more earned credits. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

ANSC 468 | Therapeutic Certificate Hours

This course provides the student opportunity for mentored teaching hours in therapeutic horsemanship under a PATH certified therapeutic riding instructor. The students will have the opportunity to log teaching hours applicable to application for PATH certification in therapeutic horsemanship. Co-requisite: ANSC 468X. Prerequisites: ANSC 168 and ANSC 268. [Fall, Spring] Applied Learning-Service Learning [1 credit] [1 contact hour]

ANSC 468X | Therapeutic Mentoring Hrs Lab

This course provides the student opportunity for mentored teaching hours in therapeutic horsemanship under a PATH certified therapeutic riding instructor. The student will have the opportunity to log teaching hours applicable to application for PATH certification in therapeutic horsemanship. Co-requisite: ANSC 468. Prerequisites: ANSC 168 and ANSC 268. [Fall, Spring] Applied Learning-Service Learning [2 credits] [4 contact hours]

ANSC 478 | Mentor Training

Students will obtain PATH, Intl Mentor training and will understand the role of the mentor, techniques, skills, and types of mentoring required to mentor instructors in training. Mentoring will occur in the lab setting as well as with video review of lessons provided for distance mentoring. Co-requisite: ANSC 478X. Prerequisite: ANSC 468, PATH, Intl certification. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [1 contact hour]

ANSC 478X | Mentor Training Laboratory

Students will obtain PATH, Intl Mentor Training and will understand the role of the mentor, techniques, skills, and types of mentoring required to mentor instructors in training. Mentoring will occur in the lab setting as well as with video review of lessons provided for distance mentoring. Lab fee of $120 is required. Co-requisite: ANSC 478. Prerequisite: ANSC 468, PATH, Intl certification. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [2 credits] [4 contact hours]

ANSC 499 | Adv Reproductive Technologies

This course will include topics that are classified as advanced reproductive technologies (ARTs), including artificial insemination, in vitro fertilization, intracytoplasmic sperm injection, ovum pickup, somatic cell nuclear transfer, and embryo transfer. It is designed for third- and fourth-year animal science students with a base of knowledge in animal reproduction. Prerequisites: ANSC 200 or ANSC 400 or ANSC 374; and 75 or more earned credits [Spring] Applied Learning-Other [3 credits] [3 contact hours]

ANSC 499B | Canine Research Seminar

A weekly journal club-style seminar where students will read and discuss both seminal research and current research on canines, with a focus on dogs. Prerequisites: 45 or more earned credits in the Canine Training and Management BT program or current Honors students only. [Fall, Spring] Applied Learning–Research [1 credit] [1 contact hour]

Anthropology

ANTH 114 | Physical Anthropology (C)

This course will provide the student with an introduction to the more scientific aspects of anthropology. Topics to be studied in physical anthropology and archeology will include the foundations of evolutionary theory, the fossil evidence for human evolution, the evolution of culture, field studies of the primates, techniques used in archeological investigation, the evolution of food production and the consequences of that process for both Old and New World prehistory, physical variation in modern human populations, and the ancient Near East and Mesoamerica Civilizations. [Fall, Spring] Gen Ed Social Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

ANTH 115 | Cultural Anthropology (C)

This course will provide the student with an introduction to the substantive and theoretical nature of social and cultural anthropology. The course will examine preindustrial populations within a worldwide context, however both North and Middle American native cultures will be emphasized. An economic/ecological approach will be utilized in studying two radically different production modes: (1) hunting and foraging; and (2) the continuum spanning incipient cultivation to intensive hydraulic agriculture. The sociocultural consequences of these varied technologies will be a major concern of the course, namely social structure and the evolution of political and religious systems. Students completing this course should have an emerging appreciation for the notion of "humanity," and a respect for the diversity found in the preindustrial world and in preindustrial technology. This course does not require ANTH 114 as a prerequisite. [Spring] Gen Ed Social Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

ANTH 200 | Introduction to Archeology

This course will provide the student with an introduction to the principles and methods of modern archeological science. The course will be concerned with New World prehistory. Students will be introduced to the concepts of prehistory, field excavation, classification, description, and analysis of artifacts, and methods used in reconstructing the past. [Fall] Gen Ed Social Sciences, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ANTH 216 | Cult,Society&Ag Ancient Mexico

This course examines the archeological cultures of pre-Hispanic Mexico and specifically the evolution of Aztec civilization. The relationship between food production strategies, technology, land use and empire building will be closely examined throughout the course. A historical survey of the Spanish Conquest and the Colonial Period will provide the student with a framework for understanding the factors which lead to massive 20th Century social and economic problems. The course brings together a wide variety of inter-disciplinary approaches in understanding the evolution of a tropical American civilization: ethnohistory, geography, demography and ecological anthropology. Prerequisites: Any of the following: ANTH 114, ANTH 115, HIST 101, HIST 102, HIST 121, HIST 122, NAMS 111 [Fall] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ANTH 290A | Special Projects Anthropology

An independent or small group study course designed to permit an individual student or group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

ANTH 290B | Special Projects Anthropology

An independent or small group study course designed to permit an individual student or group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

ANTH 290C | Special Projects Anthropology

An independent or small group study course designed to permit an individual student or small group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Faculty member with

whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirement for any degree. This course is repeatable up to 2 times. Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ANTH 317 | Agriculture and Society

This course is a historical and anthropological investigation into the many ways in which agricultural technology has irreversibly altered the course of human social life. Major events of the past, such as the rise and expansion of civilization, the evolution of warfare and technological evolution will be concerns of this course. In addition, the course will deal with probable future changes to human cultural and social systems in the areas of value structure, economics, politics and demography. Prerequisites: ANTH 115 or HIST 101 suggested but not required. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

Arabic

ARAB 101 | Beginning Arabic

This is the first semester of a two-semester sequence in the basic skills of understanding, speaking and, to a lesser extent, reading and writing a complex foreign language. Students should be highly motivated as they will need to engage in self-instruction outside of the regularly assigned class period. The course design follows the guidelines of the National Association of Self-Instructional Language Programs. This means that students work with native-speaker mentors who guide classroom interaction and model the language for students. Prerequisite: Students should have already formally studied another foreign language or should be recommended by a faculty member who teaches a foreign language. [Fall, Spring] Gen Ed Foreign Language, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ARAB 102 | Beginning Arabic II

This is the second semester of a two-semester sequence in the basic skills of understanding, speaking and, to a lesser extent, reading and writing a complex foreign language. Students should be highly motivated as they will need to engage in self-instruction outside of the regularly assigned class period. The course design follows the guidelines of the National Association of Self-Instructional Language Programs. This means that students work with native-speaker mentors who guide classroom interaction and model the language for students. Prerequisite: Students should have formally studied another foreign language, completed 101 or can be recommended by a faculty member who teaches a foreign language. [Fall, Spring] Gen Ed Foreign Language, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

Art

ARTS 111 | Design I (C)

A studio course for beginners. Using various media, students explore the basic elements of design such as line, color and form. Course fee of $75 is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Arts, Applied Learning-Other [3 credits] [3 contact hours]

ARTS 114 | Drawing I

This is a beginning studio course that will introduce the fundamentals of drawing, such as line, value, contour, texture space, and composition. The course will utilize still life, landscape, and perspective to introduce observational drawing techniques. Students will also explore various drawing media. Drawing supply kit required. Course fee of $75 is required. [Fall, Spring] Gen Ed Arts, Applied Learning-Other [3 credits] [3 contact hours]

ARTS 124 | History of Art I

A survey of the visual arts from the Prehistoric to late Gothic period. Lecture and slide presentation. [Fall, Spring] Gen Ed Humanities, Gen Ed Western Civilization, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ARTS 125 | History of Art II

A survey of the visual arts from the late Gothic to 20th Century. Lecture and slide presentation. [Fall, Spring] [3 credits] [3 contact hours] Gen Ed Humanities, Gen Ed Western Civilization, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ARTS 214 | Drawing II

This course is an expansion of the concepts, techniques, and use of materials presented in Drawing I. Emphasis is on continued development of perceptual analysis and technical facility, as well as an expansion of compositional concepts and expressive use of a variety of drawing media. Historical and contemporary traditions of drawing are examined. Gallery attendance, field trips, and materials are required. Prerequisite: ARTS 114. Gen Ed Arts [3 credits] [3 contact hours]

ARTS 215 | Painting

A studio course that utilizes water-based mediums to learn techniques and processes in relation to painting. This course will use various still life objects to explore color, light, shadow, composition, and form. Painting kit required. Prerequisites: ARTS 111 or ARTS 114 or permission of instructor. [Fall] Applied Learning [3 credits] [3 contact hours]

ARTS 216 | Introduction to Ceramics

An introductory ceramics course covering basic hand-building techniques as well as firing and glazing methods. This course will focus on applying design principals to create function and non-functional ceramic forms and will give an overview of the history of the ceramic medium. This course is combined lecture/lab format. Lab Fee $75. Prerequisite: ARTS 111 [Fall, Spring] [3 credits] [3 contact hours]

ARTS 216X | Introduction to Ceramics Lab

The lab component for ARTS 216. Co-requisite: ARTS 216 [Fall, Spring] [0 credits] [1 contact hour]

ARTS 290A | Spec Projects Art

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

ARTS 290B | Spec Projects Art

An independent or small group study course designed to permit an individual or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

ARTS 290C | Spec Projects Art

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ARTS 300 | History of American Art

This course is a survey of American Art to include: Pre-contact Native American Art, painting, sculpture, architecture, photography and decorative art from early Colonial through the late 20th Century. Students will master vocabulary and concepts, study historical periods and styles, as represented by specific art works. Students will develop observation and analytical skills necessary for comment, discussion and comparison/contrast of various art works and period influences. Prerequisites: ARTS 124 or ARTS 125, BT student or permission of instructor [Fall, Spring] Gen Ed Arts, Gen Ed Humanities, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

ARTS 310 | Selected Topics in Art

This course will explore, in depth, a particular issue in art. Themes of the course will change each semester in which it is offered and will be announced prior to registration. [Fall, Spring] [3 credits] [3 contact hours]

ARTS 324 | History of Graphic Design

This course focuses on visual communication, primarily graphic design, in the Western world from the late 19th Century to the present. A brief summary of important historical precedents launches a chronological and topical series of lectures on significant movements and individuals, and the economic, political, and technological developments that have influenced modern and contemporary print and online communication. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed

Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

ARTS 390C | Spec Projects Art

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level, Applied Learning-Other [3 credits] [3 contact hours]

ARTS 399 | Aesthetics of Agribusiness

This interdisciplinary course offers an innovative exploration of the dynamic relationship between art, design, and the agricultural industry, delving into the historical, visual, and cultural dimensions of agribusiness marketing, sustainability, and entrepreneurship. We will examine how agricultural businesses use design, branding, and visual elements to communicate their values, mission, and products. Through a blend of lectures, discussions, workshops/case studies, field trips, and hands-on projects in the practical and theoretical aspects of the aesthetics of agribusiness, students will develop a comprehensive understanding of how design and agricultural practices can combine to promote novel and sustainable agribusiness ventures. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

Business Administration

BADM 131 | Principles of Business (C)

An introduction to the diverse world of business, its structure, its operations, and its impact upon each of us as employees, as consumers, as individuals, and as members of society. The course acquaints the student with major disciplines and functions of business giving the student an overview of the interrelationships between business and the basic environments in which businesses operate. The course will also acquaint students to career opportunities within the various functions of a business. [Fall] [3 credits] [3 contact hours]

BADM 134 | Principles of Marketing (C)

An introduction to marketing and its role in society. Topics include the market, the consumer, the product, physical distribution, retailing, wholesaling, branding, labeling, pricing, government regulations, marketing information systems, marketing research, communications, marketing mathematics, the commodity exchange, and marketing management and strategies. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

BADM 135 | Retailing (C)

The study of retail store operations with respect to location, financing, layout, buying, terms of sale, pricing, selling, advertising, sales promotion, customer service, and Federal and State laws which regulate retail operations. Prerequisite: BADM 134 or permission of the instructor [Fall, Spring] [3 credits] [3 contact hours]

BADM 137 | Professional Selling (C)

An analysis of personal salesmanship with particular reference to the behavioral sciences and time management as they apply to the professional salesperson. Practical application is included with the preparation and execution of sales presentations. [Fall, Spring] [3 credits] [3 contact hours]

BADM 145 | Business Communications

An introduction to verbal and nonverbal communication skills needed in a work environment. Through lecture and practice, the student will study areas such as listening, interpersonal and group communication, non-verbal communication processes, interviewing, conflict resolution and techniques for developing and delivering verbal business presentations. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 201 | Personal Finance

This course provides a foundation for dealing with the many issues individuals face throughout life's journey. Some of the topics that will be covered include: setting financial goals and planning, personal budgeting, savings techniques, personal taxation, transferring funds, credit scores, credit/debit cards, loans and housing decisions, investments, insurances [life,

health, auto, homeowner's/renter's, and long-term care], and retirement and estate planning. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

BADM 223 | Business Law I (C)

A study of contract law and the Uniform Commercial Code relating to contracts, bailments and sales. [Fall, Spring] [3 credits] [3 contact hours]

BADM 224 | Business Law II (C)

A study of law relating to negotiable instruments, agency, partnerships, corporations, and real and personal property. Prerequisite: BADM 223 or permission of the instructor. [Fall, Spring] [3 credits] [3 contact hours]

BADM 249 | Management (C)

A second year level course designed for students with a special interest in management. The course assimilates previous learning and presents more advanced techniques, examines the most modern and advanced managerial and administrative principles and theories, and applies these to the solutions of incidents, case studies and actual business situations. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 259 | Supply Chain Management (C)

This course introduces the dynamic nature of supply chain management for products and services and addresses the impact of the global economy on the supply chain management process. The course presents the resources and techniques needed to solve complex supply-chain problems. Preparing students to manage an integrated supply chain in a highly competitive global market is the focus of this course. Topics include: developing superior customer service strategy; controlling quality; and managing logistics, inventory, and information. Each student is required to prepare a formal Supply Chain Management Plan. Prerequisite: BADM 249 or permission of the instructor [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 280 | Business Administration Intern

A course designed to permit Business Administration second-year students, under supervision of a mentor, to pursue an approved work experience which is directly related to their business administration courses of study. Maximum of three credits applied to degree. Prerequisites: A cumulative average of 2.75 in business courses, an overall 2.50 cumulative average and prior consent of the Business Administration Department. [Fall, Spring] [3 credits] [3 contact hours]

BADM 290A | Spec Projects Bus Adm

An independent or small group study course designed to permit an individual student or a group of students, under the supervision of a faculty member, to pursue on their own initiative topics or projects of their own design in which they have a special interest. This course is repeatable up to 2 times. Prerequisites: Second-year Business Administration major in good academic standing and with consent of the Business Administration Faculty. Students are required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation and number of credits to be earned. [Fall, Spring] [1 credit] [1 contact hour]

BADM 290B | Spec Projects Bus Adm

An independent or small group study course designed to permit an individual student or a group of students, under the supervision of a faculty member, to pursue on their own initiative topics or projects of their own design in which they have a special interest. This course is repeatable up to 2 times. Prerequisites: Second-year Business Administration major in good academic standing and with consent of the Business Administration faculty. Students are required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation and number of credits to be earned. [Fall, Spring] [2 credits] [2 contact hours]

BADM 290C | Spec Projects Bus Adm

An independent or small group study course designed to permit an individual student or a group of students, under the supervision of a faculty member, to pursue on their own initiative topics or projects of their own design in which they have a special interest. This course is repeatable up to 2 times. Prerequisites: Second-year Business Administration major in good academic standing and with consent of the Business Administration faculty. Students are required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation and number of credits to be earned. [Fall, Spring] [3 credits] [3 contact hours]

BADM 300 | Management Communications (C)

This course is designed to provide the student with the range of communication issues a manager will face in the future. Enduring issues on how to write and speak effectively and devise a successful communications strategy as well as how to make the best use of telecommunications technology will be explored. Through lecture and application, the student will study such areas as handling feedback, managing meetings, communicating change, communicating with diverse populations and external audiences. Prerequisites: ENGL 111 or BADM 145, CITA 110, or permission of the department. [Fall, Spring] Applied Learning [3 credits] [4 contact hours]

BADM 305 | International Business (C)

In-depth exploration of business opportunities and challenges associated with operating in the international business environment. Emphasis is on how social, cultural, economic, legal and political conditions influence decisions made by firms faced with internationalization of its markets. Lectures, discussions, readings, internet problems and case studies will be used. Prerequisite: ECON 124 and BADM 145, or permission of the instructor. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 310 | Human Resources Management (C)

A course designed to analyze the problems, strategies and procedures in managing and assessing human resources in contemporary organizations. Special attention given to: problems in assessing abilities and performance, effective recruitment, selection and training, motivational strategies and developing the organization's human resources. Special emphasis is placed on such topics as Equal Employment Opportunity, ethics, organizational development/teamwork and Total Quality Management. Prerequisite: BADM 249 and PSYC 111, or permission of the instructor. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 311 | E-Marketing

E-Marketing is a major component of electronic commerce, the fastest growing area of business. As such, workers and students with expertise in this field are in great demand. This course provides an introduction to the field and explains the various roles of E-Marketing in an organization's total marketing program. Students will be trained how to specifically use the internet and related technology to strategize and implement research, advertising, merchandising, customer service and other marketing mix-related functions. This is a practical, hands-on course. It explores Internet technologies as products in and of themselves, as mass and personal communications tools, and as a distribution/transaction channel. It will also address user characteristics and behavior, direct marketing and online strategies for relationship marketing. The basics of Web design will be introduced. This course is cross-listed with MKHT 311. Prerequisite: HOTL 205 or BADM 134 [Fall, Spring] [3 credits] [3 contact hours]

BADM 314 | Fundamentals of Entrepreneurship

This course guides students through the initial planning stages of opportunity recognition and market feasibility for startup business ventures. It explores and develops the required mindset, communication skills, and research techniques needed to transform an idea into a viable business prospect. Topics include identifying a viable business opportunity, formulating the value proposition, identifying and communicating with potential customers, detailing the business model, and performing the research needed to compose a detailed market size estimation and in-depth customer research. Course requirements include a detailed industry and market analysis, customer research using at least two separate methods, and selected portions of a formal business plan and presentation. Prerequisite: BADM 134 or permission of the instructor. [Fall] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

BADM 315 | Startup Business Plan Design

This course explores entrepreneurship and the art of developing a complete startup business plan. It provides an in-depth analysis of the required skills, resources, and techniques needed to transform an idea into a viable business entity. Topics for this course include selecting a business organization structure, managing human resources, sources and uses of funding, forecasting sales, and creating pro-forma financial statements. Among the course requirements is that each student will prepare a complete formal business plan and pitch presentation for the new business venture. Prerequisite: BADM 249 and ACCT 101 or ACCT 150, or permission of the instructor. [Spring] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

BADM 320 | Ethics and Management (C)

An application of general moral theory to some of the more important moral problems arising in the areas of business and management; an analysis of motivation, of the norms of activity, of corporate responsibility as such, and of the relations of these to the range of "social responsibilities" (e.g. pollution control, environmental protection, equal opportunities, consumer protection, and government regulation. This course is cross-listed with PHIL 320. Prerequisite: Junior status or permission of the instructor. [Fall, Spring] Gen Ed Humanities, Applied Learning [3 credits] [3 contact hours]

BADM 325 | International Marketing (C)

This course explores the problems of marketing U.S. produced products in foreign markets. Emphasis is on the development of relevant skills in planning, implementing and controlling adaptive marketing strategies with the goal of entering or expanding foreign markets. Lecture, readings and case studies. Prerequisite: BADM 134 [Fall] Applied Learning [3 credits] [3 contact hours]

BADM 330 | Advertising and Promotion (C)

This course offers a detailed look at the role of advertising in the marketing mix, with special emphasis on the integrated marketing communications approach with consumers/customers; planning the advertising campaign; media selection; creating and managing advertising; economic, legal and social constraints on advertising for an organization. An evaluation of advertising expenditure from the view of the firm and the consumer are presented. Part of the course requirements is the promotion and media plan for an original product or idea. Prerequisite: BADM 134 or permission of the instructor. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 334 | Marketing Research (C)

Introduces marketing information systems and marketing research techniques currently employed by some major corporations in the United States. Included are methods for formulating a research project, designing a questionnaire, collecting data and analysis, and interpreting data for decision-making. Prerequisite: BADM 134 or permission of the instructor. [Spring] [3 credits] [3 contact hours]

BADM 349 | Strategic Mgmt for Quality (C)

An upper-level course designed to provide the student with background information on Total Quality Management in today's business. Discussion and case work will involve the perspective of total quality, leadership for total quality, restructuring for total quality, the implementation process and total quality in human resources management. Prerequisite: BADM 249 or permission of the instructor. [Fall] Applied Learning [3 credits] [3 contact hours]

BADM 355 | Logistics Management

This course explores the role of logistics as a critical link in the Global Supply Chain Management process. This course provides an in-depth analysis of the required skills, resources, and techniques needed to solve complex problems in the area of logistics management. Topics covered include transportation and the economy, costing and pricing, third party logistics, risk management, global transportation management, the governmental role in transportation, and the critical transportation issues. Each student will prepare a formal logistics plan. This course is cross-listed with AGBU 355. Prerequisite: BADM 249 or AGBU 207 and AGBU 207X or permission of the instructor [Spring] Applied Learning-Other [3 credits] [3 contact hours]

BADM 360 | Business Sustainability: TBL

This course is designed for students to integrate the concepts, tasks, and responsibilities of the practice of sustainable processes for organizations. Emphasis on the triple bottom line: financial, social, and environmental performance. This requires careful and thoughtful use of people, information, financial resources, and the environment. The goal of this course is to help students develop a better understanding of the keys to leading organizations (from any level within an organization), inspiring change and transformation, using resources sustainably, and creating new business applications and opportunities. Course content will include case studies and readings on sustainable development and collaborative innovation. Students will engage as reflective practitioners in completing individual as well as group projects. Prerequisites: BADM 223 and BADM 249 [Fall, Spring] [3 credits] [3 contact hours]

BADM 365 | Purchasing

This course explores the role of purchasing as a critical link in the Global Supply Chain Management process. This course provides an in-depth analysis of the required skills, resources, and techniques needed to solve complex problems in the area of purchasing management. The course will examine transportation and distribution concerns including production scheduling, third party logistics, calculating costs of services, warehousing, material management, analyzing value of services, staffing and supervision, and technology. Topics covered include the purchasing process, supply management for corporate advantage, supplier selection and evaluation, global sourcing, contract negotiation, lean supply chain, and purchasing laws. Each student will prepare a formal purchasing plan. This course is cross-listed with AGBU 365. Prerequisite: BADM 249 or AGBU 207 and AGBU 207X or permission of the instructor [Spring] Applied Learning-Other [3 credits] [3 contact hours]

BADM 368 | Health Care Management

This course introduces students to the knowledge and skills required to strategically manage the rapidly changing internal and external environment of health care organizations. The course offers a comparative, global perspective on how the United States and other countries address issues of health and health care. The course will explore managerial implications of emerging issues in health care such as public reporting, pay for performance, information technology, retail medicine, ethics, and medical tourism. Prerequisite: BADM 249 or permission of the instructor [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 380 | Internship Orientation Bus Adm

Bachelor of Business Administration students will be introduced to acceptable methods of establishing an internship. Successful and less than successful activities noted by previous interns will be evaluated. Interview skills will be enhanced and agreements developed. This course is intended for students planning to intern the following semester. This course is S/U graded only. Prerequisite: Completion of one semester in the BBA. [Fall, Spring] [1 credit] [1 contact hour]

BADM 390A | Special Project Bus Admin

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management student in Financial Services or Information Technology. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [Fall, Spring] [1 credit] [1 contact hour]

BADM 390B | Spec Project Business Admin

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management student in Financial Services or Information Technology. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [Fall, Spring] [2 credits] [2 contact hours]

BADM 390C | Spec Project Business Admin

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management student in Financial Services or Information Technology. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [Fall, Spring] [3 credits] [3 contact hours]

BADM 400 | Operations Management

A study of the decision-making process and how quantitative methods are used to find solutions to business problems. The computer will be used to analyze and process data. Opportunities, problems and decisions that confront managers are analyzed and solutions are developed. Topics covered include: cost-volume-profit analysis, forecasting, decision theory,

linear programming, probability concepts and applications, inventory control, queuing theory and game theory. Prerequisite: BADM 249 and Senior Status, or permission of the instructor. [Fall, Spring] [3 credits] [3 contact hours]

BADM 405 | Consumer Behavior

The most complex aspect of marketing is the consumer. This course will provide tools to better understand consumer behavior. Topics will include consumer motivation, values, psychographics and lifestyle influences, individual and group decision making, demographic and cultural influences. Practical applications of psychological principles will be emphasized, including frequent guest programs, promotional strategy and marketing planning. This course is cross-listed with MKHT 405. Prerequisites: BADM 134 or HOTL 205, or permission of the instructor [Fall, Spring] [3 credits] [3 contact hours]

BADM 420 | Marketing Management (C)

This is an advanced course in marketing, with an emphasis on decision-making, and solving marketing problems at the executive and managerial level. This course draws heavily on materials found in Principles of Marketing, economics, the behavioral science, mathematics, and management. Field trips may be required at a cost to the student. Prerequisites: BADM 134, BADM 249 [3 credits] [3 contact hours]

BADM 449 | Management Policy & Issues (C)

The emphasis is on analyzing the criteria for which ultimate business decisions are made; business strategies in international and domestic operations and the impact of political, economic and legal factors. Focus will be given to actual situation analysis and applying current functional and managerial techniques to a variety of case studies. Prerequisite: BADM 249 and Senior Status, or permission of the instructor. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

BADM 450 | You, The Leader

This course is designed for students to integrate the concepts, tasks, and responsibilities of the practice of leadership and engage students in a self-assessment of their own leadership styles and tendencies. An emphasis will be on exploring leadership principles and then having the student apply them to themselves through self-exploration. The goal of this course is to help students develop a better understanding of leadership and give them a capability of developing themselves as leaders. Course content will include readings, discussion, case studies, assessment, and reflection. Prerequisites: PSYC 111 and ENGL 101 [Spring] [3 credits] [3 contact hours]

BADM 480 | Internship in Bus Admin

Supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. During the internship, an academic department faculty member will serve as an internship advisor. Midterm and final reports are required. Evaluation will be based on written and oral reports of work experience activities and the quality of experiences gained from the internship. This course is S/U graded only. Prerequisite: 30 credits of upper-level (300- 499) Technology Management coursework. To participate in an internship the student MUST have an overall GPA of 2.50 or better in their major field requirements, or receive an exemption from the Dean of the School of Business. Co-requisite: BADM 485 [Fall, Spring, Summer] [9 credits - 405 contact hours] [6 credits - 270 contact hours] [9 credits] [9 contact hours]

BADM 485 | Internship Bus Admin Reporting

Technology Management students enrolled in BADM480, Internship in Technology Management, must be concurrently enrolled in this course. Students will prepare their internship agreement paperwork; submit daily log entries while on their internship; submit periodic, mid-term, and final evaluations; and give their final presentation at the conclusion of the internship. Internship advisors may assign additional reports as well. Their course will be letter graded (A-F). Prerequisite: Minimum of 30 upper-level (300-499) division credits and concurrent enrollment in BADM 480 [Fall, Spring, Summer] [3 credits] [3 contact hours]

BADM 490C | Spec Project Business Admin

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management student in Financial Services or Information Technology. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to

2 times. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [Fall, Spring] [3 credits] [3 contact hours]

Biological Sciences

BIOL 101 | Introduction to Biology (C)

This course is a survey of the fundamentals of biology starting with the molecules that make up life, leading to cells and multi-cellular organisms, and on to populations, ecosystems and human impact. Rather than a detailed exploration of each topic, the course will lead to an understanding of the unifying principals common to all biological species - such as structure and function, homeostasis, metabolism and reproduction - while highlighting the diversity of organisms that make up the web of life. Articles chosen from current events will highlight the application of fundamental concepts to specific topics in health and disease, society and/or the environment. Course fee of $25 is required. Co-requisite: BIOL 101X. [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 101X | Intro to Biology Lab

This lab will emphasize the scientific method of hands-on exercises on both ends of the scale, both molecular techniques and assessing ecological communities. Co-requisite with BIOL 101 lecture. [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [2 contact hours]

BIOL 103 | Human Biology

Human Biology is an introductory course designed for students with little or no background in biology. Its aim is to teach the fundamental functioning of the human body, examining the organ systems, their physiology, and several aspects of disease on normal system operation. Basic cell architecture and function and biochemistry are taught within the framework of the human body. Co-requisite: BIOL 103X [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 103X | Human Biology Lab

Lab component for BIOL 103 Human Biology. Co-requisite: BIOL 103. [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [1 credit] [2 contact hours]

BIOL 104 | Prin Animal Anat/Physiology(C)

This course is a study of basic animal anatomy and physiology. The orientation of all activities and discussions is to investigate how animal physiology is affected by the various environments found on the farm. Laboratory involves working on livestock in their environments. Lecture includes a study of the following: the integument and the nervous, circulatory, respiratory, renal, endocrine, reproductive and immune systems. Course fee of $25 is required. Co-requisite: BIOL 104X [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 104X | Animal Anatomy & Physiology Lab(C)

Lab component for BIOL 104 Prin Animal Anat/Physiology. Co-requisite: BIOL 104 [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [1 credit] [2 contact hours]

BIOL 105 | Principles of Genetics (C)

A college-level study of the principles of animal genetics. Topics include Mendelian (transmission) genetics, DNA/RNA structure, protein synthesis, DNA sequencing, determination of sex, gene action, epistasis, multiple alleles, linkage, basic probability, hypothesis testing, population genetics and quantitative (polygenic) traits. Co-requisite: BIOL 105X [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 105X | Principles of Genetics Lab(C)

1 credit laboratory course designed to complement BIOL 105. Focus will be on solving written problems designed to illustrate the principles covered in BIOL 105. Co-requisite: BIOL 105 [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective [1 credit] [2 contact hours]

BIOL 106 | Environmental Sci for Educator

Environmental Science for Educators examines the basic principles of upstate New York's natural history, including animals, plants, geology, habitat types and astronomy. The natural history of the area will be presented through lectures, laboratory studies, and field visits. The "how-to" of running student field study trips, from the schoolyard to the state park, will be discussed. A survey of common environmental activity guides will enable students to use these and other guides when developing programs or curricula for children. Students will be required to build an environmental education lesson and present it to the class. Fulfills the Liberal Arts and Sciences laboratory science requirement. Course fee of $25 is required. Co-requisite: BIOL 106X [Fall, Spring] Gen Ed Sciences, Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 106X | Environ Sci for Educators Lab

The lab component of BIOL 106- Environmental Science for Educators. Co-requisite: BIOL 106 [Fall, Spring] Gen Ed Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [2 contact hours]

BIOL 110 | Special Topics in Biotech

This course will provide a general introduction into the field of biotechnology while discussing new and novel applications. Students will learn the basic principles about DNA, genomics and gene expression which are fundamental to biological life functions, and will also examine issues and ethics concerning the future of biotechnology and our society. The course will give students a panoramic survey of the current applications of biotechnology and career opportunities in this rapidly growing field. Gen Ed Sciences, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 111 | Biology I

The first semester of a two-semester university-level biology course covering fundamental principles common to living systems at the molecular, cellular, and organismal levels with a taxonomic survey of the major groups of living organisms. Topics covered include basic biochemistry, cell structure and function, reproduction, biodiversity, evolutionary theory, and the interrelationships between living things (especially humans) and their environment (green course designation) with emphasis on current biological problems. This course is designed for prospective biology majors and other science majors who have had Regents-level high school biology or its equivalent. Requires appropriate laboratory course. Course fee of $25 is required. Co-requisite: BIOL 111X [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 111X | Biology I Lab

BIOL 111X is a one-credit laboratory designed to accompany lecture topics covered in BIOL 111, Biology I lecture. Students should be currently enrolled in or have previously completed BIOL 111 lecture. Laboratory runs for one three-hour block each week giving students "hands-on" experiences in dissection, microscopy, and the set-up of controlled experiments including data collection, analysis, and interpretation. Creating and keeping a sustainable and healthy environment are emphasized throughout the semester (green course designation). Specific emphasis will be placed on biodiversity and how it relates to a healthy environment by studying selective taxonomic groups of organisms. Co-requisite: BIOL 111 [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 112 | Biology II

A continuation of BIOL 111. Topics include: cell energetics, the biology of plants (selected topics), animal form, function and regulation, genetics, development, and evolution and ecology. Course fee of $25 is required. Prerequisite: BIOL 111. Co-requisite: BIOL 112X [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 112X | Biology II Lab

BIOL 112X is a one-credit laboratory designed to accompany lecture topics covered in BIOL 112, Biology II lecture. Students should be currently enrolled in or have previously completed BIOL 112 lecture. Laboratory runs for one three-hour block each week and emphasizes the set-up of controlled, experiments including data collection, analysis, and interpretation. Creating and keeping a sustainable and healthy environment are emphasized throughout the semester (green course designation). Co-requisite: BIOL 112 [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 114 | Medical Terminology/Orient (C)

This course is designed for students entering the bio-medical and allied health fields. The primary focus is to introduce students to basic medical terminology as related to body systems, disease, medical procedures and diagnosis. The orientation will expose students to the various career pathways in the medical field and the regulatory agencies that govern the health professions. [Fall] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 116 | Botany I

A study of cell division in plants and tissues, and their structure and function in roots, stems, leaves and flowers. Photosynthesis, respiration, mineral use, food distribution, inheritance and variation, meiosis, taxonomy and evolution are also considered. Course fee of $25 is required. Co-requisite: BIOL 116X [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective [3 credits] [2 contact hours]

BIOL 116X | Botany I Lab

A laboratory experience directly related to the material in BIOL 116 Lecture. Co-requisite: BIOL 116 [Fall, Spring] [0 credits] [2 contact hours]

BIOL 117 | Botany II

A continuation of Botany I with emphasis on plant cell function, cell life, metabolism, respiration, food and mineral translocation, theories on the formation and use of amino acids, vitamins, carbohydrates and auxins, photosynthesis, environment, and plant deficiency diagnosis and correction. Co-requisite: BIOL 117X. Recommended prerequisite: BIOL 116 or BIOL 111 [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [2 contact hours]

BIOL 117X | Botany II Lab

A laboratory experience directly related to the material in BIOL 117 lecture. Co-requisite: BIOL 117 [Spring] [0 credits] [2 contact hours]

BIOL 131 | Natural Hist of Vertebrates(C)

Identification, evolution, taxonomy and life history of local vertebrates. General ecological requirements, reproductive habits, distribution and habitat preference are emphasized for each of the vertebrate classes. (Students cannot take both BIOL 131 and BIOL 136.) Prerequisite: BIOL 111 [2 credits] [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [2 credits] [2 contact hours]

BIOL 131X | Nat Hist Vertebrates Lab (C)

Identification, evolution, taxonomy and life history of local vertebrates. General ecological requirements, reproductive habits, distribution and habitat preference are emphasized for each of the vertebrate classes. Laboratory and field experiences are included. Prerequisite: BIOL 111X [1 credit] Co requisite: BIOL 131 Lecture [2 credits] [Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other, Science [1 credit] [2 contact hours]

BIOL 158 | Human Anatomy & Physiology I

Human Anatomy and Physiology I is part one of a two-semester course exploring the human body as an integrated complex of systems. It explores the study of structure and function of each organ system with an emphasis on inter-relationships. This introductory course sequence is designed for students with an interest in physical education and health-related professions but is open to all students. The aim is to teach the fundamental structure and function of the human body, examine the normal operation of organ systems and the effect of disease on normal system operation. Basic cell architecture and function are taught within the framework of the human body. Course fee of $25 is required. Prerequisite: High school biology or its equivalent or permission of the instructor. Co-requisite: BIOL 158X and BIOL 158Y [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 158X | Human Anatomy/Physiology I Lab

BIOL 158X is a one-credit laboratory course designed to accompany lecture topics covered in BIOL 158. Co-requisite: BIOL 158 [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [2 contact hours]

BIOL 158Y | Human Anatomy/Physiology I Recitation

The recitation component for BIOL 158. Co-requisite: BIOL 158 [Fall] [0 credits] [1 contact hour]

BIOL 159 | Human Anatomy & Physiology II

Human Anatomy and Physiology II is part two of a two-semester course exploring the human body as an integrated complex of systems. It explores the study of structure and function of each organ system with an emphasis on inter-relationships. This introductory course sequence is designed for students with an interest in physical education and health-related professions but is open to all students. The aim is to teach the fundamental structure and function of the human body, examine the normal operation of organ systems and the effect of disease on normal system operation. Basic cell architecture and function are taught within the framework of the human body. Co-requisites: BIOL 159X and BIOL 159Y. Prerequisite: High school biology or its equivalent or permission of the instructor. [Fall, Spring, Summer] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 159X | Human Anatomy/Physiology II Lab

BIOL 159X is a one-credit laboratory designed to accompany lecture topics covered in BIOL 159. Lab fee of $55 is required. Co-requisite: BIOL 159 [Spring, Summer] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [2 contact hours]

BIOL 159Y | Human Anatomy/Physiology II Recitation

The recitation component for BIOL 159. Co-requisite: BIOL 159 [Spring] [0 credits] [1 contact hour]

BIOL 186 | Entomology

The anatomy, identification, biology, and ecology of insects are studied. Management of insect pests and the importance of beneficial insects is discussed. Insect identification is stressed in the laboratory portion of the course. An insect collection is required. This course is cross-listed with AGSC 186. Co-requisite: BIOL 186X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Science Elective Applied Learning-Field Study [3 credits] [2 contact hours]

BIOL 186X | Entomology Lab

The lab component for BIOL 186. Co-requisite: BIOL 186 [Fall] [0 credits] [2 contact hours]

BIOL 199 | Critical Thinking and Pseudoscience

This is an 8-week course that is meant to improve student critical thinking about scientific material. Students will spend time developing study skills and learning to analyze different study techniques for the type of material they are covering. The students will learn the Paul-Elder model of critical thinking and use it to analyze topics in pseudoscience. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [6 contact hours]

BIOL 211 | Terrestrial Ecology (C)

Terrestrial ecology examines the basic principles of ecology including trophic structure, energy cycling and biogeochemical cycles. A survey of terrestrial ecosystems of North America will be conducted with an emphasis on northeastern environments. Interactions between abiotic and biotic elements of ecosystems will be discussed in depth. Labs involve sampling of the flora, fauna and abiotic features of local terrestrial habitats. Students will gain Project Wild certification. Co-requisite: BIOL 211X. Prerequisites: BIOL 111 or BIOL 116 [Fall] Liberal Arts/Science Elective, Applied Learning-Field Study [3 credits] [2 contact hours]

BIOL 211X | Terrestrial Ecology Lab

The lab component for BIOL 211. Co-requisite: BIOL 211 [Fall] [0 credits] [2 contact hours]

BIOL 212 | Forest Ecology (C)

This course will cover the foundational concepts in forest ecology, including: forest community dynamics, nutrient cycles, forest soils, and forest biodiversity and function. We will also spend time discussing the sustainable management of forests, by considering silviculture systems, forest products, and forest insects. This course will have weekly field exercise to train students in common forest mensuration techniques and for exposure to a variety of forest ecosystem types. Prerequisite: FWLD 101 or permission of the instructor [Fall] Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 215 | Aquatic Ecology (C)

Lectures and field surveys will examine the physical, chemical, and biological components, interrelationships, and sampling techniques characteristic of the major north temperate aquatic environments. An applied ecosystem approach will be utilized in the study of the ecology of streams, rivers, reservoirs, lakes, ponds, swamps, marshes, and estuaries. Field instructional experiences, some on weekends, are a major part of this course. Field costs are shared by the students. Waders and life jackets are required. Prerequisite: BIOL 111 [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 219 | Microbiology

The study of bacteria, yeasts, molds and viruses which considers their morphology, physiology, molecular biology, relation to normal symbiosis or pathogenesis, and their influence on human progress. Course fee of $25 is required. Prerequisite: BIOL 111. Co-requisite: BIOL 219X [Fall] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 219X | Microbiology Lab

A series of extensive laboratories giving students practical skills necessary to isolate, characterize and identify microorganisms important in both normal symbiosis and disease, in food and water quality control, and in the applications of microorganisms in modern biotechnology. Co-requisite: BIOL 219 [Fall] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 251 | Microscopic Anatomy

This course provides a comprehensive study of the microscopic anatomy (histology) of mammalian cells, tissues and organs, particularly in the human. Lectures and discussions are oriented toward understanding the correlation between the organization of the cells comprising the basic tissue types and organs and their respective functions. Course fee of $25 is required. Prerequisites: BIOL 111 and CHEM 111. BIOL 112 and CHEM 112 strongly recommended; a final grade of "C" or better or permission by the instructor is required for students who expect to take BIOL 268. Co-requisite: BIOL 251X [Fall] Liberal Arts/Sciences Elective [2 credits] [3 contact hours]

BIOL 251X | Microscopic Anatomy Lab

The laboratory sessions are designed to familiarize the student with the identification of cells, tissues and organs under the microscope. Each student will have a complete set of slides and a microscope for the semester. Most slides will be stained with the routine hematoxylin and eosin staining, though some will have special stains to demonstrate specific structures. Sample slides will be shown and discussed with the aid of a videomicroscope. In addition, high quality demonstration slides will be available as supplemental slides for study and review. Co-requisite: BIOL 251; a grade of "C" or better or permission of the instructor is required for students who expect to take BIOL268. [Fall] Liberal Arts/Sciences Elective, Applied Learning-Other [2 credits] [4 contact hours]

BIOL 258 | Anatomy & Physiology I

This is the first semester of two Anatomy and Physiology lecture courses covering the structure and function of the human body. Topics include the basic chemistry of life processes, a discussion of the four classes of macromolecules in the body, the muscular and skeletal systems, and the organization and integrative functions of the nervous and endocrine systems. Course fee of $25 is required. Prerequisites: BIOL 111 and CHEM 111 or permission of the instructor. BIOL 112 and CHEM 112 strongly recommended. Co-requisite: BIOL 258X [Fall] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 258X | Anatomy and Physiology I Lab

The laboratories are designed to teach the students proper dissection techniques as well as to help develop the skills to design, record, analyze and interpret data from experiments. Physiology labs will familiarize the student with standard curves, dilutions and clinical methods to detect and measure the levels of normal serum constituents such as glucose and cholesterol. Dissections will include the muscles of the cat, a bovine eye and a sheep brain. Bone identification will be based on the skeletal bones of the cat available in individual boxes. Co-requisite: BIOL 258 [Fall] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 259 | Anatomy & Physiology II

This is the second semester of two Anatomy and Physiology lecture courses covering the structure and function of the human body. Topics include cardiovascular dynamics, respiration, digestion and absorption, the urinary system and its role in water and electrolyte and acid/base balance, metabolism and reproduction. Prerequisite: BIOL 111 and CHEM 111 or permission of instructor. BIOL 258 and BIOL 258X and BIOL 112, CHEM 112 strongly recommended. Co-requisite: BIOL 259X. [Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 259X | Anatomy and Physiology II Lab

The laboratories utilize a variety of techniques. The physiology experiments include assays using standard curves and ELISA methodologies, assessment of urinary and digestive functions and measurement of physiologic parameters such as pulse rate, EKG's and lung volumes. Dissections and/or prosections of the cat include identification of thoracic, abdominal and pelvic organs and the blood vascular system. Structure and function relationships will be emphasized. Lab fee of $76 is required. Prerequisites: BIOL 111 and CHEM 111 or permission of instructor. BIOL 258 and BIOL 258X strongly recommended. [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 268 | Microtechniques

This course provides a comprehensive overview of the chemistry, theory and practice of the techniques used in preparation and staining of tissues for light microscopy. The concepts and principles involved in standard histological procedures are discussed in detail. Topics include: tissue fixation, processing, embedding, sectioning, routine nuclear and cytoplasmic staining and special stains. Related topics including health and safety, decalcification of bone and immuno-histochemistry are also discussed. Recognizing and resolving technical difficulties and troubleshooting problems are an integral part of the presentations. Course fee of $100 is required. Prerequisites: BIOL 112, CHEM 112, and BIOL 251 and BIOL 251X with a grade of "C" or better or permission of the instructor. Co-requisite: BIOL 268X [Spring] [3 credits] [3 contact hours]

BIOL 268X | Microtechniques Lab

The aim of this laboratory course is to familiarize and assist the student in mastering the technical skills involved in the preparation of high quality tissue slides. Each student will learn to program, run and clean the VIP processor; embed tissues at the embedding station; section tissues on each of three brands of microtome; and stain, coverslip, clean and label slides. The staining procedures will include routine hematoxylin and eosin staining as well as a wide variety of special stains including trichrome stains, silver stains, an acid fast bacterial stain and others. Special lab sessions will include decalcification of bone, immunostaining and field trips to hospital histology labs. To complete the course each student must fix, process, embed, section and stain a total of 25 final slides to be evaluated. Co-requisite: BIOL 268; a grade of "C" or better or permission by the instructor is required for students who expect to take BIOL 275. [Spring] Applied Learning-Other [3 credits] [6 contact hours]

BIOL 275 | Clinical Exp Histotechnology

This is a clinical rotation which involves a 60-day clinical experience in a hospital, pharmaceutical, or veterinary histology laboratory under the direct supervision of a H.T. or H.T.L. (A.S.C.P.). A pathologist and other affiliated faculty are also involved in the supervision and assessment of the student's progress. Students will spend approximately 50 percent of their time preparing for the lecture and practical portion of the national certification examination given by the American Society of Clinical Pathologists (A.S.C.P.). This course is S/U graded only. Prerequisites: BIOL 251 and BIOL 251X; BIOL 268 and BIOL 268X; grade of "C" or better in each prerequisite or permission of the instructor. 60 working days, hours to be arranged. [Spring, Summer] Applied Learning-Clinical Placement [4 credits] [4 contact hours]

BIOL 290A | Spec Projects Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience in the field. The project proposal should be submitted to the Chairperson of the Natural Sciences Department for approval prior to registering for the course. A description of the project or work experience and a summary must be submitted at its conclusion. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

BIOL 290B | Spec Projects Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience in the field. The project proposal should be submitted to the Chairperson of the Natural Sciences Department for approval prior to registering for the course. A description of the project or work experience and a summary must be submitted at its conclusion. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

BIOL 290C | Spec Projects Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience in the field. The project proposal should be submitted to the Chairperson of the Natural Sciences Department for approval prior to registering for the course. A description of the project or work experience and a summary must be submitted at its conclusion. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

BIOL 300 | Principles of Parasitology (C)

An introduction to the parasitic diseases of domestic and wild animals with emphasis on their biology and control. Prerequisites: Six credits of Biology having a laboratory emphasis. An additional three credits of Microbiology are strongly recommended. Co-requisite: BIOL 300X [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [2 contact hours]

BIOL 300X | Principles of Parasitology Lab

The lab component for BIOL 300. Co-requisite: BIOL 300 [Fall, Spring] [0 credits] [2 contact hours]

BIOL 303 | Seminar in Applied Genetics

Topics of interest related to the genetic definition and control of qualitative and quantitative traits in various species of animals are presented. Genetic conservation programs and current animal improvement strategies as well as challenges presented by new developments in reproductive biology and molecular genetics are addressed in a distance learning format. Prerequisites: BIOL 105, BIOL 111 or permission of the instructor. [Fall] [1 credit] [1 contact hour]

BIOL 305 | Ethics Science,Medicine & Tech

This writing-intensive and discussion-based course is an upper-level philosophy/science course focused on the elements of moral philosophy, especially as they apply to emerging ethical dilemmas in science, medicine, and technology. Emphasis will be on gaining cognitive skills and applying reason to all decision-making processes, including the appropriate use of emerging science and technologies. This course is cross-listed with PHIL 305. Prerequisites: Students must have completed at least 30-credit hours, including ENGL 101, any BIOL course, and an additional science course, or permission of the instructor; philosophy course recommended. [Fall, Spring] Gen Ed Diversity, Equity, Inclusion, and Social Justice, Gen Ed Humanities, Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

BIOL 307 | Invertebrate Zoology (C)

This course will examine the major invertebrate taxa of North America with emphasis on life history, phylogeny, morphology and ecology. Studies on invertebrate organisms with ecological and economic significance will be stressed. Field and laboratory instructional experiences, some on weekends, will provide first-hand experience collecting and observing common northeastern invertebrates. Field costs are shared by the students. Prerequisite: BIOL 111 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [4 credits] [6 contact hours]

BIOL 308 | Terrest. Invertebrate Ecology

Field-based course that explores the roles of terrestrial invertebrates in ecosystem function, interactions between terrestrial invertebrates and other animals and plants, and the impacts of disturbance, both natural and anthropogenic, on functional invertebrate assemblages. Emphasis is on techniques used to quantify invertebrate ecology. Students will be exposed to invertebrates in the context of the their natural environments, learn sampling methodologies associated with the study of different terrestrial invertebrates and gain an appreciation for the diversity, biology and ecology of terrestrial invertebrates. Prerequisites: One of the following: AGSC/BIOL 186 or BIOL 307, or BIOL 316, or BIOL 317 or permission of the instructor. [Fall] Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 316 | Ornithology

This course covers anatomy, physiology, taxonomy, distribution, biogeography, ecology and conservation of birds in North America. Lectures provide an introductory review of the study of birds and ornithology as a science. Practical laboratory and field exercises include gross anatomy, preparation of study skins, field identification of birds by sight and sound, research methodology, and analysis and interpretation of field data. Binoculars are required. Prerequisites: BIOL 131, BIOL 211 or BIOL 215 [Spring] Liberal Arts/Science Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 317 | Herpetology

This course covers anatomy, physiology, taxonomy, distribution, ecology, behavior and conservation of amphibians and reptiles of North America. Lectures provide an introductory review to the study of herpetology as a science. Practical laboratory and field exercises involve the identification of North American amphibians and reptiles, recognition of frog and toad calls, sampling populations and habitats of local species, and analysis and interpretation of field data. Prerequisites: BIOL 131, BIOL 211 or BIOL 215 [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 318 | Fish Biology

Lectures and field surveys will examine the fisheries resources of the northeastern states with emphasis on the life history and special requirements of species making up the major commercial and recreational fisheries. Field and laboratory instructional experiences, some on weekends, will provide first-hand experience with the biology of northeastern freshwater and marine fish. Field costs are shared by the students. Waders and life jackets are required. Prerequisites: BIOL 131, FWLD 221 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [4 credits] [6 contact hours]

BIOL 320 | Environmental Toxicology

This course should be of interest to science majors who desire a knowledge of toxics in the environment and the negative impact they can have on plants and animals. Lectures blend material with the instructor's extensive diagnosing environmental toxicant motilities in fish and wildlife, and investigating contamination of the wildlife food supplies. Chemicals are traced from their production, to loss in the environment, to movement into the food chain. Environmental contaminants discussed include metals, industrial compounds, and pesticides, as well as toxins produced by microbes, plants, and animals. The laboratory portion of the course, BIOL 320X, may also be taken. Prerequisite: CHEM 111 and 6 credits of Biology including BIOL 111. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [3 contact hours]

BIOL 320X | Environmental Toxicology Lab

This laboratory compliments the lecture for BIOL320. Chemical tests of environmental toxics such as lead and mercury are performed. Sampling methods for solid, sediments, water, air and animal tissues are taught. Safety measures to be utilized in the field and laboratory are shown. A field trip to the instructor's laboratory is taken to illustrate a modern laboratory used in toxic diagnostic work on wildlife and field samples. Co-requisite: BIOL 320. Liberal Arts/Science Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [1 credit] [3 contact hours]

BIOL 330 | Mammalogy (C)

This course is designed as an introduction to the biology, ecology, and behavior of mammals. Students will explore a variety of topics including the morphology and physiology, taxonomy, evolution, habitat use, movements, reproduction, behavior, ecology, pathology, management, and conservation of various mammalian taxa. Prerequisites: BIOL 111/111X and BIOL 131. [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [4 contact hours]

BIOL 340 | Ecological Restoration (C)

This course is an introduction to the tools and techniques necessary to achieve successful ecological restoration. As an important foundation, we will examine the definitions, history, and ecological processes involved in restoration. We will explore methods for restoring ecosystems common throughout North America, discuss case studies of successful restoration projects, and learn the steps necessary for planning, implementing, and evaluating restoration projects. This course will include restoration site visits and involvement in local restoration projects. Prerequisites: AGSC 111 and FWLD 101. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 355 | Animal Pathology

This course covers the alterations and reactions that occur in the living body when its various parts are exposed to injurious agents or deprivations, pathological changes resulting from traumatic injuries, infections and parasitic diseases, nutritional deficits, toxic substances, malignant and benign tumors, and heredity. The prion-caused diseases will also be covered. Emphasis will be on wildlife and domestic animals but much of the information will also be relevant to human pathology. An optional lab, BIOL 355X, may be taken with this course. Course fee of $25 is required. Prerequisite: Six credits of biology including BIOL 111. [Fall] [3 credits] [3 contact hours]

BIOL 355X | Animal Pathology Lab

This optional lab will cover necropsy techniques, tissue preservation and personal protective procedures, gross pathology, histopathology, and microbiological, parasitological, chemical, and toxicological techniques used for making diagnosis. Preserved specimens will be studied for gross pathology and prepared slides will be studied microscopically. No live infectious material will be utilized in the laboratory. Prerequisite: BIOL 111X. Co-requisite: BIOL 355 [Fall] [1 credit] [2 contact hours]

BIOL 364 | Biotechnology

This course gives students experience with both the theory and methodology used in contemporary biotechnology and molecular biology laboratory. Course content includes good laboratory practice (GLP), research design, statistics spectrophotometry, genetic engineering, polymerase chain reaction (PCR), electrophoresis, gel documentation, analysis, and visualization, Southern Blotting, DNA extraction, fluorescent tagging of genes, and an introduction to bioinformatics. Course fee of $25 is required. Prerequisite: BIOL111/111X, and BIOL112/BIOL112X, and CHEM111/111X Co-requisite: BIOL 364X [Spring] [2 credits] [2 contact hours]

BIOL 364X | Biotechnology Lab

An intensive, hands-on practicum running and working in a modern research laboratory. Using guided projects, students will gain expertise in general laboratory procedures (e.g., solution preparation, pH measurements, record keeping, etc.) and specific instrumentation (including IC, osmometry, electrophoresis, density gradient centrifugation, atomic absorption spectrophotometry, UV and visual spectrophotometry, electrophoresis, Southern blot, and a variety of computer applications, including statistical analysis. Prerequisite: BIOL 111/111X, and BIOL 112/BIOL112X, and CHEM 111/111X. Co-requisite: BIOL 364 [Spring] Applied Learning-Other [2 credits] [4 contact hours]

BIOL 375 | Cell Biology

This course is a study of the structure, function, and the life history of cells and their components. We will especially examine the relationships among cell organelles and between cells and their environments. Prerequisite: BIOL 111/BIOL112 or equivalent and CHEM 111/112 or equivalent or permission of the instructor. Course fee of $25 is required. Co-requisite: BIOL 375X [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

BIOL 375X | Cell Biology Lab

The lab component for BIOL 375 Cell Biology. Co-requisite: BIOL 375. [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 390A | Special Projects in Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience in the field. The project proposal should be submitted to the Department Chair for approval prior to registering for the course. A description of the project or work experience and a summary must be submitted at its conclusion. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

BIOL 390B | Special Projects in Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience in the field. The project proposal should be submitted to the Department Chair for approval prior to registering for the course. A description of the project or work experience and a summary must be submitted at its conclusion. Hours to be arranged. This course is repeatable up to 1 time. [Fall, Spring] [2 credits] [2 contact hours]

BIOL 390C | Special Projects in Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience in the field. The project proposal should be submitted to the Department Chair for approval prior to registering for the course. A description of the project or work experience and a summary must be submitted at its conclusion. Hours to be arranged. This course is repeatable up to 1 time. [Fall, Spring] [3 credits] [3 contact hours]

BIOL 395 | Topics in Current Research

This course requires hands-on research in the sciences stressing experimental design, proven methodology, and consistent laboratory work aimed at contributing to an established ongoing research project. Students will be responsible for a research proposal, weekly progress reports to supervising faculty, data collection and analysis, and presentation of work at a meeting and/or in a peer-reviewed journal. Students are required to spend a minimum of six hours per week in laboratory. This course is repeatable up to 2 times. Course fee of $120 is required. This course is cross-listed with CHEM 395. Prerequisites: Students should be proficient in routine laboratory procedures, have taken at least four science courses including BIOL 111, BIOL 112, CHEM 111, and a 200-level laboratory course. Maximum number of five students per instructor. Permission of instructor is necessary for participation. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [6 contact hours]

BIOL 400 | Evolutionary Biology

This course explores various mechanisms of biological evolution of plants and animals. Lecture reviews and class discussions serve as an introduction to concepts of evolutionary processes such as adaptation and speciation, genetics, natural selection, coevolution, extinction, sociality and biodiversity. Prerequisites: BIOL 316, BIOL 317 or BIOL 318. Students not meeting prerequisites need permission of the instructor. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

BIOL 403 | Conservation Biology

Case studies, interactive discussion, on-site evaluation, and formal presentation designed to help students gain a better understanding of how human activities impact the living world's biodiversity and the inter-disciplinary efforts currently focused on protecting it. Students will review the biological knowledge that is essential to conservation, ranging from genetics to ecosystems. Prerequisites: AGRN 232 or BIOL 211 or BIOL 215 or BIOL 308. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [4 contact hours]

BIOL 405 | Theory and Methods in Biotech

This course will cover both basic and advanced concepts in biotechnology with a specific emphasis on those methods designed to enhance our ability for recombinant DNA technology. Topics will include, but are not limited to, genetic engineering of enhanced plant crops (both nutritionally enhanced as well as pest and salt/drought resistant varieties), use of biotechnology to produce useful agriculturally important animals, genetic enhancement of fungal and microbial species,

and regulatory environmental, and ethical concerns for the production and release of recombinant organisms. This is an essential part of the capstone sequence of coursework for Biotechnology majors. Prerequisites: Biotechnology (BIOL 364) and Cell Biology (BIOL 375) or permission of instructor. Co-requisite: BIOL 405X [Fall] [3 credits] [3 contact hours]

BIOL 405X | Theory/Meth Biotech Lab

The lab component for BIOL 405 Theory/Methods in Ag Biotech. Lab fee of $167 is required. Co-requisite: BIOL 405. [Fall] Applied Learning-Other [1 credit] [3 contact hours]

BIOL 410 | Molecular Genetics

This course is designed to give students the basic foundation of genetics from a molecular/genomics perspective. Emphasis is placed in DNA/genome structure and function as well as regulation of gene expression. Additional advanced topics include molecular methods in the laboratory, bioinformatics, and analysis of gene expression. Prerequisite: BIOL 111/112 or equivalent and CHEM 111/112 or equivalent or permission of the instructor. Microbiology or Cell Biology is recommended. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

BIOL 415 | Marine Ecology

Lectures and field surveys will examine the physical, chemical and biological components, interrelationships, and sampling techniques characteristic of the major northeastern marine environments. An applied ecosystem approach will be utilized to study the ecology of estuaries, intertidal shores, tidal ponds, saltmarshes, hard and soft benthos, and coastal environments. Field instructional experiences, on weekends, are a mandatory part of this course. Field costs are shared by the students. Waders are required field gear. Prerequisite: BIOL 215. [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [4 credits] [6 contact hours]

BIOL 419 | Applied Microbiology

This course focuses on microbiology at an advanced level. Students will explore concepts developed in Microbiology (BIOL 219) for bacteria and yeast. Following a brief review of structures and function, this course will focus on the metabolism and biochemistry of these microbes. Topics will include fermentation, responses to environmental stressors, and environmental cues. Protein secretion and molecular biology of bacteria will also be covered. Prerequisites: grade of C- or better in BIOL 219/219X, CHEM 351, and MATH 125. Co-requisite: BIOL 419X [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level [3 credits] [3 contact hours]

BIOL 419X | Applied Microbiology Lab

This course focuses on microbiology at an advanced level. It is meant to provide students with the opportunity to put theory into practice and to develop the practical skills necessary to isolate, characterize, and process microorganisms for further study. Prerequisites: grade of C- or better in BIOL 219/219X, CHEM 351, and MATH 125. Co-requisite: BIOL 419 [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level, Applied Learning-other [2 credits] [6 contact hours]

BIOL 420 | Tissue Culture Techniques

In this course, students will learn the basic theory of plant and/or animal cell tissue culture, principles and methods of gene transfer technology. The mechanism of DNA transfer technique will be reviewed in detail. Factors known to affect transformation efficiency will be discussed. Students will learn basic and advanced theory of plant and/or mammalian tissue culture, genetic engineering, and agricultural and industrial applications utilizing cell tissue culture and genetic engineering. Course fee of $25 is required. Prerequisites: BIOL 364/364X, BIOL 375/375X, BIOL 405 or permission of the instructor. Co-requisite: BIOL 420X. [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [2 credits] [2 contact hours]

BIOL 420X | Tissue Culture Techniques Lab

In this course, students will learn the basic theory of plant and/or animal cell tissue culture, principles and methods of gene transfer technology. Students will work with plant and/or mammalian cell cultures, students will learn techniques involved in maintaining and manipulating cell cultures, molecular cloning, DNA transfer, and genetic analysis of transformants. Lab fee of $95 is required. Co-requisite: BIOL 420. [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [2 credits] [4 contact hours]

BIOL 425 | Bioinformatics

This is a practical "hands-on" course that will emphasize how to use computers and the web as tools to analyze and represent large collections of biological sequence and structure data. In this course, students will learn theoretical approaches, techniques, and computational tools for DNA and protein sequence and structure analysis. The topics also include biological database and internet-based bioinformatics resources. Prerequisite: BIOL 375/375X. Co-requisite: BIOL 425X. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

BIOL 425X | Bioinformatics Lab

This is a practical "hands-on" course that will emphasize how to use computers and the web as tools to analyze and represent large collections of biological sequence and structure data. Prerequisite: BIOL 375/375X. Co-requisite: BIOL 425. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [1 credit] [3 contact hours]

BIOL 430 | Applied Immunology

An overview of the immune system, with emphasis on current concepts and literature. Topics covered include: cells and tissues of the immune system; structure and function of antibodies; genetic basis of antibody diversity; humoral and cellular immunity; cellular interactions; major histocompatibility complex; the complement system; transplantation; and tumor immunity. Prerequisites: grade of C or better in BIOL 219/219X and BIOL 105/105X or BIOL 410, or permission of the instructor. This course is recommended for students with Junior or Senior status. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

BIOL 480 | Internship in Biotechnology

This is the capstone, guided project or work experience in biotechnology. It will focus on an in-depth study of a contemporary problem or research endeavor applying the tools of modern biotechnology to agriculturally important organisms. While independent research activities will be expected of students, supervision and guidance will occur by the project advisor and/or by the Director of the Biotechnology Program or a faculty in Biotechnology or related discipline. Projects will clearly vary each year, but are intended to focus on those attempting to solve real-world problems in crop production improvements, bioremediation, biomass energy production, etc. Prerequisite: BIOL 364 Biotechnology and a minimum of 3 credits at the 200-Level or above in specialization electives. [Fall, Spring, Summer] Applied Learning-Internships [6 credits] [40 contact hours]

Biotechnology

BIOT 395 | Research in Applied Biotech

This course requires hands-on research in Biotechnology stressing experimental design, proven methodology, and consistent laboratory work aimed at contributing to an established ongoing research project. Students will be responsible for a research proposal, weekly progress reports to supervising faculty, data collection and analysis, and presentation of work at a meeting and/or in a peer-reviewed journal. Students are required to spend a minimum of six hours per week in laboratory. This course is repeatable up to 2 times. Maximum number of five students per instructor. Permission of instructor is necessary for participation. Prerequisites: Students should be proficient in routine laboratory procedures, have taken at least four science courses including BIOL 111, BIOL 112, CHEM 111, and a 200-level laboratory course. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [7 contact hours]

Culinary Arts, Hospitality, and Tourism

CAHT 001 | Serv Safe Cert Class & Exam(C)

Passage of this exam is required for graduation. Food Handler's certification is issued by The New York State Restaurant Association for a passing score of 75% or higher and is valid for five years. Cost of exam is approximately $40 payable at the time of the exam. This course is S/U graded only. Pre- or Co-requisite: CAHT 103 [Fall, Spring] [0 credits] [3 contact hours]

CAHT 103 | Food Service Sanitation (C)

The study of sanitation and the prevention of food-borne illness as it applies to the purchasing, receiving, storage, preparation, and service of food. Hazard Analysis Critical Control Point (HACCP) plans to insure food safety are analyzed and discussed. Passage of "ServSafe exam" is a graduation requirement. Cost of exam is approximately $40. Co-requisite: CAHT 001 [Fall, Spring] [2 credits] [3 contact hours]

CAHT 104 | Service for Restaurant Profess

Students will learn to identify the process and equipment needed for the professional service of food and beverages. The class includes a study of American, English, French and Russian service. Co-requisite: CAHT 104X [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

CAHT 104X | Service for Restaurant Pro Lab

The lab component for CAHT 104. Co-requisite: CAHT 104 [Fall, Spring] [0 credits] [2 contact hours]

CAHT 105 | Introduction to Food Science

This course introduces the student to all aspects of Food Science as it applies to food production and consumption. By gaining a better understanding of the issues and opportunities in food science, it is expected that students will be better able to choose their career path more wisely and with more interest. This course also involves several off campus field trips which will most likely last longer than the allotted time for the class. It is expected that students take part in at least 2 field trips. If you cannot take part in the field trips, it is highly advisable that you do not register for this course. Lab fee $75. Prerequisite: CAHT 103 [Fall] [3 credits] [5 contact hours]

CAHT 105X | Intro to Food Science Lab

A laboratory experience directly related to the material in CAHT 105 Lecture. Lab fee: $75 Co-requisite: CAHT 105 [Fall] [0 credits] [4 contact hours]

CAHT 111 | Culinary I (C)

The course serves as an introduction to culinary arts. Students will study culinary history, trends and employment opportunities. The course is designed to teach students basic culinary skills that are applicable to any area of food service. Students will study knife handling skills and basic classical cooking methods. Lab fee $125. Co-requisites: CAHT 103 and CAHT 111X [Fall, Spring] Applied Learning-Other [3 credits] [2 contact hours]

CAHT 111X | Culinary I Lab

laboratory experience directly related to CAHT 111 Lecture. Co-requisite: CAHT 111 [Fall,Spring] [0 credits] [4 contact hours]

CAHT 112 | Culinary II (C)

This course will allow the student to build upon the skills developed in CAHT 111. Students will study plate presentation, cost controls, menu conversions, and communication skills. Topics to be covered include advanced knife skills, equipment identification and use, the preparation of classical sauces, further understanding of cooking methods by following recipes, and breakfast cookery. Lab fee $125. Co-requisite: CAHT 112X. Prerequisites: CAHT 111 and CAHT 103 [Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 112X | Culinary II Lab

A laboratory experience directly related the material in CAHT 112 Lecture. Co-requisite: CAHT 112 [Spring] [0 credits] [4 contact hours]

CAHT 116 | Intro to Dairy Processing

This course is an introduction to the dairy processing industry. Students will study the makeup and handling of raw milk, the process of drug-testing of raw milk and pasteurization, bottling, and labeling in the campus Dairy Processing Center. Students will be introduced to the common terminology and equipment used in the process of producing safe and high-quality dairy products in accordance with the NYS Safe Milk Ordinance. Throughout the course, students will be introduced to value-added dairy products such as butter, yogurt, kefir, and soft and hard cheeses, and will learn to conduct a consumer sensory analysis of these products. Course fee of $150 is required. This course is cross-listed with AGBU 116 and ANSC 126. [Spring] Applied Learning-Other [3 credits] [5 contact hours]

CAHT 140 | Mathematics Hospitality Op (C)

Practical application of principles and procedures of mathematics in the hospitality industry. Includes recipe costing and conversion, yield tests, inventory procedures, daily cash reports, payroll and an introduction to financial reports. [Fall, Spring] [3 credits] [3 contact hours]

CAHT 145 | Food Service Purchasing (C)

Study of procurement phases, practices, and systems associated with food and sundry products employed by the hospitality industry to achieve desired goals. In addition to management-related skills, government regulations and concerns are discussed. Product identification, evaluation, selection, storage and handling, yield testing, quality standards, nutritional information, costs, and intended uses will be covered. Additional discussions are devoted to how the market functions and how buyers can more efficiently function within the market place. [Fall, Spring] Applied Learning-Practicum [3 credits] [3 contact hours]

CAHT 147 | Financial Mgt HospitalityOp(C)

The course is designed for practical application of cost theory and principles to the areas of food, beverage and labor cost control. Industry procedures are used to examine each of these areas. The course includes basic accounting and financial reports such as income statements, balance sheets and budgets. Students gain hands-on experience using appropriate computer software. Prerequisite: successful completion of CAHT 140 [Fall, Spring] Applied Learning-Other [3 credits] [4 contact hours]

CAHT 160 | Baking & Pastry I (C)

This course will introduce the student to the history of baking and pastry arts, baking science and technique, ingredients and their functions. Students will prepare a variety of baked goods following baking formulas. Areas of study for this course include breads, quick breads, cookies, cakes, pies and an introduction to cake decorating. Lab fee $125. Co-requisites: CAHT 103 and CAHT 160X [Fall, Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 160X | Baking & Pastry I Lab

A laboratory experience directly related to the material in CAHT 160 Lecture. Co-requisite: CAHT 160 [Fall, Spring] [0 credits] [4 contact hours]

CAHT 210 | Healthy Cooking

Students will be introduced to healthy cooking choices including vegetarian, vegan and lean protein. Emphasis will be placed on trends, techniques and health impact of nutrition-based cooking. Prerequisites: CAHT 111 and CAHT 112. Co-requisite: CAHT 210X [Spring] Applied Learning-Practicum [1 credit] [1 contact hour]

CAHT 210X | Healthy Cooking Lab

This lab course is designed to provide the student with an understanding of the trends, techniques, and health impact of vegetarian cuisine. In lab, students will learn to prepare and serve vegetarian meals, with an emphasis on healthy food items. The lab must be taken with CAHT 210 Healthy Cooking lecture. Prerequisite: CAHT 103 [Spring] Applied Learning-Practicum [2 credits] [4 contact hours]

CAHT 215 | Beverage Management (C)

History of the vintner's trade, the selection and service of alcoholic beverages, bar management including purchasing and cost control, storage, bar controls and licensing. Lab fee $100 for controlled wine tastings. Co-requisite: CAHT 215X. Prerequisite: CAHT 103 [Spring] Applied Learning-Other [3 credits] [2 contact hours]

CAHT 215X | Beverage Management Lab

A laboratory experience directly related to the Material in CAHT 215 Lecture. Co-requisite: CAHT 215 [Spring] [0 credits] [2 contact hours]

CAHT 235 | Catering

The planning, production, supervision, costing and service of meals for special occasions. Lab Fee $125. Co-requisite: CAHT 235X. Prerequisites: CAHT 111, CAHT 140, and CAHT 145 [Fall, Spring] Applied Learning-Practicum [3 credits] [1 contact hour]

CAHT 235X | Catering Lab

A laboratory experience directly related to the material in CAHT 235 Lecture. Co-requisite: CAHT 235 [Fall,Spring] [0 credits] [6 contact hours]

CAHT 247 | Menu Planning/Merchandising(C)

This course is designed to introduce students to various types of menus for food service operations. Nutritional, economic, and aesthetic values are incorporated into written menu presentations. Merchandising and promotional techniques are included. This course also evaluates facility design and layout. Emphasis is placed on space allocation, developing basic production work flow, and equipment selection. Prerequisite: CAHT 140 [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

CAHT 249 | Menu Planning, Purch &Cost Con

This course provides an introduction to menu planning, purchasing, cost control functions, and computer applications. Emphasis will be on the procedures for purchasing, inventory procedures, menu development, and menu sales analysis. Prerequisite: CAHT 111 [Spring] Applied Learning-Other [3 credits] [4 contact hours]

CAHT 255 | Prin Mgmt for Service Busi (C)

This course teaches students the principles of management. Topics include the study of management theories, leadership styles, workplace diversity, communication styles and techniques, motivation theories and techniques; human resource management including selection, training, discipline and performance appraisals; planning, organizing, decision making and problem solving; time management and labor law. The student will create a management portfolio and prepare and participate in case studies and role playing exercises. The student will be responsible for conducting research on various management topics. Illustration of the management principles presented in this course come from the hospitality and tourism industry. Prerequisite: CAHT 140 [Fall, Spring] Applied Learning-Research [3 credits] [3 contact hours]

CAHT 260 | Baking and Pastry II

This course is designed to build upon the basic baking skills learned in CAHT 160. Students will study yeast function, artisan bread baking, laminated doughs, savory and dietary baking, an introduction to chocolates. Other topics include plate design, recipe development, and costing methods. Lab fee $125. Co-requisite: CAHT 260X. Prerequisites: CAHT 103, CAHT 145 and CAHT 160 [Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 260X | Baking and Pastry II Lab

A laboratory experience directly related to the material in CAHT 260 Lecture. Co-requisite: CAHT 260 [Spring] [0 credits] [4 contact hours]

CAHT 262 | Garde Manger (C)

The course emphasizes the preparation in cold food techniques and pantry production. Topics include hors d'oeuvres, salads, dressings, sandwiches, cold soups and sauces, pates and terrines, galantines, charcuterie and decorative garnishing skills. Upon completion, students should be able to demonstrate the ACF competencies in the design application of garde manger work including a classical buffet. Lab fee: $125. Co-requisite: CAHT 262X. Prerequisites: CAHT 103 and CAHT 112 [Fall] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 262X | Garde Manger Lab

A laboratory experience directly related to material in CAHT 262 Lecture. Co-requisite: CAHT 262 [Fall] [0 credits] [4 contact hours]

CAHT 264 | International Cuisine (C)

This course describes the role of geography, culture and history on the development of several European and Asian cuisines. Students learn production and presentation techniques of complete menus from different regional cuisines. Emphasis is placed on modern plate and platter presentations and the impact international cuisines have on the foods served in the United States. Lab fee: $125. Co-requisite: CAHT 264. Prerequisite: CAHT 112 or CAHT 132; and CAHT 247 [Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 264X | International Cuisine Lab

A laboratory experience directly related to the material in CAHT 264 Lecture. Co-requisite: CAHT 264 [Spring] [0 credits] [5 contact hours]

CAHT 265 | Commercial Baking

This course is designed to allow students to further develop baking skills. Students will use traditional baking methods to plan, prepare and serve large quantity baked goods, in coordination with campus dining services. Co-requisite: CAHT 265X. Prerequisites: CAHT 103 and CAHT 160 [Fall, Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 265X | Commercial Baking Lab

The lab component to CAHT 265 lecture. Co-requisite: CAHT 265 [Fall, Spring] [0 credits] [4 contact hours]

CAHT 266 | American Cuisine (C)

The importance of regional and ethnic influences in American cooking styles. Preparation and demonstration of complete practice menus. The application of basic cooking principles to the preparation of these menus. Lab fee $125. Co-requisite: CAHT 266X. Prerequisite: CAHT 112 or CAHT 132 [Fall, Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 266X | American Cuisine Lab

A laboratory experience directly related to material in CAHT 266 Lecture. Lab fee: $125. Co-requisite: CAHT 266 [Fall,Spring] [0 credits] [5 contact hours]

CAHT 268 | Chinese & Asian Cuisine (C)

Preparation and demonstration of meals using Asian goals, cooking techniques, food, and equipment. Students will learn to distinguish between the cuisines of China, Japan, Korea, India, Thailand, Vietnam, Indonesia, and Phillipines. Also, they will explain how the culture and history effects those cuisines. Lab fee of $100 is required. Prerequisite: CAHT 103 [Fall, Spring] Applied Learning-Other [3 credits] [5 contact hours]

CAHT 270 | Restaurant Practicum

The planning, production, service and supervision of meals served in the campus restaurant, American Heritage. Emphasis is on a la carte restaurant service. Students will further develop and apply the knowledge gained in related courses. Prerequisites: CAHT 111, CAHT 140, CAHT 145; and CAHT 112 or CAHT 132 [Fall, Spring] Applied Learning-Practicum [3 credits] [40 contact hours]

CAHT 275 | Practicum in Management System

Field work in the industry under the direct supervision of the manager or department head and coordinated by the faculty. Students must furnish transportation. Permission of the instructor. Second-year students only. Applied Learning-Practicum [3 credits] [3 contact hours]

CAHT 290 | Special Project

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Prerequisite: Culinary Arts, Hospitality and Tourism major with second-year status and in good academic standing. Program guidelines must be followed. [Fall, Spring] [3 credits] [3 contact hours]

CAHT 290A | Special Project

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Prerequisite: Culinary Arts, Hospitality and Tourism major with second year status and in good academic standing. Program guidelines must be followed. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

CAHT 290B | Special Project

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Prerequisite: Culinary Arts, Hospitality and Tourism major with second year status and in good academic standing. Program guidelines must be followed. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

CAHT 290C | Special Project

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Prerequisite: Culinary Arts, Hospitality and Tourism major with second year status and in good academic standing. Program guidelines must be followed. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

CAHT 302 | Dairy Processing Technology

In this course, concepts learned in Applied Food Science and elective courses will synergistically be applied to exploration of value-added food production in the dairy industry. Students will receive hands-on experiential education in the scientific principles involved in and the technology required for the production of dairy products including processed fluid milk, cheese, yogurt and ice cream. The scientific components of this course will be treated as natural yet more focused extensions of those taught in Applied Food Science. The processing procedures and technologies, sanitation inputs and food safety parameters used a both large and small scales will be explored in both the classroom setting and through site visits to a variety of firms engaged in multiple facets of the industry. Concepts will also be linked to food science fundamentals taught in CAHT 103 and CAHT 105 so that students understand the critical relationships between dairy farm management and value-added product characteristics. In lab, instructors will utilize the fluid milk and cheese processing equipment and the dairy production facilities on campus to illustrate scientific and technological concepts taught in lecture sections. Further, industry partners will conduct intensive hands-on lab sessions with dairy processing technologies in a wide variety of operations. Co-requisite: CAHT 302X Prerequisite: CAHT 105 or CAHT 103. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

CAHT 302X | Dairy Processing Technology Lab

In this lab, concepts learned in Applied Food Science and elective courses will synergistically be applied to exploration of value-added food production in the dairy industry. Students will receive hands-on experiential education in the scientific principles involved in and the technology required for the production of dairy products including processed fluid milk, cheese, yogurt and ice cream. The scientific components of this course will be treated as natural yet more focused extensions of those taught in Applied Food Science. The processing procedures and technologies, sanitation inputs and food safety parameters used a both large and small scales will be explored in both the classroom setting and through site visits to a variety of firms engaged in multiple facets of the industry. Concepts will also be linked to food science fundamentals taught in CAHT 103 and CAHT 105 so that students understand the critical relationships between dairy farm management and value-added product characteristics. In lab, instructors will utilize the fluid milk and cheese processing equipment and the dairy production facilities on campus to illustrate scientific and technological concepts taught in lecture sections. Further, industry partners will conduct intensive hands-on lab sessions with dairy processing technologies in a wide variety of operations. Course fee of $110 is required. Co-requisite: CAHT 302 Prerequisite: CAHT 105 or CAHT 103. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

CAHT 304 | Brewing Science

This course focuses on the production of beer. Different styles of beer will be discussed. Choices of yeast, grains, hops, flavorings, and their impact on recipe development will be considered. Water chemistry and its impact on beer production will be presented. Student will be exploring these concepts in a hands-on brewing environment on a small scale. As part of this course, students will be expected to demonstrate CIP (Clean-in-Place) procedures, proper sanitation and safety techniques. Sensory analysis of various styles of beers will be conducted. Course fee of $125 is required. Co-requisite: CAHT 304X, Pre-requisite: CAHT 103, 215, CHEM 214 (with a C- or better), or permission of the instructor. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

CAHT 304X | Brewing Science Lab

This course is a one credit laboratory designed to accompany lecture topics covered in CAHT 304- Brewing Science. Laboratory will met five times during the semester for six hours at a time. Students will be responsible for all facets of brewing with particular emphasis on cleanliness and sanitation. Co-requisite: CAHT 304 [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

CAHT 305 | Food Science II

This course builds upon the knowledge gained in Food Science I as it applies to food production and consumption. Students will gain an understanding of food science as it pertains to food preservation, brewing, and cheese making. This course also involves several off campus field trips which will most likely last longer than the allotted time for the class. It is expected that students take part in at least 2 field trips. If you cannot take part in the field trips, it is highly advisable that you do not register for this course. Lab fee $75. Prerequisites: CAHT 103 and CAHT 105 [Spring] [3 credits] [5 contact hours]

CAHT 306 | Oenology

This course focuses on the production of wine. Different styles of wine will be discussed. Choices of grapes, and aging conditions will be considered. Soil aspects and "terroir" will be considered. Students will be exploring these concepts in hands-on wine-making environment on a small scale. As part of this course, students will be expected to demonstrate proper sanitation and safety techniques. Sensory analysis of wine varietals will be conducted. Course fee of $125 is required. Co-requisite: CAHT 306X. Pre-requisite: CAHT 103, CAHT 215, or permission of instructor. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

CAHT 306X | Oenology Lab

This course focuses on the production of wine. Different styles of wine will be discussed. Choices of grapes, and aging conditions will be considered. Soil aspects and "terroir" will be considered. Students will be exploring these concepts in hands-on wine-making environment on a small scale. As part of this course, students will be expected to demonstrate proper sanitation and safety techniques. Sensory analysis of wine varietals will be conducted. Co-requisite: CAHT 306 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

CAHT 307 | Distilled Beverages

This course focuses on the production of distilled beverages. Different styles of distilled, fermented beverages will be discussed. Choices of materials for distillation and aging conditions will be considered. Students will be exploring these concepts in a hands-on environment on a small scale. As part of this course, students will be expected to demonstrate proper sanitation and safety techniques. Sensory analysis of distilled beverages will be conducted. Course fee of $110 is required. Co-requisite: CAHT 307X. Prerequisite: CAHT 103 and CAHT 215 or permission of instructor. [Spring] Applied Learning-Other [1 credit] [1 contact hour]

CAHT 307X | Distilled Beverages Lab

This course focuses on the production of distilled beverages. Different styles of distilled, fermented beverages will be discussed. Choices of materials for distillation and aging conditions will be considered. Students will be exploring these concepts in a hands-on environment on a small scale. As part of this course, students will be expected to demonstrate proper sanitation and safety techniques. Sensory analysis of distilled beverages will be conducted. Co-requisite: CAHT 307 [Spring] Applied Learning-Other [2 credit] [4 contact hours]

CAHT 308 | Cider, Mead and Other Beverages

This course focuses on the production of beverages beyond those commonly thought of when one hears the term "fermented'. Different styles of fermented beverages will be discussed. Choices of materials for preparing beverages such as cider, mead, or ginger beer will be considered. Students will be exploring these concepts in a hands-on environment on a small scale. As part of this course, students will be expected to demonstrate proper sanitation and safety techniques. Co-requisite: CAHT 308X. Pre-requisite: CAHT 103 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [1 contact hour]

CAHT 308X | Cider, Mead and Other Beverages Lab

This course focuses on the production of beverages beyond those commonly thought of when one hears the term "fermented". Different styles of fermented beverages will be discussed. Choices of materials for preparing beverages such as cider, mead, or ginger beer will be considered. Students will be exploring these concepts in a hands-on environment on a small scale. As part of this course, students will be expected to demonstrate proper sanitation and safety techniques. Sensory analysis of relevant beverages will be conducted. Co-requisite: CAHT 308 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [1 credit] [2 contact hours]

CAHT 309 | Advanced Topics in Food and Fermentation

This course will focus on the production and use of a wide range of fermented foods. Many foods are produced through fermentation. Soy sauce, bread, poi, teas, cheese, yogurt, pickles, and dry-cured meats are all examples of the types of foods that may be produced depending on availability, season, and instructor/student preference. Course fee of $75 is required. Co-requisite: CAHT 309X. Pre-requisite: CAHT 103, BIOL 219, or permission of instructor. [Fall] Applied Learning-Other [1 credit] [1 contact hour]

CAHT 309X | Advanced Topics in Food and Fermentation Lab

This laboratory will focus on the production and use of a wide range of fermented foods. Many foods are produced through fermentation. Soy sauce, bread, poi, teas, cheese, yogurt, pickles, and dry-cured meats are all examples of the types of foods that may be produced depending on availability, season, and instructor/student preference. Co-requisite: CAHT 309 [Fall] Applied Learning-Other [2 credits] [4 contact hours]

CAHT 310 | Customer Service (C)

This course is the study of customer service in a variety of industries. Course is designed to acquaint students with the functions and activities required for managing and providing excellent customer service in any industry. Topics will include providing excellent customer service, approaches to customer retention, effective customer complaint strategies, the importance of guest service, electronic customer service, understanding service recovery and how to develop a customer service training program for a specific industry. Prerequisite: CAHT 255 or BADM 249, or permission of the instructor. [Fall, Spring] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

CAHT 312 | Food Allergens

An evaluation of food allergens as they relate to the health and safety of consumers. Study the makeup of allergens in our food system and investigate how allergens affect the human body. Investigate how to recognize an allergen, how to replace a potential allergen in a prepared food, how to prevent an allergic reaction as well as how to handle an emergency response to an allergic reaction. Coursework includes ServSafe Allergen Certification. Prerequisite: CAHT 103 or consent of the instructor [Spring] Applied Learning-Other [2 credits] [2 contact hours]

CAHT 313 | Artisan Dairy Products

This course will examine the value-added products originating from a variety of fluid milks. Students will develop recipes and work with accepted industry practices to develop and potentially prepare artisan products such as cheese, yogurt, frozen dairy, and drinkable milk products. The class will cover HACCP procedures for dairy processing, inventory and equipment management, and market research, as well as customer demographics and trends. Students will travel to various farm businesses and manufacturers to learn about the various products created using fluid milk. Students will need to adjust their schedules to accommodate several field trips. Prerequisite: CAHT 113 or by permission of instructor. Co-requisite: CAHT 313X [Fall] Applied Learning-Research [3 credits] [2 contact hours]

CAHT 313X | Artisan Dairy Products Lab

A laboratory experience directly related to the material in CAHT 313 lecture. Course fee of $110 is required. Co-requisite: CAHT 313 [Fall] [0 credits] [2 contact hours]

CAHT 315 | Adv Pastry Design & Desserts

Students will learn about the diversity and multitude of new tools, equipment, and availability of reasonably priced ingredients emerging for the baking industry. Students will develop a comprehensive knowledge of the use and application of new industry trends. Lectures will emphasize the ingredients, tools, techniques, and skills required in making pastry and desserts. In teams, students will develop and plan the production of recipes assigned in lab. Strong emphasis will be placed on advanced techniques including, but not limited to composition desserts, buffet platters, chocolate, sugar work, design, and cost. Evaluations will include written examinations, research, and final practicums in hot and cold desserts, and buffet pastry platter including piece montee. Lab fee of $125 is required. Co-requisite: CAHT 315X. Prerequisites: CAHT 103, CAHT 140, CAHT 145, CAHT 160, CAHT 111, and CAHT 112. [Spring] Applied Learning-Other [4 credits] [2 contact hours]

CAHT 315X | Adv Pastry Design & Desserts Lab

A laboratory experience directly related to the material in CAHT 315 Lecture. Co-requisite: CAHT 315 [Spring] [0 Credits] [5 contact hours]

CAHT 332 | Advanced Food Production

This upper-level capstone course is designed to integrate elements of food production, foodservice management, and current industry trends. Students will be expected to participate in foodservice functions which might occur outside of scheduled class time. Lab fee $125. Co-requisite: CAHT 332X. Prerequisite: CAHT 270 [Fall] Applied Learning-Creative Works [3 credits] [2 contact hours]

CAHT 332X | Advanced Food Production Lab

A laboratory experience directly related to the material in CAHT 332 lecture. Co-requisite: CAHT 332. [Fall] [0 credits] [4 contact hours]

CAHT 335 | Advanced Catering Management

This course is designed to further expose and build upon the functions and activities required for operating an on- or off-premise catering business. It will cover such topics as booking and sales techniques, commissary/distribution systems, financial management, insurance/licensing, contract development, menu design, marketing, laws, and interfacing departments within an organization. Students will be expected to participate in catered functions which might occur outside of scheduled class time. Lab fee: $125. Co-requisite: CAHT 335X. Prerequisite: CAHT 270 [Fall, Spring] Applied Learning-Practicum [3 credits] [3 contact hours]

CAHT 335X | Advanced Catering Management Lab

A laboratory experience directly related to the material in CAHT 335 Lecture. Co-requisite: CAHT 335 [Fall, Spring] [0 Credits] [2 contact hours]

CAHT 347 | Facility Operations Management

This course is designed to give students an appreciation for the role of facilities management in the life of a hospitality enterprise. It will cover topics relatedly to the design and maintenance of grounds, buildings, fixtures, and equipment found in a typical restaurant or food service business. Students will acquire knowledge, skills, and abilities equivalent to those of a hospitality manager whose responsibilities include facilities oversight. Guest speakers and other learning opportunities will be provided when possible. [Spring] [3 credits] [4 contact hours]

CAHT 348 | Sensory Evaluation

This course focuses on the sensory evaluation of food products. In this course, students will gain experience in the application of their senses as a means of analysis. Students will learn theory in the classroom and apply it in the co-requisite laboratory. Students will explore the physiological and psychological aspects related to sensory experiences. Analytical instruments (electronic noses and tongues) will also be discussed. Co-requisite: CAHT 348X. Pre-requisite: MATH 125, CAHT 215, or permission of instructor. [Fall] Applied Learning-Other [2 credits] [2 contact hours]

CAHT 348X | Sensory Evaluation Lab

This laboratory explores the “hands-on” aspects of CAHT 348. Students will apply the classroom concepts while devising an evaluation protocol, conducting data collection and data processing (analysis). Results from the experiments will be written as reports. As part of this process, students will be applying statistical methods. Course fee of $90 is required. Co-requisite: CAHT 348 [Fall] Applied Learning-Other [1 credit] [2 contact hours]

CAHT 350 | Food and Culture

Students in this course will learn about the impact that food has had on society - from historical, religious, cultural, political, economic, environmental, and geographic approaches to food within local, urban, and global contexts. This class will examine the ways in which individuals, communities, and societies produce, distribute, and consume food. Students will learn about the social, economic, cultural, and psychological factors that have influenced food production and consumption practices and patterns. There will be an emphasis on food systems, from local to international, and their impact on society.

Students will gain an understanding of their role as culinary professionals on their impact on society. Prerequisite: ENGL 101 [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

CAHT 355 | Food and the Media

Students will learn about the effects of the media on consumer buying patterns and how food professionals from both agriculture and culinary backgrounds can use the power of the media to their advantage. The class will cover what information the media responds to, how to develop "news" content for positive media exposure, how to disseminate that information, and how to build recognition with media professionals. The class will become familiar with significant media professionals and the stories that they cover. Students will learn how to portray products for live demonstrations of food photography with guest photographers/videographers, stylists, and chefs. Students will learn about how to use social media and internet exposure to maximum effect. Public relations professionals will be invited as guest speakers to address students on developing messages that can break through and be noticed by the media. Prerequisites: ENGL 101 and COMM 108, or permission of the instructor. [Spring] [3 credits] [3 contact hours]

CAHT 368 | Asian Cuisine

Asian Cuisine will expose the student to the cuisines of China, Korea, Japan, Indonesia, Thailand and India. The course will include the study of ingredients, equipment, tools, menu, cookery and their principle techniques. The course will utilize traditional methods as well as more modern techniques and methods to reinforce Asian cookery, flavors and food presentation. Prerequisite: CAHT 103 [Spring] [3 credits] [5 contact hours]

CAHT 370 | Farm to Table Restaurant Mgmt

This course is designed to give students an integrated understanding of the food and agricultural industry and introduce the farm to table concepts of integrated food systems. Students will have the opportunity to celebrate the foods and flavors of each season by utilizing fresh ingredients from local farms. The student will build upon prior learning in CAHT 215 Beverage Management and CAHT 270 Restaurant Practicum to plan and prepare dinners for service in The Rolling Hills Bistro. Students will manage dinner service for each event, which will include procurement of local ingredients and menu planning, dinner preparation and service, basic cost accounting for each meal to determine profitability, planning of appropriate wine and beer pairing and service, and cash account handling with the use of a POS system. This course will also cover a broad array of sustainability issues with emphasis on on-site visits with local practicing farmers which will take place on days where there is no dinner event planned. Course fee of $135 is required. Prerequisites: CAHT 215 and CAHT 270. [Fall, Spring] Applied Learning-Practicum [3 credits] [6 contact hours]

CAHT 375 | Taste, Trends and Technology

This course emphasizes sensory analysis and presents a variety of modern culinary industry trends and techniques. The class will discuss the role of the five senses, the five basic tastes (salty, sweet, sour, bitter and umami), seasonings, texture, temperature, and balance. The class will use modern techniques and equipment found in today's professional kitchens and review the principles of culinary science and their applications in modern foodservice through lectures, discussions, and extensive hands-on kitchen work. The effects of these factors on the sensory properties and enjoyment of a meal, and the fundamentals of objective evaluation of flavor will also be covered. Special emphasis will be placed on sanitation in regards to vacuum packing. Students will develop a HAACP plan for sous-vide dish. The class will be responsible for preparing and serving up two dinners which may be scheduled outside of normal class time. Co-requisite: CAHT 375X. Prerequisites: CAHT 215, CAHT 103, CAHT 111 and CAHT 112; minimum of 60 credits. [Spring] Applied Learning-Other [3 credits] [1 contact hour]

CAHT 375X | Taste, Trends and Technology Lab

A lab experience directly related to CAHT 375 lecture. Co-requisite: CAHT 375 [Spring] [0 Credits] [4 contact hours]

CAHT 380 | Internship Orientation

Culinary Arts Management BBA students will be introduced to acceptable methods of establishing an internship. Successful and less than successful activities noted by previous interns will be evaluated. Interview skills will be enhanced and agreements developed. This course is intended for students planning to intern the following semester. Prerequisite: Completion of CAHT 300-level Major Field Requirements [Fall, Spring] [1 credit] [1 contact hour]

CAHT 390A | Special Projects CAHT

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Culinary Arts student. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

CAHT 390B | Special Projects CAHT

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Culinary Arts student. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

CAHT 390C | Special Project CAHT

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Culinary Arts student. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

CAHT 415 | Retail Bakery Sales Management

This capstone course brings together all prior learning about baking and pastry with retail sales and customer service. This course is the study of retail bakery production and sales in which students will learn how to prepare and package baked goods for retail sales as well as operate a retail sales unit. Students will work approximately 3 hours weekly in the bakery lab preparing goods for sale as well as work a rotational schedule through the campus retail unit managing the sales and service of the bakery. Co-requisite: CAHT 415X. Prerequisites: CAHT 103 and CAHT 260 [Fall, Spring] [3 credits] [1 contact hours]

CAHT 415X | Retail Bakery Sales Management Lab

A lab experience directly related to CAHT 415 lecture. Co-requisite: CAHT 415 [Spring] [0 Credits] [6 contact hours]

CAHT 480 | Internship in Culinary Arts

This course is S/U graded only. Prerequisite: 90 credit hours and a 2.0 overall GPA. [Fall, Spring, Summer] Applied Learning-Internship [9 credits] [9 contact hours]

CAHT 485 | Internship Reporting

To be taken concurrently with CAHT 480. Applied Learning-Internship [3 credits] [3 contact hours]

Canine Training and Management

CANI 227 | Canine Cooperative Care

This class is an introduction to cooperative care training- where dogs learn to actively participate in their own health care behaviors. This training reduces stress for dogs allowing for more efficient, effective, and safer care by owners, veterinarians, and groomers. Students will create management and training plans for dogs struggling with behaviors like nail trimming, tooth brushing, and receiving injections. The lab portion of the class will complement material covered in the lecture. Co-requisite: CANI 227X. Prerequisite: ANSC 142 with a C- or above. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

CANI 227X | Canine Cooperative Care Lab

This class is an introduction to cooperative care training- where dogs learn to actively participate in their own health care behaviors. This training reduces stress for dogs allowing for more efficient, effective, and safer care by owners, veterinarians, and groomers. Students will create management and training plans for dogs struggling with behaviors like nail trimming, tooth brushing, and receiving injections. The lab portion of the class will complement material covered in the lecture. Co-requisite: CANI 227. Prerequisite: ANSC 142 with a C- or above. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

CANI 228 | Canine Engagement and Rewards

Engagement is the foundation for all dog training. When we train for engagement, we can learn to become our dog's most important motivator. This course will focus on techniques on how to gain a dog's focus with multiple types of reward

systems and engagement techniques Prerequisites: ANSC 142 and ANSC 142X with a C- or above [Fall, Spring] Applied Learning-Other [1 Credit] [2 Contact Hours]

CANI 399 | Introduction to Primatology

This course will familiarize students with the range of extant primates including evolutionary relationships and taxonomy. The 'rules' and constraints on nonhuman primate social structure, and the diversity and flexibility of primate social behavior, will be introduced. The course will discuss ecological influences and constraints on social structure and behavior, as well as a more detailed examination of different types of behaviors (e.g. aggression, dominance/status-related behaviors, reproduction) and the functions of these behaviors within primate social groups. Prerequisites: ANSC 142 and 142X or ANSC 111 and 111X or ANSC 222 and 222X with a C- or above and Jr/Sr status or permission of the instructor. [Fall, Spring] Applied Learning-Research [3 credits] [3 contact hours]

CANI 399A | Animal Sheltering

Lecture and field work will explore applied canine behavioral training and management within animal sheltering. Weekly lessons will take place at one of three partnering shelters, on a rotating schedule. Through field work and assignments, students will identify, evaluate, and analyze best practices within the animal sheltering system. Additionally, students will have the opportunity to receive a Certificate of Completion for the Fear Free Shelter course. Prerequisites: ANSC 364, ANSC 364X, ANSC 144, and two semesters ANSC 242 with a grade of C- or above. [Fall] Applied Learning-Other [3 credits] [5 contact hours]

CANI 399B | Canine Client Relations

This course provides an introduction to the essential principles of working with clients and their dogs. Students will develop and refine practical skills through hands-on activities, engaging with real clients and dog owners with their dogs in both group and private session formats. Emphasis will be placed on navigating challenges associated with diverse personalities, managing dynamics in one-on-one and group settings, and recognizing and preventing professional burnout in the field of canine behavior and training. Additionally, students will learn how to write effective training plans and design homework assignments that support client success and reinforce positive behavior in dogs. Prerequisites: ANSC 142, ANSC 142X, and ANSC 242 with a grade of C- or above, and Jr/Sr status or permission of instructor. [Fall, Spring] Applied Learning–Other [1 credit] [2 contact hours]

CANI 399C | Conservation Detection Dogs

This course provides hands-on experience in imprinting and handling dogs in conservation detection in both indoor and outdoor settings. Students will learn about assessing dogs for conservation work, foundational imprinting techniques, odor recognition training, and proper reinforcement methods to develop reliable detection behaviors. The course covers real-world deployment scenarios, including search patterns and environmental challenges. Prerequisites: ANSC 142, ANSC 142X, CANI 228, and ANSC 242 with a grade of C- or above [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

CANI 430 | Animal Cognition

This course examines topics with animal cognition and its relevance to our understanding of animals. Topics include subjects such as learning, reasoning, memory, and communication. Cognition with a wide range of animal species is covered. Prerequisites: ANSC 142 and 142X, or ANSC 111 and 111X, or ANSC 222 and 222X with a grade of C- or above and Jr/Sr status or permission of the instructor [Fall, Spring] Liberal Arts/Sciences Elective, Lib Art/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

Chemistry

CHEM 101 | Introductory Chemistry

The course will introduce students to chemical principles as they relate to real-world applications in society and the environment. The following topics will be covered: units and measurement, classification and properties of matter, energy in chemical changes, bonding interactions in physical and chemical processes. Specialized topics include acids and bases, oxidation and reduction, organic chemistry, materials science, and environmental issues. A previous background in chemistry is not assumed. The course is useful for preparing students conceptually for CHEM 111 and satisfying a science elective for nonscience majors. Course fee of $25 is required. Co-requisites: CHEM 101X and CHEM 101Y [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

CHEM 101X | Introductory Chemistry Lab

The laboratory activities are designed to provide students with hands-on experience with general laboratory experimentation methods, while at the same time examining the practical application of chemistry in common, everyday substances. Students will learn basic lab safety, measurement and observation skills, data collection and analysis techniques. Co-requisites: CHEM 101 and CHEM 101Y [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [2 contact hours]

CHEM 101Y | Introductory Chemistry Recitation

The recitation component for CHEM 101. Co-requisite: CHEM 101 [Fall, Spring] [0 credits] [1 contact hour]

CHEM 110 | Forensic Science

A comprehensive analysis of work in a crime laboratory, including theory and methods. Includes ballistics, examination of questioned documents, criminal analysis and instructional analysis. Laboratory topics will range from traditional fingerprinting and blood samples to leading edge topics like chromatography, DNA "fingerprinting" and toxicology. Recommended for the second semester or later. Prerequisite: High school biology or high school chemistry. Course fee of $25 is required. Co-requisite: CHEM 110X [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Practicum [2 credits] [2 contact hours]

CHEM 110X | Forensic Science Lab

The lab component for CHEM 110 Forensic Science. Co-requisite: CHEM 110. [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Practicum [1 credit] [2 contact hours]

CHEM 111 | General Chemistry I (C)

The first semester of a two-semester university-level general chemistry course. This first part will focus on understanding the basic principles of chemistry and why matter behaves as it does. Topics include: mathematics of chemistry, nomenclature, chemical reactions, stoichiometry, solutions, gases, thermochemistry, atomic structure, chemical bonding and molecular structure. Homework components require access to a computer the internet. Course fee of $25 is required. Prerequisites: A score of 75 or higher on the New York State Regents' exam in high school chemistry, or CHEM 101 with a grade of "C" or better, and placement in MATH 111 or higher, or permission of the instructor; Co-requisites: CHEM 111Y and CHEM 111X [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

CHEM 111X | General Chemistry I Lab

Laboratory experiments designed to accompany the lecture topics presented in CHEM 111. Emphasis on observation, interpretation, measurement, safety, record keeping, data analysis and lab skills. It is highly recommended that this course be taken concurrent with CHEM 111. Co- or prerequisites: CHEM 111 and CHEM 111Y [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

CHEM 111Y | General Chemistry I Recitation

The recitation component for CHEM 111. Co-requisite: CHEM 111 [Fall, Spring] [0 credits] [1 contact hour]

CHEM 112 | General Chemistry II (C)

CHEM 112 is a continuation of CHEM 111. This course with focus on understanding the world around us by applying the principles studied in CHEM 111. Topics include: interparticle forces, states of matter, solutions, chemical equilibrium, acids and bases, electrochemistry, thermodynamics, organic chemistry, and biochemical molecules. Course fee of $25 is required. Prerequisites: completion of CHEM 111 with a grade of "C-" or higher; MATH 111 with a grade of "C-" or higher or placement of MATH 112 or higher; or permission of the instructor; and co-requisites: CHEM 112Y and CHEM 112X [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

CHEM 112X | General Chemistry II Lab

Laboratory experiments designed to accompany the lecture topics presented in CHEM 112. Emphasis on observation, interpretation, measurement, safety, record keeping, data analysis and lab skills. Prerequisite: CHEM 111X; and co-requisite: CHEM 112 [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

CHEM 112Y | General Chemistry I Recitation

The recitation component for CHEM 112. Co-requisite: CHEM 112 [Fall, Spring] [0 credits] [1 contact hour]

CHEM 214 | Intro to Fermentation Science

This course is designed to introduce the field of Fermentation Science to the student with a general biology and chemistry background. The course will provide an overview of the field ranging from food and beverage production (e.g. cheese, wine, and tea) to industrial production of value-added materials (e.g. pharmaceuticals and chemical reagents) to the processing and mitigation of waste materials from a range of sources (e.g. agricultural and industrial). We will view fermentation from a modern perspective of generating value-added molecules through enzyme or microbial catalysis. Concepts of equilibria, kinetics, thermodynamics, and enzyme basics will be presented in the context of fermentation science. Prerequisite: BIOL 111/111X, CHEM 111/111X, and CHEM 112/112X with grades of C- or better, or permission of the instructor [Spring] Gen Ed Sciences, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

CHEM 216 | Water Chemistry

We'll look first at the physical and chemical properties of water and what forces account for its ability to dissolve other chemicals. Next we'll examine which natural chemical and biological substances and where these substances come from, how we can measure their concentrations, how they affect the quality of water and what that means to a sustainable environment. Course fee of $25 is required. Prerequisites: CHEM 111 or permission of instructor. Co-requisite: CHEM 216X [Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

CHEM 216X | Water Chemistry Lab

Emphasizes the Standard Methods for determining water quality. Students individually select a body of water for study and each week test for a different water quality parameter. Tests include: alkalinity, pH, hardness, sodium, iron, chloride, phosphate, ammonia, nitrate, solids and coliform bacteria. Both wet-bench and instrumental methods are used in testing for natural and manmade pollutants. Results are summarized in an end-of-semester term report. The lab is writing intensive and will emphasize keeping a scientific notebook. Prerequisite: CHEM 111X or permission of instructor; and co-requisite: CHEM 216 [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

CHEM 231 | Organic Chemistry I

Introduction to structure, synthesis and reactivity of alkanes, akenes, alkynes, alcohols and ethers stressing the underlying principles of theory, mechanism, stereochemistry and spectroscopy. Recommended for pre-medical and veterinary students and science majors. Course fee of $25 is required. Prerequisites: CHEM 111/CHEM 111X and CHEM 112/CHEM 112X. Co-requisites: CHEM 231X/CHEM 231Y. [Fall] Liberal Arts/Sciences Elective [3 credits] [4 contact hours]

CHEM 231X | Organic Chemistry I Lab

Use of micro and mini scale techniques to synthesize and characterize organic compounds using evaporation, extraction, recrystallization, reflux and chromatography. Applications of infrared spectroscopy, gas chromatography, melting and boiling point analysis, refractive index, and optical rotation are used to identify hydrocarbons. Co-requisites: CHEM 231/CHEM 231Y [Fall] Liberal Arts/Sciences Elective, Applied Learning-Other [2 credits] [4 contact hours]

CHEM 231Y | Organic Chemistry I Recitation

The recitation component for CHEM 231. Co-requisite: CHEM 231 [Fall, Spring] [0 credits] [1 contact hour]

CHEM 232 | Organic Chemistry II

Continued treatment of topics from Organic Chemistry I, including conjugation, aromaticity and reactivity of other principal organic compounds including aldehydes, ketones, amines, carboxylic acids and their derivatives. Introduction to carbohydrates, proteins, lipids and nucleic acids. Course fee of $25 is required. Prerequisites: CHEM 231 and CHEM 231X; and co-requisites: CHEM 232X/CHEM 232Y. [Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

CHEM 232X | Organic Chemistry II Lab

Continued study of the methods, techniques, syntheses and instrumentation of representative classes of organic compounds. Prerequisites: CHEM 231 and CHEM 231X; and co-requisite: CHEM 232/CHEM 232Y [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [2 credits] [4 contact hours]

CHEM 232Y | Organic Chemistry I Recitation

The recitation component for CHEM 232. Co-requisite: CHEM 232 [Spring] [0 credits] [1 contact hour]

CHEM 244 | Instrumental Analysis

This course introduces students to modern analytical instruments and the application of chemical instrumentation to real-world problems, in particular those pertaining to the environment. How do they work, how do you use them, what do they tell you, how should they be maintained? Instrumentation studied includes: visible, ultraviolet, infrared, atomic absorption, fluorescence, and nuclear magnetic resonance spectroscopy; gas and liquid chromatography. Course fee of $25 is required. Prerequisite: CHEM 111 and CHEM 111X. Co-requisite: CHEM 244X [Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

CHEM 244X | Instrumental Analysis Lab

Extensive hands-on experience with the instruments discussed in CHEM 244 lecture. Emphasis is on instrument operation skills, troubleshooting, record keeping and data analysis. The experiments involve environmental, industrial and consumer samples. Co-requisite or prerequisite: CHEM 244. [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [2 credits] [4 contact hours]

CHEM 290A | Spec Projects Chemistry

Students will carry out research operations on specific topics related to the various fields of chemistry. Special emphasis will be placed on the methods of conducting research, investigations on the utilization of laboratory techniques and analytical procedures, including the use of modern instrumental analytical techniques. Students will prepare formal reports for oral presentation to faculty. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Research [1 credit] [1 contact hour]

CHEM 290B | Spec Projects Chemistry

Students will carry out research operations on specific topics related to the various fields of chemistry. Special emphasis will be placed on the methods of conducting research, investigations on the utilization of laboratory techniques and analytical procedures, including the use of modern instrumental analytical techniques. Students will prepare formal reports for oral presentation to faculty. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Research [2 credits] [2 contact hours]

CHEM 290C | Spec Projects Chemistry

Students will carry out research operations on specific topics related to the various fields of chemistry. Special emphasis will be placed on the methods of conducting research, investigations on the utilization of laboratory techniques and analytical procedures, including the use of modern instrumental analytical techniques. Students will prepare formal reports for oral presentation to faculty. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Research [3 credits] [3 contact hours]

CHEM 340 | Fermentation Science

This course builds on concepts developed in previous courses relevant to fermentation. Concepts including catalysis, thermodynamics, kinetics, and the use of enzymes or microbes to facilitate fermentation will be explored in greater depth. Prerequisites: MATH 125, BIOL 219/219X with a grade of C- or better, and CHEM 214 with a grade of C- or better, or permission of the instructor. Co-requisite: CHEM 340X. [Spring] [2 credits] [2 contact hours]

CHEM 340X | Fermentation Science Lab

This laboratory accompanies CHEM 340 Fermentation Science. Topics may include fermentation in a laboratory setting, kinetics, conditions of fermentation, isolation of fermentation products, and the analysis of a fermentation product, in order to develop skills relating to relevant biochemistry, separation of products, and the use of analytical techniques. Prerequisites: MATH 125, BIOL 219/219X with a grade of C- or better, and CHEM 214 with a grade of C- or better, or permission of the instructor. Co-requisite: CHEM 340. [Spring] [2 credits] [6 contact hours]

CHEM 350 | Regulation in Industry

This course will emphasize the manufacturing environment in which a fermentation, chemical, or biological scientist is likely to operate in industry. It will cover an overview of regulations of OSHA, FDA, and foreign regulatory agencies. Examination of how to conduct clinical trials, day-to-day operations and final manufacturing will be covered. Included in this regulatory overview will be a consideration of the reporting required of an industrial entity. A field trip may be included in the curriculum which would incur additional cost to the student. Priority for course enrollment will be given to Natural Sciences and Mathematics department majors. Due to the interactive nature of the seminar portion of the course, the course is limited to 29 enrolled students. Prerequisites: a grade of C- or better in BIOL 111/111X, CHEM 111/111X, and MATH 125 or permission of the instructor. This course does not fulfill a Lab Science requirement. [Fall/Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level [3 credits] [3 contact hours]

CHEM 351 | Biochemistry

The structure, function and synthesis of proteins, nucleic acids, carbohydrates and lipids, enzyme kinetics, bioenergetics and introduction to metabolism. Prerequisite: CHEM 111 and CHEM 231 or permission of the instructor. 3 class hours [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

CHEM 390A | Spec Projects Chemistry

Students will carry out research operations on specific topics related to the various fields of chemistry. Special emphasis will be placed on the methods of conducting research, investigations on the utilization of laboratory techniques and analytical procedures, including the use of modern instrumental analytical techniques. Students will prepare formal reports for oral presentation to faculty. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring][1 credit] [1 contact hour]

CHEM 390C | Spec Projects Chemistry

Students will carry out research operations on specific topics related to the various fields of chemistry. Special emphasis will be placed on the methods of conducting research, investigations on the utilization of laboratory techniques and analytical procedures, including the use of modern instrumental analytical techniques. Students will prepare formal reports for oral presentation to faculty. Hours to be arranged. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

CHEM 395 | Topics in Current Research

This course requires hands-on research in the sciences stressing experimental design, proven methodology, and consistent laboratory work aimed at contributing to an established ongoing research project. Students will be responsible for a research proposal, weekly progress reports to supervising faculty, data collection and analysis, and presentation of work at a meeting and/or in a peer-reviewed journal. Students are required to spend a minimum of six hours per week in laboratory. This course is repeatable up to 2 times. Course fee of $120 is required. This course is cross-listed with BIOL 395. Prerequisites: Students should be proficient in routine laboratory procedures, have taken at least four science courses including BIOL 111, BIOL 112, CHEM 111, and a 200-level laboratory course. Maximum number of five students per instructor. Permission of instructor is necessary for participation. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [6 contact hours]

CHEM 480 | Senior Project: Fermentation

This course is part of the capstone sequence of coursework. A student enrolled in CHEM 480 will be engaged on a guided project/internship/co-op supervised by a faculty member on campus, or through mutual agreement with an off-campus employer as an intern, or co-op (a faculty member will serve as an internship advisor). The project will focus on learning new skills while applying the skills gained within the Fermentation Science and Applied Fermentation Programs to real-world situations. Topics may focus on food and beverage related projects, biocatalysis, e.g. fermentation in a pharmaceutical research/development/or manufacturing setting, or in an environment oriented aspect in alignment with a student's chosen advisement track. On- or off-campus, expectations will be set between the advisor/supervisor and the student. Written mid-point and final reports and a final oral report are required. Off-campus internships, or co-ops, may have additional student costs that might include, but are not limited to, transportation to and from the experience site. Prerequisites: completion of BIOL 219 and BIOL 219X with a grade of C- or higher; completion of CHEM 214 with a grade of C- or higher; completion of CHEM 340 and CHEM 340X with a grade of C- or higher; or instructor permission. Additional

prerequisites for internships are: 2.00 GPA overall and a 2.00 GPA in the major, with 90 credits completed toward degree. Contact hours: a minimum of 270 hours over 15 weeks on-campus; a minimum of 270 hours over at least 10 week off-campus. [Fall, Spring, Summer] [6 credits] [6 contact hours]

Information Technology

CITA 110 | Intro to Computer Applications(C)

An introduction to the use of microcomputers and application software. Topics will include microcomputer terminology, hardware system components, disk operating systems, and MS Windows. The student will learn, through hands-on experience, the skills necessary to use windows-based word processing, spreadsheets, and data base systems. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

CITA 112 | Spreadsheet & Database Appl(C)

This course emphasizes the use of advanced concepts in spreadsheet and database applications. Students will gain understanding of concepts and skills required to develop complex business applications. Using software applications such as Microsoft Excel and Microsoft Access to store, organize, and retrieve business information that is critical to decision making. Concepts explored include developing complex business models, interaction with other software applications, and using visual programming tools. Prerequisite: Familiarity with Microsoft Windows, Word, and Power Point or permission of the instructor. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

CITA 115 | Computer Operating Systems (C)

A study of advanced computer operating systems, students will be introduced to the Linux operating system. They will also study the features and functionality of Microsoft Windows operating systems in detail. Topics will include installation, the file system, profiles and policies, security, protocols, internetworking, remote access, printing, and troubleshooting. It will provide an overview of the Windows networking family. Successful completion of this and associated courses will prepare the student for industry certification. Course fee of $45 is required. Co-requisite: CITA 115X [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [2 credits] [2 contact hours]

CITA 115X | Computer Operating Systems Lab

Laboratory experience directly related to the material in CITA 115. Students will install operating systems, create profiles and policies, establish security, setup protocols, interconnect networks, setup remove accessing and printing and carry out troubleshooting. Co-requisite: CITA 115 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [1 credit] [2 contact hours]

CITA 120 | Computer Hardware Concepts (C)

A study of the terminology and concepts associated with computer systems hardware and software. Topics will include: system hardware components, memory organization and management, operating systems, troubleshooting fundamentals, etc. Students will construct PC's, and install, configure, test and troubleshoot system software to apply the various concepts covered in the course. Course fee of $45 is required. Co-requisite: CITA 120X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

CITA 120X | Comp Concepts & Op Systems Lab

Laboratory experience directly related to the material in CITA 120. Students will construct PCs, and install, configure, test and troubleshoot system software to apply the various concepts covered in the lecture. Co-requisite: CITA 120 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [1 credit] [2 contact hours]

CITA 122 | Spreadsheet Application Devel (C)

The importance of spreadsheet applications in business and scientific applications cannot be understated. Microsoft Excel has become the de facto standard of spreadsheet applications. This is a project-based course taught in a hybrid format. Students will acquire an in-depth knowledge of developing spreadsheet applications. Students successfully completing this course will be prepared to develop solutions to a variety of business and/or scientific problems. Students will be required to develop an application that is relevant to their field of study. Students studying Social or Natural Sciences could develop an

application that analyzes data to solve a research question. Students studying Business or Information Systems could develop an application that supports a business project or proposal. Students successfully completing this course would master the skills necessary to pass the Microsoft Certification Exam for Microsoft Excel. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

CITA 130 | Intro to Web Development

This course provides a broad overview of the fundamental concepts and techniques of web development based on a comprehensive web development life cycle. Key web development technologies - Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) - as well as an introduction to JavaScript will be covered. State-of-the-art web technologies and best practices, including responsive web design and "mobile-first" development strategies, will be a primary focus of the course. Students will learn, through hands-on experience, the skills necessary to conceive, plan, design, code, test, and maintain websites suitable for coursework, professional purposes, and personal use. Further, topics and issues in our digital world that are relevant to the emerging web developer will be reviewed, analyzed, and discussed. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

CITA 135 | Python Programming

This course will introduce students to the fundamentals of computer programming and to the Python programming language. Topics will include logic, variables, strings, flow control, loops, tuples, list dictionaries, functions, files and exceptions, and object-oriented programming concepts. Furthermore, this course will prepare students for the study of other advanced programming languages. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

CITA 140 | Intro to Programming (C)

A study of fundamental computer terminology, concepts and problem solving techniques. Emphasis is placed on the development of problem solving skills using a programming language. Students will write, test and debug programs related to appropriate disciplines using computer equipment. Course fee of $45 is required. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

CITA 190 | Linux Operating System (C)

A comprehensive study of the Linux operating system. Students will also examine the history of the development of Linux and its relationship to Unix. Prerequisite: CITA 115 or permission of the instructor. Course fee of $45 is required. Co-requisite: CITA 190X. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

CITA 190X | Linux Operating System Lab

Laboratory experience directly related to the material in CITA 190. Students will use a hands-on approach to learn how to install, configure, and administer Linux-based computers. Co-requisite: CITA 190 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [1 credit] [2 contact hours]

CITA 200 | Introduction to Networking

A first course in computer networking, this course introduces network fundamentals using the OSI (Open Systems Interconnection) model and the TCP/IP (Transmission Control Protocol/Internet Protocol) suite, fundamentals of Ethernet, IP Addressing, and building simple LANs (Local Area Networks). Students will work in teams to design, create, configure, and troubleshoot network systems typically found in a small business. Prerequisite: CITA 115. Co-requisite: CITA 200X. Course fee of $45 is required. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [2 credits] [2 contact hours]

CITA 200X | Introduction to Networking Lab

Laboratory experience directly related to the material in CITA 200. Students will utilize hardware and software to install, configure, and troubleshoot LANs. Co-requisite: CITA 200 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [1 credit] [2 contact hours]

CITA 210 | Visual Programming & Dev Tools

An introduction to development of computer applications using rapid development tools, such as Visual Basic or Visual C++. Emphasis will be on designing and managing graphical user interfaces, procedures, file management, debugging and testing. Prerequisite: CITA 140 or permission of department. Course fee of $45 is required. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

CITA 220 | Systems Analysis (C)

A study of the terminology and concepts associated with computer oriented systems analysis and design. Topics include: problem definition, problem analysis, fact gathering and analysis, interviewing, system design, implementation, testing, and evaluation techniques. Emphasis is placed on the business organization, human relations factors, and case studies. Independent and group projects will be developed. Prerequisites: CITA 115 and CITA 190 or permission of the department. Course fee of $45 is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

CITA 230 | Computer Networks (C)

A follow-up course to CITA 200, this course provides a thorough introduction to the design, installation, management, and troubleshooting server-based networks. Working in a team-oriented environment, students will use various network-based operating systems and application software to create networked solutions to business requirements. Network configuration, security, backup, and recovery are major topics. User rights and privileges, file and device sharing are also covered. Prerequisite: CITA 200 with a grade of C or higher or permission of the department. Co-requisite: CITA 230X. Course fee of $45 is required. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [2 credits] [2 contact hours]

CITA 230X | Computer Networks Lab

A laboratory experience directly related to the material in CITA 230. Students will design, develop, implement and administer computer networks. Co-requisite: CITA 230 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [1 credit] [2 contact hours]

CITA 265 | Web Development II

This course provides a deeper experience with key front-end web development technologies - such as HTML, CSS, and JavaScript - with a focus on the browser as a platform. You will learn, through hands-on training, the skills necessary to code websites and web applications across device types (phone, tablet, PC) using state-of-the-art web development tools and frameworks. Further, additional concepts and tools relevant to web development, such as digital analytics, will be explored. Prerequisite: CITA 130 or permission of the department. Co-requisite: CITA 265X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [2 credits] [2 contact hours]

CITA 265X | Web Development II Lab

Laboratory experience directly related to the material in CITA 265. Students will use front-end web development technologies to create websites, web applications, and solve web development coding challenges. Prerequisite: CITA 130 or permission of the department. Co-requisite: CITA 265 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [1 credit] [2 contact hours]

CITA 280A | Computer Tech Internship

Students may earn credit for approved work experience which is related to the study of computer technology. Maximum of four credits approved toward degree. Prerequisite: Prior consent of department. [Fall, Spring] [1 credit] [contact hours]

CITA 280B | Computer Tech Internship

Students may earn credit for approved work experience which is related to the study of computer technology. Maximum of four credits approved toward degree. Prerequisite: Prior consent of department. [Fall, Spring] [2 credits] [contact hours]

CITA 280C | Computer Tech Internship

Students may earn credit for approved work experience which is related to the study of computer technology. Maximum of four credits approved toward degree. Prerequisite: Prior consent of department. [Fall, Spring] [3 credits] [contact hours]

CITA 280D | Computer Tech Internship

Students may earn credit for approved work experience which is related to the study of computer technology. Maximum of four credits approved toward degree. Prerequisite: Prior consent of department. [4 credits] [contact hours]

CITA 290A | Special Projects

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. This course is repeatable up to 2 times. Prerequisite: Open to second-year students who have completed at least one programming language and have the approval of department. [Fall, Spring] [1 credit] [1 contact hour]

CITA 290B | Special Projects

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. This course is repeatable up to 2 times. Prerequisite: Open to second-year students who have completed at least one programming language and have the approval of department. [Fall, Spring] [2 credits] [2 contact hours]

CITA 290C | Special Projects

An independent or small group study course designed to permit an individual student or a group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Prerequisite: Open to second-year students who have completed at least one programming language and have the approval of department. [Fall, Spring] [3 credits] [3 contact hours]

CITA 305 | JAVA Programming (C)

This course provides a comprehensive introduction to the JAVA programming language, its object-oriented features and the main classes required to build useful Java applications and applets. Java has all of the attributes expected of a modern programming language, such as object orientation, multithreading, and a class library for handling facilities such as the graphical user interface and networking. The course includes a thorough grounding in the language, together with important features such as user interface design, exception handling and multithreading. Prerequisite: CITA 135 or CITA 140 or permission of the department. [Spring] Applied Learning-Other [3 credits] [3 contact hours]

CITA 315 | Artificial Intelligence

Through this course, students will develop fundamental artificial intelligence literacy and hands-on skills with various artificial intelligence tools. Topics and exercises will cover effective prompt development, critical evaluation of artificial intelligence tool outputs, the use of artificial intelligence in various settings (e.g., industry, academia, government), ethical issues (e.g., algorithmic bias, data ownership, privacy), and cybersecurity concerns (e.g., malware development, phishing, deepfakes, adversarial attacks), as well as other crucial topics and tools determined by the continued emergence of artificial intelligence technologies. Prerequisite: One of the following: AGBU 160, CITA 112, CITA 122, COMM 108, ENGL 101, ENGL 102, ENGL 111, SOSC 111, or by permission of the department. [Fall, Spring] Applied Learning-Research [3 credits] [3 contact hours]

CITA 320 | Networking Administration

Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Topics will include performance issues, end-user accounts, data security, disaster recovery, supporting applications and documentation. Prerequisite: CITA 230 or permission of department. Co-requisite: CITA 320X. Course fee of $45 is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

CITA 320X | Networking Administration Lab

Laboratory experience directly related to the material in CITA 320. Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Co-requisite: CITA 320. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [1 credit] [2 contact hours]

CITA 325 | Intro to Network Security

This course will provide students with a working knowledge of network security fundamentals. Students will examine all aspects of network security. Coursework will include significant self-directed research on current security topics. Hands-on lab sessions will allow students to develop practical skills in data security threats and countermeasures. Co-requisite: CITA 325X [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [2 credits] [2 contact hours]

CITA 325X | Intro to Network Security Lab

The lab component of CITA 325 Intro to Network Security. Co-requisite: CITA 325. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [1 credit] [2 contact hours]

CITA 330 | Web Design II

This course builds on the student's knowledge in the use of design principles and markup languages and introduces the design principles and programming languages used to create dynamic content and interactivity. Topics also include The World Wide Web Consortium (W3C) standards, browser capabilities, information architecture, bandwidth considerations, image formats, image maps, frames, and computer-generated imagery. This course is cross-listed with GART 330. Prerequisites: CITA 130 or GART 265. Course fee of $45 is required. [Spring] [3 credits] [3 contact hours]

CITA 335 | Cisco Routing (C)

This course will provide the student with advanced training in the use and configuration of Cisco routers. This course covers the topics found in Cisco semesters III and IV. Topics include a review of Cisco semesters I and II material. Additional topics covered include IPX/SPX, LAN/WAN designs, switching and VLANs, PPP, ISDN and Frame Relay. Students successfully completing CITA 245 and this course will have met all CCNA objectives and be able to pass the CCNA exam. Prerequisite: CITA 200, CITA 245 or permission of department. Co-requisite: CITA 335X [Fall, Spring] Applied Learning [2 credits] [2 contact hours]

CITA 335X | Cisco Routing Lab

Laboratory experience directly related to the material in CITA 335. Students will use and configure Cisco routers. Co-requisite: CITA 335 [Fall, Spring] Applied Learning [1 credit] [2 contact hours]

CITA 340 | Data Base Concepts (C)

A study of the terminology, hardware and software associated with database systems. Topics include: traditional file organizations and access methods, historical development of databases, data organization and structure, relational databases, types of database languages, data description language, data manipulation language, and comparison of database techniques and traditional approaches. Students will design, create, and implement database solutions to business problems. Prerequisite: CITA 112 or permission of the department. Course fee of $45 is required. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

CITA 350 | Object-Oriented Systems

A study of object-oriented systems, including systems analysis and design and programming techniques. One or more graphical user interface object-oriented languages are used to build business application prototypes. Prerequisite: CITA 210 or permission of department. [Spring] [3 credits] [3 contact hours]

CITA 365 | Web Development III

This course provides a foundation in full stack web development, bringing front- and back-end web development technologies together. Development across device types will be emphasized - mobile, tablet, laptop, and desktop - using key development technologies (including, but not limited to, HTML, CSS, JavaScript, jQuery, PHP, and MySQL). Full stack web development frameworks such as MEAN will also be explored. Prerequisite: CITA 265/265X or permission of the department. Co-requisite: CITA 365X [Spring] Applied Learning-Other [2 credits] [2 contact hours]

CITA 365X | Web Development III Lab

Laboratory experience directly related to the material in CITA 365. Students will use both front- and back-end web development technologies to create websites, web applications, and solve web development coding challenges.

Prerequisite: CITA 265/265X or permission of the department. Co-requisite: CITA 365 [Spring] Applied Learning-Other [1 credit] [2 contact hours]

CITA 375 | Web Design III

This course builds on the student's knowledge in the use of markup and programming languages to provide proficiency in the coding and application of interactivity in online media. Basic animation techniques will also be introduced. The practice of this knowledge will be explored through lecture, discussion, exercises, and a semester-long project. Graphic design principles will be used to analyze problems and solve them visually. This course is cross-listed with GART 375. Prerequisite: CITA 330 or GART 330 or permission of the department. Co-requisite: CITA 375X [Fall] Applied Learning [2 credits] [2 contact hours]

CITA 375X | Web Design III Lab

Laboratory experience directly related to the material in CITA 375. Students will use the tools and techniques to produce computer graphics and animation. Student projects will be required. This course is cross-listed with GART 375X. Co-requisite: CITA 375 [Spring] Applied Learning [1 credit] [2 contact hours]

CITA 380 | Intern Orientation Info Tech

This course will prepare the student for the internship experience. Topics covered will include: resume preparation, internship search methodology, interviewing skills, and documentation preparation. This course is S/U graded only. Prerequisite: 30 credits of upper division courses. [Fall, Spring] [1 credit] [1 contact hour]

CITA 390A | Special Projects Info Tech

An advanced independent study of topics of special interest to the Bachelor of Technology student in Application Software Development, End-User Support, Network Administration, Web Development, and Electronic Marketing or Publishing. Students are required to submit a written proposal, which includes a description of the project, its duration, education goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [Fall, Spring] [1 credit] [1 contact hour]

CITA 390B | Special Projects Info Tech

An advanced independent study of topics of special interest to the Bachelor of Technology student in Application Software Development, End-User Support, Network Administration, Web Development, and Electronic Marketing or Publishing. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [Fall, Spring] [2 credits] [2 contact hours]

CITA 390C | Special Project Info Tech

An advanced independent study of topics of special interest to the Bachelor of Technology student in Application Software Development, End-User Support, Network Administration, Web Development, and Electronic Marketing or Publishing. Students are required to submit a written proposal, which includes a description of the project, its duration, educational goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [Fall, Spring] [3 credits] [3 contact hours]

CITA 405 | Project Management (C)

This course will address the full life cycle of a project and present various management techniques for establishing, tracking, and meeting project objectives of time, cost and results. Prerequisite: BADM 249 and Junior status or permission of the instructor. Course fee of $45 is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

CITA 415 | Digital Ethics

The prevalence of digital technologies in nearly every aspect of personal and professional life inevitably poses questions and ethical dilemmas. Consequently, strategies for navigating this increasingly complex ethical landscape are needed more urgently than ever. In this course, students will become familiar with digital ethics and its moral implications. Theories of ethical action to better understand the digital world and put it into wider society context will be addressed. The key debates and ethical implications of various digital technologies will be explored such as artificially intelligent chatbots, video games, social media platforms, autonomous vehicles, robots, voice-enabled personal assistants, smartphones, and drones. Other contemporary topics dealing with digital ethics, including digital privacy and cybersecurity, will be examined. Prerequisite: One of the following: CITA 112, CITA 122, COMM 108, ENGL 101, ENGL 102, ENGL 111, AGBU 160, SOSC 111, or permission of the instructor [Fall] Applied Learning-Research, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level [3 credits] [3 contact hours]

CITA 420 | Programming for the Web

In this course, students focus on deeper study and advanced hands-on project work related to full-stack web development. Contemporary web development technologies, concepts, topics, and approaches will be explored. Students will use state-of-the-art technologies to create web applications, across the front- and back-end, and solve coding challenges. Prerequisite: CITA 330 or permission of department. [Spring] Applied Learning [3 credits] [3 contact hours]

CITA 430 | Sys Integrate/Interoperability

The study of system integration and the construction of system components that are designed to provide capabilities for cooperation in the accomplishment of given tasks. Topics covered include: communication, synchronization, and representation of data. Methods of system integration and design for interoperability will be covered. Prerequisite: CITA 320/320X or permission of department. Co-requisite: CITA 430X. Course fee of $45 is required. [Fall, Spring] Applied Learning [2 credits] [2 contact hours]

CITA 430X | Sys Integ & Inoperability Lab

Laboratory experience directly related to the material in CITA 430. Students will construct and integrate system network components for optimum interoperability. Co-requisite: CITA 430 [Fall, Spring] Applied Learning [1 credit] [2 contact hours]

CITA 460 | Management Information Systems

This course is a study of how organizations use information systems to achieve business goals in today's global market space. Using a collaborative approach, students will analyze real-world case studies to develop an understanding how successful organizations utilize a "best practices" approach in evaluating the competing business interests that drive corporate decision-making. Additional emphasis will be placed upon the development and use of sustainable business practices through corporate and personal ethics. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

CITA 480 | Internship in Information Tech

Supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. To participate in an internship the student MUST have an overall GPA of 2.50 or better in their major field requirements or receive an exemption from the Dean of the School of Business. This course is S/U graded only. Prerequisite: 30 credits of upper-level course work (courses with 300 through 400 prefixes) or permission of instructor [Fall, Spring, Summer] [9 credits - 405 contact hours] [6 credits - 270 contact hours] [9 credits] [9 contact hours]

CITA 485 | Internship Info Tech Reporting

Information Technology students enrolled in CITA480 - Internship in Information Technology - must be concurrently enrolled in this course. Students will prepare their internship agreement paperwork; submit daily log entries while on their internship; submit periodic, mid-term, and final evaluations; and give their final presentation at the conclusion of the internship. Internship advisors may assign additional reports as well. This course will be letter graded (A-F). Prerequisite:

Minimum of 30 Upper-Level credits and concurrent enrollment in CITA 480 [Fall, Spring, Summer] [3 credits] [3 contact hours]

CITA 492 | Internship in Information Tech

Supervised work experience and applied learning at an approved business, government, educational, or other professional setting. Students carry out a planned program of educational experiences under the direct supervision of the internship site supervisor at the approved professional organization. Each intern will also be supervised by a member of the department faculty on a regular basis. A daily journal reflecting on, and quantifying work activities, along with internship evaluations and final reporting (written and oral reports of internship activities) are required elements of the internship. To participate in an internship the student MUST have an overall GPA of 2.50 or better in their major field requirements or receive an exemption from the Dean. This course is S/U graded only. Each credit hour requires 45 hours of relevant work and reporting experience. A minimum of 405 internship contact hours is required along with required internship reporting activities. [Fall, Spring, Summer] Applied Learning-Internship [12 credits] [12 contact hours]

Communications

COMM 108 | Intro Mass Media:Comm Info Age

A history of mass media, and an overview of the effects of mass media on popular culture. The course covers radio, television, books, magazines, public relations, advertising and the Internet. [Fall, Spring] Gen Ed Humanities, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

COMM 120 | Interpersonal Communications

This is a course in the study of human communication on the level of one-to-one, face-to-face interaction as well as small group communication. Among the topics studied are non-verbal communication, listening, the role of perception, feedback, confirming and disconfirming behavior and cross- cultural issues in communication. Through class discussion, activities, and reflective writing, this course seeks not only to inform the student of communication theory, but to make the student a more effective communicator. Students are also expected to complete a research project as part of their study. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

COMM 210 | Single Camera Video Prod (C)

This course introduces students to the fundamentals of video production. Students will gain experience in pre-production, production, and post-production of short projects. In addition to learning the theory and aesthetics of video production, students will learn how to operate a video camera, set up lighting, and record professional sound. Students will learn video and audio editing to take their projects to completion. An emphasis will be placed on developing visual storytelling skills and technical proficiency in the video medium. [Fall] Gen Ed The Arts, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

COMM 220 | Intercultural Communication

The focus of this course is on the dynamic nature of culture and how culturally relative strategies of communication affect the formulation and comprehension of messages between different individuals and groups. It is designed to cultivate student awareness of how diverse cultures construct views of the role and nature of language, of the social world, and of "reality" itself, and how these differences influence human interaction in an increasingly global environment. Prerequisite: ENGL 101 or permission of instructor. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

COMM 240 | Video Studio Production (beginning Spring 2026)

A course devoted to teaching the techniques of video studio production. This course involves preproduction planning, script development, lighting design, audio design, the art of live/"look live" three studio-camera shooting, technical directing, video studio directing, basic graphics, and other roles in front of and behind the studio camera. Students develop programming designed to be fit for public distribution via program social media and streaming options or other methods. [Fall, Spring] Gen Ed Comp-Information Literacy, Applied Learning-Creative Works [3 credits] [3 contact hours]

COMM 260 | The Art of Audio/Video Edit(C)

This course is designed to teach the more advanced techniques of audio and video editing, including multi-track audio mixing, video layering, and motion graphics in a 2-D and 3-D environment. Work will be done using professional digital, non-linear editing systems. Prerequisites: COMM 210 and COMM 240. [Fall] [3 credits] [3 contact hours]

COMM 270 | Video for Web

Students will learn how to develop and produce the exciting, short videos in-demand on the web today. This course will focus on short-form storytelling and technical considerations for this format. Student projects will include fictional, promotional, journalistic, and documentary videos. At least one project will be episodic in nature. Course fee of $35 is required. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [3 credits] [3 contact hours]

COMM 280 | Communication Internship

Students may earn credit for approved work experience which is related to the study of communications. Maximum of three credits approved toward degree. Prerequisite: Prior consent of department. [Fall, Spring] [3 credits] [5 contact hours]

COMM 290A | Special Projects Communication

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisites: COMM 108, COMM 210 or COMM 240. Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

COMM 290B | Special Projects Communication

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisites: COMM 108, COMM 210 or COMM 240. Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

COMM 290C | Special Projects Communication

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisites: COMM 108, COMM 210 or COMM 240. Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

COMM 301 | Technical Communication

Technical communication concentrates on writing for professional situations, as well as upper-level research. It covers research, analysis and presentation of data, form and content of formal and informal reports, letters and resumes. Group work is required, as are presentations. Prerequisites: ENGL 101 or ENGL 201. This course is intended primarily for bachelor degree students. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning [3 credits] [3 contact hours]

COMM 302 | Script Writing

This writing intensive course examines the creative process behind storytelling and scriptwriting for various forms of media, while allowing students the opportunity to create a marketable screenplay for any form of mass-mediated communication. Students will examine how narrative is created, including the development of both story and plot; the creation of multi-dimensional characters; the development of dialogue and stage direction for dramatic effect; formatting; and how to revise for various genres. Prerequisite: ENGL 101 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning [3 credits] [3 contact hours]

COMM 309 | Nonfiction Film

This course is a theoretical consideration of nonfiction and documentary film covering the subgenres, conventions, evolution, social impact, and contemporary issues of nonfiction film. Students will watch and critique films that represent a variety of approaches to the genres. Prerequisite: ENGL 101 or ENGL 102 with a grade of C or higher or permission of the instructor. Liberal Arts/ Sciences Elective, Liberal Arts/Sciences Upper-Level Elective [Spring] [3 credits] [3 contact hours]

COMM 310 | Selected Topics Communications

This course will explore, in depth, a particular issue in communications. Themes of the course will change each semester in which it is offered and will be announced prior to registration. [Fall, Spring] Liberal Arts/ Sciences Elective, Liberal Arts/Sciences Upper-Level Elective, Applied Learning-Research [3 credits] [3 contact hours]

COMM 311 | The Documentary (C)

A course devoted to the study of techniques of producing documentaries on video. The work will be grounded in an historical survey of the genre in film and television. The class will include single camera production projects by class production teams. Course fee of $35 is required. Prerequisite: COMM 210 [Spring] Applied Learning [3 credits] [3 contact hours]

COMM 315 | Contemporary Issues Mass Media

This is a media literacy course that examines mass media's relationship with society in intellectual, economic, political, and social contexts. It entails research projects (essays), long-answer/essay tests, online classroom discussion, and extensive readings, observations, and analyses of mass media outlets. It is for upper-level communications majors and students in all bachelors programs seeking LAS credit. Prerequisite: ENGL 101 or higher [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

COMM 390B | Special Projects Communication

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisites: COMM 108, COMM 210 or COMM 240. Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

COMM 390C | Special Projects Communication

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisites: COMM 108, COMM 210 or COMM 240. Must have approval of supervising faculty before signing up for course. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

COMM 420 | Visual Media

This course is intended to provide Visual Media students with theoretical and practical understanding of the image as culturally located message medium through study and application of semiological and aesthetic models and principles to still and moving images, to include artistic and advertising design. Students will perform both critical deconstruction of images from a variety of genres using core concepts, as well as compose a visual term project for class presentation that includes a written explanation of their design strategy applying models covered in class. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

COMM 450 | Collaborative Media Production

This course is designed to develop and perfect skills involved in collaborative media production. Students will work as part of a production crew for various one-off and regularly scheduled programming that is fit for distribution. Students will engage in both studio based and field production, utilizing both video and audio creation skills in various stages of preproduction, production, and post-production. Collaborative Media Production offers students opportunities for direction and leadership in assuming command, in delegating responsibilities, and in supervising and evaluation. Students will build and perfect skills in script preparation, on camera techniques, producing, directing, technical directing, studio operations, remote productions, video editing and post-production, professional audio and lighting considerations, and more. This class includes all aspects of media creation, with an emphasis on the critical teamwork needs in effective production. Students will proceed through preproduction, production, and post-production/evaluation stages for all typical aspects of media production, with an emphasis on media creation fit for distribution. Prerequisites: COMM 210, COMM 240, and JOUR 202 [Spring] Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

COMM 480 | Communications Internship

The internship will consist of 135 hours of applied experience and may be taken incrementally over the student's last two years of study or during the student's last semester of study. The internship will be undertaken at an external site in the communications industry, in fields such as news media (print and broadcast), advertising, public relations, or in a communications office of a larger industry, such as medical, government, or education. The work should engage a broad array of communication skills, such as design, writing, research, broadcasting, editing, and/or presentation. Placement will emerge from consultation with a faculty advisor and the campus Center for Career Development. Students should seek faculty advisement well in advance of internship placement to ensure a suitable fit for the student's interests and talents. [Fall, Spring, Summer] Applied Learning [3 credits] [3 contact hours]

COMM 481 | Communications Senior Project

The Senior Project represents a culmination of the student's coursework in the Communications bachelor's program and should be developed around a theme. Each student's project should incorporate a broad-based range of communications skills. Some of the communications' strategies may include marketing, research, design, writing and production. The student must submit a formal proposal to a faculty advisor, who will determine if the scope and breadth of the project is sufficient enough to warrant three credits. [Fall, Spring] Applied Learning-Creative Works, Applied Learning-Research [3 credits] [3 contact hours]

Cybersecurity

CYBR 101 | Intro to Criminal Justice

This course will introduce the American criminal justice system to students. Topics include a study of laws, the identification and collection of evidence, the police, courts, and corrections. [Fall and Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

CYBR 330 | Implications of Cyber Attacks

This course will explore Cyberspace Operations as an instrument of international, national, organizational, and personal power from multiple perspectives. The course will use open-source material and a textbook to analyze and discuss the history and effects of cyberspace attacks and intrusions as well as acts of cyberterrorism and crime as the basis for classroom discussion, papers, and projects. Numerous case studies will be explored, analyzed, and evaluated. The Diplomatic, Information, Military and Economic (DIME) Model will be used to assess nation-state sponsored events while human nature (terrorism, crime) will be used to study non-State sponsored events. This is an upper-level course designed to explore the consequences of adversarial or malicious cyberspace operations and to bring together the various facets and effects of those operations on the world in which we live and work, to comprehend the impact of those operations, and to understand the need to predict, recognize, and prevent cybersecurity threats at all levels of society, nationally and internationally. Additional study and research hours outside the classroom will be required to achieve successful mastery of the material presented. Prerequisite: ENGL 101 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours

CYBR 340 | Business & Cyber: Cyber Heist

This course will evaluate cybersecurity through the lens of business. Students will understand the need and motivation for investing in cybersecurity relative to the risk; what is at risk and vulnerable to cyberattacks, and how to be best postured to prevent, mitigate, and/or recover from a cyberattack. Cyber business policies, procedures, and training will be discussed, reviewed, and analyzed. Case studies and specific cyberattack vectors and threats will be used to demonstrate real-life scenarios faced by a variety of businesses. A cyber tabletop exercise will be conducted to demonstrate a thorough understanding of the subject matter and the integration of cybersecurity throughout the business model. Prerequisite: CITA 110 or CITA 115 or permission of the department [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [3 credits] [3 contact hours]

CYBR 350 | Digital Forensics

This course explores cybersecurity from the perspective of digital forensics or computer forensics. Topics include an introduction to digital forensics, an overview of computer crime, the collecting, seizing, and preserving of data as evidence from Windows, Linux, and Macintosh mobile and non-mobile devices. In addition to lecture materials, this course provides a totally online, virtual laboratory where students can actually use the techniques and tools of the digital forensic

investigator to gain valuable hands-on experience. Prerequisite: CITA 120, CITA 325, or permission of the department. Co-requisite: CYBR 350X. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

CYBR 350X | Digital Forensics Lab

Laboratory experience directly related to the material in CYBR 350. Students will conduct various forensic investigations. Co-requisite: CYBR 350 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [1 credit] [2 contact hours]

CYBR 375 | Ethical Hacking/Incident Hndlg

This course is designed to introduce students to the fundamentals of ethical hacking and becoming an ethical hacker. The course focuses on the code of conduct and ethics of attacking systems. The course also teaches the mindset of the criminal hacker and evolution of the hacker. Students also gain fundamental understanding and education on the elements of compromising computer systems for the explicit purposes of securing them from criminals. The course makes a very clear distinction between criminal hacking and ethical hacking, and only teaches the latter. The course then focuses on some fundamentals of system defense, including configurations and software to prevent unauthorized system access. Prerequisites: CITA 325 and CITA 325X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

CYBR 375X | Ethical Hkg/Incident Hndlg Lab

Laboratory experience directly related to the material in CYBR 375. Students will conduct various network penetration and mitigation investigations. Co-requisite: CYBR 375 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [1 credit] [2 contact hours]

CYBR 390B | Special Project Cybersecurity

An advanced independent study of topics of special interest to the Bachelor of Technology student in Application Software Development, End-User Support, Network Administration, Web Development, and Electronic Marketing or Publishing. Students are required to submit a written proposal, which includes a description of the project, its duration, education goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. This course is repeatable up to 2 times. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [Fall, Spring] [2 credits] [2 contact hours]

CYBR 390C | Special Project Cybersecurity

An advanced independent study of topics of special interest to the Bachelor of Technology student in Application Software Development, End-User Support, Network Administration, Web Development, and Electronic Marketing or Publishing. Students are required to submit a written proposal, which includes a description of the project, its duration, education goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [Fall, Spring] [3 credits] [3 contact hours]

CYBR 450 | Mgmt of Information Security

This course is designed to present the management aspects of security for global information systems. Information security is viewed with respect to natural and human-generated threats. The material covered addresses information system security planning, development of security policies and programs, risk assessment, risk management, disaster recovery, business continuity, and personnel issues. Examples of real world information security issues and practices implemented in today's business environment, as well as government security laws, are presented. Prerequisite: BADM 300 or permission of the department [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

CYBR 490C | Special Project Cybersecurity

An advanced independent study of topics of special interest to the Bachelor of Technology student in Application Software Development, End-User Support, Network Administration, Web Development, and Electronic Marketing or Publishing. Students are required to submit a written proposal, which includes a description of the project, its duration, education

goals/objectives, methods of study or supervision, written and/or verbal reporting, method of evaluation, and number of credits to be earned. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [Fall, Spring] [3 credits] [3 contact hours]

Early Childhood

ECHD 101 | Basics of Early Childhood (C)

Documented successful completion of one or two years of an approved New York State curriculum in Child Development through a high school or BOCES program, with a final-year Child Development grade point average of 85 or above will demonstrate successful completion of requirements for this course. Students must request transcript review by the chair of the Early Childhood department. [Fall, Spring] [3 credits] [3 contact hours]

ECHD 121 | Expressive Arts (C)

The course presents a hands-on, practical approach to the safe use and function of a variety of media with young children including the visual arts, music, and creative movement. Students will develop lesson plans that respond to young children's changing developmental characteristics as well as to their culture and individual learning needs. A portfolio will be developed to demonstrate skills, knowledge, and understandings of course content. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 130 | Intro Early Chldhd Studies (C)

The course presents an overview of the wide variety of roles and responsibilities of Early Childhood professionals working in educational and community-based settings. The course examines the National Association for the Education of Young Children's Code of Ethical Conduct, standards, and developmentally appropriate practices for children birth to age 8. Other topics include: curriculum models, environments that meet the needs of young children, positive child guidance, family partnerships, and the services provided by community agencies. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

ECHD 150 | Curriculum and Methods (C)

An introduction to project/thematic approaches to curriculum planning for a learning center-based Early Childhood classroom, which uses play as the predominant instructional strategy. Integrated curriculum activities and materials for math, science, language arts, block play, socio-dramatic play and motor development centers are examined. Students develop activity lesson plans and short-term curriculum plans which assess and enhance the cognitive, physical and social/emotional development of the young child. A 4-6 hour participation in a classroom for two to seven year-old children is required. During this time, two lesson plans are implemented and evaluated. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 170 | Child Growth & Dev Theory Prac

An introductory overview of normative child growth and development from conception through middle childhood. The course focuses on major theorists and their models of child development. Developmental areas include: physical, cognitive, speech/language, perceptual and social/emotional. Practical application of theory is related to observation skills, activities and curriculum, the role of the family, the role of the teacher/caregiver, as well as issues in child development. 10 hours of direct observation of children, culminating with a major child study is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Field Study [3 credits] [4 contact hours]

ECHD 171 | Child Observation Skills

This five-week course introduces students to the purposes, ethics, and skills for observing young children, including objectivity vs subjectivity and identifying behaviors in the four developmental domains (social-emotional, cognitive, language/communication, physical-motor). Students will practice and develop initial competency in writing and interpreting narrative methods (running records, anecdotal records), which are key methods of recording young children's behavior. Direct applied experience observing children on campus is included. Co-requisite: ECHO 170 [Fall] Applied Learning-Field Study [1 credit] [1 contact hour]

ECHD 175 | Infants and Toddlers

An overview of the role of the caregiver in creating a high- quality learning environment for infants and toddlers. Topics include designing healthy, safe and emotionally responsive environments. New York State licensing requirements, play-based curriculum, family involvement, early intervention, and diversity issues in child care. 7 hours of field observation is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Field Study [3 credits] [4 contact hours]

ECHD 190 | Intro to Community Agencies

This course is designed to introduce students to a variety of community-based agencies. Topics include types of agencies, funding sources, services, organizational characteristics, clients, personnel and facilities. A 12-hour volunteer experience in a community agency is required. [Fall] Applied Learning-Community Service [3 credits] [3 contact hours]

ECHD 230 | Applications in Child & Family

This course will prepare students for working with children and families in a variety of settings, with particular focus on careers other than teaching. Topics include: Understanding and developing the attributes of an effective helping professional; applying theory to the practice of working with children and families in a variety of roles; and the responsibilities and requirements for particular professions, such as speech-language, occupational, and/or physical therapy, social worker, CPS worker, child-life specialist, play therapist, etc. Students will visit agencies, interview professionals in the field, and participate in role-play activities. Students must earn a grade of "C" or higher. Prerequisites: ECHD 130, ECHD 170, and PSYC 111 or permission of instructor. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 234 | Practicum

A competency-based 225-hour practicum experience in the second year giving students the opportunity to apply theoretical knowledge with young children from birth through age eight and their families. Settings include on-campus child care or preschool, Head Start, public school classrooms, or programs in human service agencies in the community. Early Childhood faculty coordinates placements, weekly seminars, and student evaluations. Students work with an on-site mentor. Requirements include observing, planning, assessment, and reflection. Completing a final project demonstrating competency and growth is required. Prerequisites: Grade of "C" or better in major field courses as follows: ECHD 121, ECHD 130, ECHD 150, and ECHD 170; Minimum GPA of 2.00. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Practicum [6 credits] [26 contact hours]

ECHD 240 | Child and Family Wellness (C)

Students explore a variety of environmental, behavioral, and regulatory factors which influence health dynamics within the family. The role of the teacher/practitioner in observation, prevention, communication, referral, and follow-up, pertaining to the health of children, is a strong focus within this course. Topics include: establishing safe environments within children's programs, communicable and non-communicable diseases in children, current options for family health care, children's nutritional needs, mental health, and common childhood emergency awareness and care. Completion of Mandated Reporter training is a mandatory component of this course. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 251 | Anti-Bias Strategies Human App

This course explores the social, historical, and political forces in the United States that make anti-bias education and its four core goals (identity, diversity, justice, and activism) essential to quality early childhood education. The course examines the social identities that shape children's development and learning (cultural, racialized, gendered, economic class, abilities, and family structure) and what adults can do to create early childhood programs that make it possible for all children to develop to their fullest potential. Prerequisite: ENGL 101 [Fall] Gen Ed Diversity: Equity, Inclusion, and Social Justice, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Civic Engagement [3 credits] [3 contact hours]

ECHD 252 | Conflct Resol:Create Peace Env

Conflict exists in society, classrooms, families and ourselves. In this course, students will engage in creative exercises and activities that foster cooperation, personal self-expression, communication, affirmation, mediation and conflict resolution.

Students will learn how to prevent conflict and how to use conflict productively for learning. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ECHD 260 | Foundation of Modern Education

A study of the philosophic, historic and cultural foundations of present-day educational programs. This course serves as an important resource area in evaluating current approaches to child development, early education and early intervention. The ethical and professional roles of early childhood personnel are considered. Prerequisites: Second-year status or permission of instructor. [Spring (every other)] Liberal Arts/Sciences Elective [3 credits] [contact hours]

ECHD 280 | Exceptional Children (C)

An introduction to childhood exceptionalities in the disability categories of sensory, health, physical, learning communication, and behavior disorders as well as covering autism, ADHD, traumatic brain injury and giftedness. Definitions, assessment, diagnosis, incidence, causes, instructional strategies, issues, and trends are examined in each category of exceptionality. An overview of laws, policies, and practices with emphasis on Individuals with Disabilities Education Act and placement of students in special education will be covered. In addition, the importance of early intervention, transition, and parental involvement will be discussed. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

ECHD 290A | Spec Projects Early Child

The student may pursue an independent project or may do further work with children beyond the required practicum courses. Either type of project must be supervised by a faculty member in the program, and an outline of the project must be submitted to the department chairperson. It is recommended that 30 credits of course work be completed before students enroll in this course. No more than four credits of 290 courses may be applied toward degree requirements. Prerequisite: 2.00 minimum grade point average [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ECHD 290B | Spec Projects Early Child

The student may pursue an independent project or may do further work with children beyond the required practicum courses. Either type of project must be supervised by a faculty member in the program, and an outline of the project must be submitted to the department chairperson. It is recommended that 30 credits of course work be completed before students enroll in this course. No more than four hours of 290 credits may be applied toward degree requirements. Prerequisite: 2.00 minimum grade point average [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ECHD 290C | Spec Projects Early Child

The student may pursue an independent project or may do further work with children beyond the required practicum courses. Either type of project must be supervised by a faculty member in the program, and an outline of the project must be submitted to the department chairperson. It is recommended that 30 credits of course work be completed before students enroll in this course. No more than four credits of 290 courses may be applied toward degree requirements: Prerequisite: 2.00 minimum grade point average [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ECHD 351 | Families as Partners EC Progms

An examination of the importance of families as partners with early childhood staff and community agencies in providing early care, education, and services for their children. Includes a historical and cultural perspective of family relations with agencies, communities, and other educational institutions. Students will develop an understanding of the challenges families face to support and enhance their child's development and examine best practices in working with families. Prerequisite: ECHD 130 and ECHD 170 or permission of the instructor. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

ECHD 352 | Positive Child Guidance

An examination of the principles and practices consistent with professional guidelines for developmentally appropriate child guidance and classroom management in early care and education programs. Includes discussions and practical experiences related to positive guidance and management strategies for work with groups and with individual children, family involvement, and environment, staffing patterns, scheduling, professional development of staff, conflict resolution and reflective teaching. Prerequisite: ECHD 170 and ECHD 130 or ECHD 190 or permission of the instructor. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

ECHD 354 | Math/Sci for Young Children

This course presents developmentally appropriate theory and methods of integrating math and science into curriculum for young children. National and state standards for mathematics and science education will be referenced in order to align learning experiences for children with current trends in early childhood education. Hands-on content and experience with the natural world will facilitate the planning and implementation of math and science curricula. This course will empower students with the awareness, knowledge, skills, and attitudes to develop positive dispositions in young children toward math and science. Prerequisites: Early Childhood Practicum or permission of the instructor. This course is for B.S. EC Studies: Birth - Age 5 majors only. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 357 | Literacy Dev in Young Children

This course examines literacy development of the young child beginning in infancy. Students will examine early stages of listening, speaking, reading, and writing from a developmental perspective and learn how to nurture those skills throughout the early childhood years. Students will have practical experience in designing literacy experiences for young children and assessing young children's literacy development using varied data collection methods. The importance of integrating literacy experiences into the entire curriculum will be emphasized. National and state standards pertaining to literacy education will be referenced in order to align learning experiences for children with current trends in early childhood education. Prerequisites: Early Childhood Practicum or permission of the instructor. This course is for B.S. EC Studies: Birth - Age 5 majors only. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 360 | Differentiated Instruction

This course builds on foundational knowledge of disabilities and special education. Students analyze case studies of individuals who learn differently, plan differentiated instructional sessions and assessments, design adapted environments, and collaborate in multidisciplinary teams based on their profession of interest. Students engage in field observation, research, ethical problem-solving, and demonstration of instruction. Prerequisites: C or better in ECHD 280, or permission of instructor. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [3 credits] [3 contact hours]

ECHD 380 | Internship Orientation

This course introduces effective methods of establishing and preparing for internship in early childhood, birth through age five years. Particular attention is given to the application of concepts and skills acquired in the first three years of study. This course will require reading, research and resume preparation. Emphasis will be on researching internship sites, interview skills and professionalism. Students will explore and identify possible internship sites that meet their professional goals, and outline an exit portfolio. This course is for B.S. EC Studies: Birth - Age 5 majors only. [Fall, Spring] [1 credit] [1 contact hour]

ECHD 390A | Spec Projects Early Childhood

The student may pursue an independent project or may do further work with children beyond the required practicum courses. Either type of project must be supervised by a faculty member in the program, and an outline of the project must be submitted to the department chairperson. It is recommended that 30 credits of coursework be completed before students enroll in this course. Prerequisite: 2.00 minimum grade point average [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ECHD 390B | Spec Projects Early Childhood

The student may pursue an independent project or may do further work with children beyond the required practicum courses. Either type of project must be supervised by a faculty member in the program, and an outline of the project must be submitted to the department chairperson. It is recommended that 30 credits of coursework be completed before students enroll in this course. Prerequisite: 2.00 minimum grade point average [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ECHD 390C | Spec Projects Early Childhood

The student may pursue an independent project or may do further work with children beyond the required practicum courses. Either type of project must be supervised by a faculty member in the program, and an outline of the project must be submitted to the department chairperson. It is recommended that 30 credits of coursework be completed before students enroll in this course. Prerequisite: 2.00 minimum grade point average [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ECHD 450 | Infant-EC Mental Health

This course addresses theory and practice in Infant-Early Childhood Mental Health (I-ECMH), including assessment and interventions to promote the social-emotional well-being of young children (prenatal - 5 years) within the context of their primary relationships. Prerequisites: Earned grade of C or higher in ECHD 170 or ECHD 175. This course is open to both majors and non-majors. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

ECHD 452 | Assess/Eval in Early Childhood

An examination of developmentally appropriate practice in the assessment and evaluation of young children, following the guidelines set by the National Association for the Education of Young Children for authentic assessment and evaluation. Includes practice and using a variety of observation-based data gathering instruments, play-based assessments, trans-disciplinary assessments and portfolios. Also includes discussion of the use and misuse of standardized tests in the assessment and evaluation of young children. Prerequisite: ECHD 230 or ECHD 234 or permission of the instructor. This course is for B.S. EC Studies: Birth - Age 5 majors only. [Spring, Summer] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Field Study, Applied Learning-Research [3 credits] [3 contact hours]

ECHD 453 | Admin, Supvsn, Fin Plng & Mgmt

An overview of existing models of early childhood programs and the specific roles and responsibilities involved in the administration/supervision of these programs. Includes practical experience with program planning and implementation. Prerequisite: 60 credits, 18 credits of which must be in Early Childhood. Must have earned a grade of "B" or better in Early Childhood Practicum course. This course is for B.S. Child Care and Development majors only. [Fall] [3 credits] [3 contact hours]

ECHD 454 | Operations Mgmt Chldrns Prog

Systems theory and practical applications related to operations management and policy development in quality programs for children and families: enrollment and retention of children and families. Record keeping, technology and communication systems, health and safety policies and procedures, program accreditation and space allocation and maintenance. Prerequisite: ECHD 453, 60 credits, of which 18 must be in Early Childhood. Must have earned a grade of "B" or better in Early Childhood Practicum course. This course is for B.S. Child Care and Development majors only. [Spring] [3 credits] [3 contact hours]

ECHD 456 | External Envrnmt & Chldrns Prg

An examination of the legal and regulatory requirements for children's programs at local, state and federal levels; marketing strategies and customer relationships; ethical issues; community resources for children and families; advocacy issues and activities; career development in the field of early childhood. Included experiences with practical applications of the principles and practices discussed. Prerequisite: ECHD 453, 60 college credits, 18 of which must be in Early Childhood. Must have earned a grade of "B" or better in Early Childhood Practicum course. This course is for B.S. Child Care and Development majors only. [Spring] [3 credits] [3 contact hours]

ECHD 460 | Internship in Early Childhood

The internship is the Early Childhood B.S. program's culminating experience. Students apply concepts and skills acquired during the first three years of the program while working in a supervised field experience tailored to their career goals. Students engage in research, reflection, and documentation of their academic and professional growth. Field sites may include childcare, preschool, Head Start, or early intervention programs, kindergarten classrooms, community agencies, or other approved early care and education settings. This course is S/U graded only. Prerequisite: Senior year standing, GPA of 2.0 or higher [Fall, Spring] Applied Learning-Internships [12 credits] [12 contact hours]

ECHD 461 | Internship Reporting

ECHD461, Internship Reporting, is a four-credit course taken simultaneously with ECHD 460, Internship. ECHD 461 is designed for students to engage in research, problem solving, discussion and reflection and to document their academic and professional growth throughout the internship. The main goal of the course is to maximize student learning while working in the field and to ensure the internship is a sound academic experience. Students complete an internship project, portfolio, and a final presentation for members of the College community. Students earn a letter grade for this course. Prerequisite: Senior year standing, GPA of 2.5 or higher. [Fall, Spring] Applied Learning-Internships, Applied Learning-Research [4 credits] [4 contact hours]

Economics

ECON 123 | Micro-Economics (C)

A study of the composition of the market structure, price and distribution theory, and an analysis of the factors of production and international trade. [Fall, Spring] Gen Ed Social Sciences, Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

ECON 124 | Macro-Economics (C)

An introduction to the operation of the modern national economy including: analysis of national output, income employment, business fluctuations, money and banking. [Fall, Spring] Gen Ed Social Sciences, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

ECON 290A | Special Projects Economics

An independent or small group study course designed to permit an individual student or group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

ECON 290B | Special Projects Economics

An independent or small group study course designed to permit an individual student or group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

ECON 290C | Special Projects Economics

An independent or small group study course designed to permit an individual student or group of students to pursue on their own initiative topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirement for any degree. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ECON 330 | Comparative Economic System(C)

An analysis of capitalism, the mixed economy, and socialism; the ways in which economic activities are organized; the role of monetary and financial institutions; management practices; allocation of resources among competing goals; role of economic planning; and the role of industry and agriculture. A detailed comparative study of Japan, China, Yugoslavia, the Soviet Union and the United States. Emphasis will be placed on understanding the process of furthering economic growth by studying successful and unsuccessful development strategies. Prerequisite: ECON 123 or ECON 124 or AGBU 103 or its equivalent. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

Emergency Medical Services

EMSC 112 | Emergency Medical Tech (C)

Successful completion of this course will meet the requirements for admission to the New York State Department of Health Bureau of EMS Emergency Medical Technician (EMT) certification exams. This intense and rigorous course will cover topics from the Bureau of EMS educational guidelines, including, but not limited to, patient assessment, pathophysiology, and treatment of shock, CPR, trauma and medical-related emergencies, and EMS operations. Students will apply techniques and participate in a simulated real-life environment including simulation of field stress during labs. Students will be expected to act as EMS professionals in teams while treating mock patients and performing basic life support skills under the tutelage of NYS DOH Bureau of EMS paramedics. These labs will involve substantial outside preparation by the student. Additionally, a clinical component in an EMS setting is required. Students who pass NYS DOH Bureau of EMS certification exams will receive a three-year NYS EMT certification. Course fee of $25 is required. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [4 credits] [11 contact hours]

EMSC 201 | Paramedic I

This intense and rigorous course will cover topics and the application of techniques from the national and New York State DOH Bureau of EMS educational guidelines, including, but not limited to, patient assessment, pharmacology, medication administration, airway management, pathophysiology, and cardiology. Per NYS DOH Bureau of EMS regulations, students must be certified at or above the NYS EMT level throughout the duration of the course. It is strongly recommended that students have field experience as an EMT or higher prior to enrolling in this course. Prerequisite: BIOL 158/158X or BIOL 159/159X or BIOL 258/258X or BIOL 259/259X. Co-requisite: EMSC 201X. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [8 credits] [12 contact hours]

EMSC 201X | Paramedic I Lab

This intense and rigorous course will provide an application of concepts learned in EMSC 112 and EMSC 201. Students will apply techniques and participate in simulated real-life environment including simulation of field stress during labs. Students will be expected to act as EMS professionals in teams while treating mock patients and performing both basic and advanced life support skills under the tutelage of NYS DOH Bureau of EMS paramedics. These labs will involve substantial outside preparation by the student. Per NYS DOH Bureau of EMS regulations, students must be certified at or above the NYS EMT level throughout the duration of the course. It is strongly recommended that students have field experience as an EMT or higher prior to enrolling in this course. Lab fee of $100 is required. This course is S/U graded only. Prerequisite: BIOL 158/158X or BIOL 159/159X or BIOL 258/258X or BIOL 259/259X. Co-requisite: EMSC 201. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [4 credits] [4 contact hours]

EMSC 202 | Paramedic Hospital Clinical

Paramedic candidates will participate in hospital clinical rotations that prepare them to provide advanced life support treatment of the sick and injured while under the guidance of hospital licensed staff and paramedic program faculty. Required component of the NYS paramedic curriculum. This course will be graded as Pass/Fail based on the completion of the curriculum skill competencies. Prerequisite: Current NYS EMT certification. Co/prerequisite: EMSC 201 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Clinical Placement [6 credits] [6 contact hours]

EMSC 203 | Paramedic II

This intense and rigorous course will continue to cover topics and the application of techniques from the national and New York State DOH Bureau of EMS educational guidelines, including, but not limited to, pediatrics, geriatrics, special patient populations, nephrology, hematology, endocrinology, immunology, and toxicology. Per NYS DOH Bureau of EMS regulations, students must be certified at or above the NYS EMT level throughout the duration of the course. It is strongly recommended that students have field experience as an EMT or higher prior to enrolling in this course. Prerequisite: EMSC 201 and EMSC 201X. Co-requisite: EMSC 203X. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [8 credits] [12 contact hours]

EMSC 203X | Paramedic II Lab

This intense and rigorous course will provide an application of concepts learned in EMSC 112, 201, 201X, 202, and 203. Students will apply techniques and participate in a simulated real-life environment including simulation of field stress

during labs. Students will be expected to act as EMS professionals in teams while treating mock patients and performing both basic and advanced life support skills under the tutelage of NYS DOH Bureau of EMS paramedics. These labs will involve substantial outside preparation by the student. Per NYS DOH Bureau of EMS regulations, students must be certified at or above the NYS EMT level throughout the duration of the course. It is strongly recommended that students have field experience as an EMT or higher prior to enrolling in this course. Lab fee of $100 is required. This course is S/U graded only. Prerequisite: EMSC 201 and EMSC 201X. Co-requisite: EMSC 203. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Other [4 credits] [4 contact hours]

EMSC 204 | Paramedic Field Clinical

Paramedic candidates will participate in field clinical rotations that prepare them to provide advanced life support treatment of the sick and injured while under the guidance of NYS Paramedics and paramedic program faculty. This section will be graded Pass/Fail based upon completion of the curriculum skill competencies. Required component of the NYS paramedic curriculum. Prerequisite: Current NYS EMT certification, EMSC 201, EMSC 201X & EMSC 202. Co/prerequisite: EMSC 203 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Clinical Placement [6 credits] [6 contact hours]

English

ENGL 100 | Intro to College Writing

ENGL 100 is a preparatory course for ENGL 101 Composition I. It is a credit-bearing, college-level course that will introduce students to the critical reading, thinking, and writing practices that will enable them to complete their studies successfully. The course is skills-based in that it focuses on reading comprehension, working effectively with texts, introducing college-level research practices, and improving writing skills at the sentence, paragraph, and paper level. The course is also designed to meet students at their reading and writing levels when they enter college and to prepare them in one semester for the challenges presented in ENGL 101. All students taking ENGL 100 must earn a grade of C or better in order to receive course credit and move forward to ENGL 101. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ENGL 101 | Composition I

In this composition course, students will practice both written and oral expression through the development of essays and presentations that require them to articulate, research, and analyze ideas across various academic contexts. Areas of focus may include narrating a personal story, arguing in favor of an idea, evaluating communication for substance, bias, and intended effect, comparing, or defining. A student must demonstrate competency in (1) organizing and paragraphing, (2) clarity of main point, (3) appropriateness, logic and specificity of development, (4) maturity of content, and (5) sentence structure, grammar, spelling, and punctuation. This course will include an introductory research component. Prerequisite: Placement or a grade of C or higher in ENGL 100 [Fall, Spring] Gen Ed Communications, Gen Ed Communication-Oral, Gen Ed Communication-Written, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 102 | Composition II

This composition course will begin with a review of academic essay writing as presented in ENGL 101 and proceed to intensive work on writing research essays and term papers. A student must demonstrate competency in items 1-5 in the course description of ENGL 101 and in (6) locating, evaluating, using and documenting source material, (7) command of various modes of rhetorical development, and (8) ability to revise one's writing at the thesis level and beyond. Prerequisite: ENGL 101 or admission to the Honors program. This course is designed primarily for students transferring to four-year institutions which require two semesters of composition. [Fall, Spring] Gen Ed Communications-Written, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 111 | Fund of Speech Communications

An introductory course presenting and developing principles and skills common and basic to all forms of the art of oral expression. It seeks, through class experience in discussion and public address, as well as through lecture, to provide the student with a working knowledge of communication theory. [Fall, Spring] Gen Ed Communications-Oral, Gen Ed Comp-

Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

ENGL 115 | Diversity and Public Speaking

Through the lens of speeches and oral experiences of various cultures, diverse populations, and social justice, this course aims to teach and develop principles and skills common and basic to all forms of the art of oral expression. It seeks, through class, gender, race, abilities, and other under-represented experiences through discussion and public address, as well as lecture, to provide the student with a working knowledge of communication theory and the advances it has been able to support for social justice issues. Evaluation will be based upon such factors as class participation, response essays, tests, and speech presentations. [Fall, Spring] Gen Ed Communications - Oral, Gen Ed Diversity: Equity, Inclusion, and Social Justice, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ENGL 121 | Introduction to Literature

This course introduces the student to literature through readings in the various genres and across a broad spectrum of styles and eras. Additionally, through writing critical/ analytical essays, the student learns the terms associated with literary analysis and gains additional experience in writing in support of a thesis. Prerequisite: ENGL 101 with a grade of C- or better; or by permission of instructor. [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 151 | Introduction to Drama

A course designed to develop in the student an appreciation of drama as a form of literature and as a function of theater. It seeks to develop in each student a set of critical standards applicable to dramatic literature and its manifestation in the related forms of television and film. Evaluation will be based upon such factors as class participation, tests including essay questions and written assignments. [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

ENGL 203 | Intro to Creative Writing

This course will allow students to explore the fundamental skills of fiction, poetry, and creative nonfiction writing and is designed around the belief that one must read widely and closely in order to write well. We will examine the works of both established and emerging writers in hopes of discerning and emulating the qualities of good nonfiction, poetry, and fiction. Frequent writing exercises will provide the opportunity to practice, to imitate, and to experiment. Class members will work together to create a welcoming and productive workshop, including extensive in-class discussion of both published writers and student work. Prerequisite: ENGL 101 with a grade of C- or better; or by permission of instructor. [Fall, Spring] Gen Ed The Arts, Gen Ed Humanities, Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective, Applied Learning [3 credits] [3 contact hours]

ENGL 205 | Writing Theory and Practice

A course designed to introduce students to the theory and practice of teaching writing, specifically within the peer tutor model. An interactive, workshop-based class, students will discuss, participate in research, understand and utilize proper formatting and citation styles, and practice tutoring skills such as assessing students' needs, listening effectively, asking probing and appropriate questions, and providing constructive feedback. Students will learn how to actively coach tutees toward articulating the meaning of their written work, to generate outlines and/or conceptual information frameworks to organize material, to generate and/or clarify a thesis statement, to thoroughly support ideas, and to edit and revise for clarity and purpose. Communication skills, assessment, and diagnostic tools learned in the course will be applicable to future study, the workplace, and the community. Prerequisites: ENGL 101, with a "B+" or better, recommendation from composition faculty, and permission of instructor. [Fall, Spring] [3 credits] [3 contact hours]

ENGL 215 | Readings in Women's Literature

Intended to make the artistic work of women more accessible to the student. Works by culturally diverse authors will be considered through the perspectives of literary and feminist theory, psycho-social dynamics, and writing and language as personal discovery and expression. Particular attention will be paid to themes, characterization, metaphor, atmosphere and use of language. The impact of women on other mediums such as film, the visual arts and music also will be discussed. Prerequisite: ENGL 101 with a grade of C- or better; or by permission of instructor. [Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 221 | Postmodern Literature

This course will focus on an examination and critical analysis of postmodern literature and its social, historical, and political contexts. Experimental forms of post-WWII literature will be analyzed with regard to its connection to themes such as of violence, war, advanced technologies, identity, and globalization, along with their interplay between mass media and popular culture. Evaluation will be based upon such factors as class participation, tests including essay questions, and written assignments. Prerequisite: ENGL 101 with a grade of C- or better; or by permission of instructor. [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 223 | American Literature

Specific genres, time periods or themes in American literature are treated by each instructor with emphasis on developing the student's skills in reading and interpretation. Evaluation will be based upon such factors as class participation, tests including essay questions, and written assignments. Prerequisite: ENGL 101 with a grade of C- or better; or by permission of instructor. [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 225 | Multi-Cultural Literature

This course explores literature and culture of groups that have historically been underrepresented and/or oppressed in the United States. The course will investigate how historical and contemporary social and cultural factors that shape individual and collective identities among the members of these groups are reflected in literature, how various identities—ethnic, racial, national, gender, sexual, class, religion, etc.—intersect, and how these identities are portrayed in literature, film, and media. Furthermore, the course examines structural forces in the society that create and perpetuate social injustice. Evaluation is based upon such factors as class participation, discussion forums, exams, presentations, and written assignments. Prerequisite: ENGL 101 with a grade of C- or higher, or permission of instructor. [Fall, Spring] Gen Ed Humanities, Gen Ed Diversity: Equity, Inclusion, and Social Justice, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 241 | Short Story

Reading and discussion of representative examples of the short story form, with emphasis on response, interpretation and appreciation. Evaluation will be based upon such factors as class participation, tests including essay questions, and written assignments. Prerequisite: ENGL 101 with a grade of C- or higher; or by permission of instructor. [Fall, Spring] Gen Ed Humanities, Gen Ed Comp-Critical Thinking & Reasoning, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

ENGL 250 | Fiction Writing

Intended for those who like to write and who have some prior exposure to fiction, either as readers or writers. Focus is on writing short fiction and class serves as writers' workshop, evaluations given both by classmates and instructor. Course emphasizes the individual progress of each writer and the development of a community of writers. Prerequisite: ENGL 101 with a grade of C- or better; or by permission of instructor. [Spring] Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 290A | Special Projects

An independent or small group study course designed to permit an individual student or a group of students to undertake work in writing beyond, or different from, that of ENGL 101 and ENGL 102. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [1 credit] [1 contact hour]

ENGL 290B | Special Projects

An independent or small group study course designed to permit an individual student or a group of students to undertake work in writing beyond, or different from, that of ENGL 101 and ENGL 102. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [2 credits] [2 contact hours]

ENGL 290C | Special Projects

An independent or small group study course designed to permit an individual student or a group of students to undertake work in writing beyond, or different from, that of ENGL 101 and ENGL 102. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [3 credits] [3 contact hours]

ENGL 302 | Approaches to Textual Analysis

Students will learn strategies for writing about various genres of non-fiction as well as fiction, poetry, and/or drama. The course will introduce students to various critical approaches as tools to investigate texts in multiple contexts. Students will not only learn to analyze text but also to apply critical material in their own original analyses. This course is required for the English minor; recommended prior to taking other 300-level classes. Prerequisites: ENGL 101 or 102 with a grade of C- or better and any other literature course; or by permission of instructor. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 304 | Writing in the Disciplines

This course in advanced composition considers the concept of discourse in the various disciplines. Through a carefully developed portfolio of significant texts in their discipline as well as their own work, students will explore the discourse of their major discipline; enhance their ability to think and write critically about contemporary issues; and develop advanced skills in research, analysis, and synthesis of information. Prerequisite: ENGL 101 and any writing class with a grade of C- or better; or by permission of instructor. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 310 | Selected Topics in Literature

The course will explore, in depth, a particular literary issue, period or genre. Themes of the course will change each semester in which it is offered and will be announced prior to registration. This course is repeatable up to 2 times. Prerequisite: ENGL 101 or ENGL 102 with a grade of C- or better and any other literature course; or by permission of instructor. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 316 | Native American Literature

This course is a study of the literature of the indigenous peoples of North America and considers the following: prevalent themes, language use, the effect of contact with European culture, and the cultural values and experiences expressed in the work. Class methodology will include readings, lecture, discussion, tests and written exploration and critique of the literature. Prerequisites: ENGL 101 or ENGL 102 with a grade of C- or better and any other literature course; or by permission of the instructor. Either NAMS 111 or NAMS 121 highly recommended. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 320 | Nature Writing

This course is designed to introduce the student to the genre of Nature Writing. Against the backdrop of a variety of readings in the genre, consideration of other art forms, as well as theoretical writings on the relationship of humankind to the environment, students will explore their own relationship with the natural world through writing spontaneous, observational and theoretical pieces as well as developing a project in their artistic medium. Prerequisite: ENGL 101 with a grade of C- or better and any other literature or writing course except ENGL 100; or by permission of instructor. [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

ENGL 390A | Special Projects - ENGL

An advanced independent or small group study course designed to permit an individual student or a group of students to undertake work in writing beyond, or different from, that of ENGL 101 and ENGL 102. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [1 credit] [1 contact hour]

ENGL 390B | Special Projects - ENGL

An advanced independent or small group study course designed to permit an individual student or a group of students to undertake work in writing beyond, or different from, that of ENGL 101 and ENGL 102. This course is repeatable up to 2

times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [2 credits] [2 contact hours]

ENGL 390C | Special Projects - ENGL

An advanced independent or small group study course designed to permit an individual student or a group of students to undertake work in writing beyond, or different from, that of ENGL 101 and ENGL 102. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [3 credits] [3 contact hours]

Engineering

ENGR 200 | Computer Aided Design & 3D Rep

This course will provide students with broad applied knowledge in 2 and 3 dimensional computer aided design (CAD) and modeling software and 3 dimensional replication techniques. Students will learn CAD software packages used by professionals in the engineering and architectural fields to develop proficiency in computer aided technical drawing and design. Student will also learn techniques to produce and evaluate prototypes using 3D printers and digitizers. This course is cross-listed with AGEN 200. [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ENGR 200X | Computer Aided Design & 3D Rep Lab

The lab component to ENGR 200 lecture. Co-requisite: ENGR 200 [Spring] [0 credits] [3 contact hours]

Environmental Health

ENHT 101 | Intro Environmental Health (C)

An introduction to the principles of environmental control as they relate to protection of human health. Topics include history and philosophy of public and environmental health, basic epidemiology, solid waste management, rodent, insect and plant pest control; childhood and occupational lead poisoning, on-site waste-water disposal systems, individual water supply systems, temporary residences, recreation areas, migrant labor camps, air quality, noise, housing quality, institutional environmental health and an overview of state and federal law, codes, rules and regulations which apply in these areas. Field trips may be required. [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

Environmental

ENVR 102 | Envrnmntl & Enrgy Tech Seminar

The Environmental and Energy Technologies Seminar introduces students to the industries, technologies, practices, skills and jobs associated with renewable energy, waste management and environmental issues. Among other activities, the course features a series of presentations on a variety of environmental and energy-related topics. The presentations will be delivered by campus faculty, guest speakers from industry and academia, and fellow students returning from internships. [Fall] [2 credits] [2 contact hours]

ENVR 200 | Energy Industry Instrument.

Energy Industry Instrumentation is designed to provide students with an understanding of state of the art instrumentation available for both domestic and industrial use for the more intelligent usage of energy and energy conservation. Instrumentation will concentrate on "Smart" systems that have the ability to coordinate usage between dissimilar appliances and disparate energy sources. Prerequisite: One semester of Physics. [Spring] Applied Learning-Other [3 credits] [3 contact hours]

ENVR 220 | Composting Science & Tech

Composting Principles and Applications. Students will learn the fundamentals of composting and become familiar with the technology and applications of composting and compost use. Composting will provide a vehicle for students to learn and apply principles of several other scientific disciplines including biology, chemistry, soil science, sustainability and mechanics. Topics include the composting process, feedstock characteristics, composting methods and equipment, process management, site management, the functions and use of compost, compost quality and compost markets. Applications will range from the backyard composting of kitchen scraps to on-farm composting of manure to enclosed industrial-strength solid waste facilities. The course will incorporate case studies of composting facilities and applications. Co-requisite: ENVR

220X. Prerequisite: Introductory biology, chemistry, soils course or permission of the instructor. [Fall] Applied Learning-Field Study [2 credits] [2 contact hours]

ENVR 220X | Composting Science & Tech Lab

Composting Principles and Applications Lab. Via practical hands-on activities and field work, students will learn the principles, science, applications and technology associated with composting and compost use. Students will work in groups to create, monitor and manage a pilot-scale composting pile through the semester. Co-requisite: ENVR 220 [Fall] Applied Learning-Field Study [1 credit] [2 contact hours]

ENVR 290A | Spec Proj Env Science

An independent study of topics of special interest environmental science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

ENVR 300 | Instrumentation

Instrumentation provides students an understanding of a broad range of environmental conditions and control parameters and the instruments that monitor and control them. Students learn the principles for measuring common environmental and energy parameters like pressure, temperature, fluid flow, heat, electrical flow and voltage, weight, and chemical constituents. Students also learn the systems and equipment used to collect and record environmental/energy data and send control signals. Such systems employ devices like limit switches, relays, power supplies, wiring terminals, transducers, electrical meters, data loggers, and programmable logic controllers (PLCs). This lecture course is accompanied by a separate but required 2-credit lab course (ENVR 300X). Prerequisites: PHYS 102, 112, or 212, and MATH 112 or higher. [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ENVR 300X | Instrumentation Lab

Instrumentation laboratory provides students with hands-on experience and skills necessary to work with a variety of instrumentation equipment and systems. Students learn to recognize, select, assemble, calibrate and use devices that measure and record position, temperature, pressure, fluid flow, force, weight, torque, level, chemicals, and electrical variables. Examples include limit switches relays, power supplies, wiring terminals, thermocouples, thermistors, hydrometers, pressure transducers, anemometers, flow meters, electrical meters, data loggers, and programmable logic controllers (PLCs). This lab accompanies a separate but required 2-credit lecture course (ENVR 300). Co-requisite: ENVR 300 [Spring] Applied Learning-Other [2 credits] [4 contact hours]

ENVR 301 | Unit Operations and Processes

Unit Operations and Processes is designed to introduce students to the fundamental principles and basic physical operations and chemical and biological processes used for most of the major waste treatment unit operations. Emphasis will be placed on understanding the physics, thermodynamics, biology, chemistry and kinetics upon which each process is based, and on the basic calculation of treatment system design parameters. Co-requisite: ENVR 301X. Prerequisites: PHYS 111 and MATH 231. [Fall] Applied Learning-Other [4 credits] [2 contact hours]

ENVR 301X | Unit Operations and Processes Lab

The lab component for ENVR 301. Co-requisite: ENVR 301 [Fall] [0 credits] [2 contact hours]

ENVR 303 | Applied Thermodynamics

Applied Thermodynamics is an advanced three-credit course that provides the student with a comprehensive understanding of the basic principles, concepts, and methods of thermodynamics with emphasis on the First and Second Laws. The macroscopic variables of pressure, volume, and temperature will be introduced and related to the thermodynamic concepts of work, internal energy, enthalpy, and entropy. Course work will also cover the ideal gas laws, phase diagrams, conservation of mass and energy and will include a discussion of reversible and irreversible processes. Students will develop their ability to analyze problems in a simple and logical manner by applying the basic principles of thermodynamics. While the course will be an introduction to classical thermodynamics, the approach to the material will be from an engineering perspective with examples and problems taken from real-life scenarios. This course is cross-listed with PHYS 303. Prerequisites: PHYS 111/111X or PHYS 211/211X and MATH 231 [Fall] Applied Learning-Other [3 credits] [3 contact hours]

ENVR 325 | Environmntl Scientific Comm I

The ability to solve environmental problems requires people who are trained in effective communication of complex ideas. In this course we will cover the skills and techniques necessary for environmental managers to write and organize scientific papers, reports, proposals, and articles for a public audience. The primary focus pf the class will be to choose a research topic, develop writing skills, and produce a literature review. Prerequisite: 60 credits towards a degree in Environmental Management or permission of the instructor. [Fall] [1 credit] [1 contact hour]

ENVR 326 | Environmental Res Methods I

This course is the second in a sequence of four capstone courses designed to give students in environmentally-focused disciplines the opportunity to complete an independent project. The focus of the class will be the design of environmental research and management projects. Determination of the study design will be based upon the objectives of the student proposal. Students will also gain familiarity with environmental scientific methodology, data collection, interpretation, analysis and reporting. Prerequisite: ENVR 325 [Spring] [1 credit] [1 contact hour]

ENVR 340 | Biofuels and Bioenergy

Biofuels and Bioenergy will provide students with basic understanding of biofuels and bioenergy. The primary focus of the course is on the renewable feedstocks (non-food plants, food crops, and agricultural waste) used in the production of biofuels which can be used as transportation fuels, heat, and electricity. The production, harvesting, storage and processing of feedstocks to biofuels and biodiesel will be discussed. Other topics include conversion of biofuel residues into bio-oil, biodiesel production from oil seeds and biomass conversion to fuel grade bio ethanol, heat and electricity. The course consists of a vigorous lecture series, informal discussions, review of current literature on biofuels and bioenergy and oral presentations. Students will also get the opportunity to listen to guest speakers working on biofuels and bioenergy. Prerequisites: CHEM 231 or Instructor permission, AND BIOL 116 OR BIOL 117, AND Junior status [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ENVR 350 | Environmental Law & Regulation

This course provides an introduction to environmental laws and regulations including an introductory overview of administrative law and procedure. Additionally, the course provides a basic understanding of environmental laws and discusses how various factors influence environmental policy and law. The course emphasizes the development of critical thinking skills by analyzing various court decisions that have helped shape the environmental landscape. Prerequisite: ENGL 101 and junior standing [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ENVR 360 | Solar Energy Photovoltaic Tech

This course provides students with an understanding of the fundamentals of solar energy with emphasis on contemporary solar photovoltaic (PV) technologies. It covers photoelectric conversion, energy production, solar array sizing, orientation and tracking, economic analysis, equipment selection, electrical components, energy storage, system monitoring, safety and related siting and construction issues. Prerequisite: PHYS 101 or PHYS 112 or permission of instructor, Co-requisite: ENVR 360X [Fall] [2 credits] [2 contact hours]

ENVR 360X | Solar Enrgy Phtvltc Tech Lab

This course is the laboratory complement to ENVR 360: Solar Energy Photovoltaic Technology. It provides hands-on learning of solar energy safety practices, siting factors, system performance, assembly, and measurement skills necessary for solar energy systems. Co-requisite: ENVR 360 [Fall] Applied Learning-Other [1 credit] [2 contact hours]

ENVR 370 | Biodiversity Field Studies

This course will provide an immersion experience for students in an international setting. Students will apply the skills they have learned in their respective curricula to address advanced questions related to natural resource conservation within different cultural settings. Students will be required to keep a journal and give a presentation on the experience upon return. This course is repeatable up to 4 times. Prerequisite: BIOL 111 and permission of instructor. [Winter, Summer] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [2 credits – 90 contact hours] [3 credits – 135 contact hours]

ENVR 390A | Spec Proj Env Science

An advanced independent study of topics of special interest in environmental science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 3 times. [Fall, Spring] [1 credit] [1 contact hour]

ENVR 390B | Spec Proj Env Science

An advanced independent study of topics of special interest in environmental science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

ENVR 390C | Spec Proj Env Science

An advanced independent study of topics of special interest in environmental science. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] [3 credits] [3 contact hours]

ENVR 401 | Alternative Energy Prod. Tech.

Alternative Energy Production Technology is an advanced three credit hour course that will provide students with a comprehensive overview of the different alternative energy systems that are in use today. The course will introduce the basic scientific and engineering concepts used in designing and analyzing the different energy technologies with emphasis on real-world applications of such technologies through the introduction of several case studies related to the field. Prerequisite: PHYS 112 OR PHYS 212. [Fall] [3 credits] [3 contact hours]

ENVR 411 | Environmental Pollution

Environmental Pollution Prevention and Remediation is designed to provide the student with an understanding of the fate of contamination on various media (air, water and soil) and the mechanisms for transport and attenuation of substances within the media. Various remediation technologies will be discussed for each media. Students will be exposed to concepts involving the effects of human exposure to various pollution sources and risk analysis of remediation alternatives. Prerequisites: PHYS 111 or 112, MATH 231, and ENVR 301. [Fall] Applied Learning-Other [3 credits] [3 contact hours]

ENVR 415 | Environmentl Resrch Methods II

This course is the third in a sequence of four capstone courses designed to give students in environmentally- focused disciplines the opportunity to complete an independent project. The focus of the class will be data management, interpretation, analysis, presentation, and discussion of their environmentally-based project. Students in this course should be in the process of conducting a capstone project or have recently completed their project. Prerequisite: ENVR 326 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

ENVR 416 | Environmntl Scientific Comm II

Sharing research results and management ideas is an integral part of the scientific and natural resource management process. In this class, we will study and practice skills necessary to give effective, professional oral presentations and posters in the environmental field. This course will be the culmination of the capstone sequence and will require a final paper, poster and presentation resulting from the student's project. Prerequisite: ENVR 415 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [2 credits] [2 contact hours]

ENVR 425 | Watershed Management

Watershed management is an advanced three-credit course that provides the student with a comprehensive understanding of the scientific, technical, and policy-related fundamentals in the management of watersheds. Principles of hydrology and resource conservation are applied to the study of watersheds and their sustainable management for water quality protection. Emphasis is placed upon the roles of watershed soil and vegetation as influencing water quality. Prerequisites: PSCI 221 and PSCI 324. [Spring] Applied Learning-Other [3 credits] [4 contact hours]

ENVR 460 | Internship in Environmental Mgmt

Supervised work experience and applied learning in an environmentally focused business, government agency, non-governmental organization, or educational setting. Students will carry out a planned program of educational experiences

under direct guidance of an environmental management site supervisor. During the internship, an academic department faculty member will serve as an internship supervisor. A daily journal quantifying work activities and final reports are required. Evaluation will be based on written and oral reports of work experience activities and the quality of experiences and learning gained from the internship. This course is S/U graded only. Internship credit hours may range from 3 credit hours to a maximum of 13 credit hours, as a substitution for upper-level electives and/or ENVR 415 and ENVR 416. Students who wish to request substitution of ENVR 415 and/or ENVR 416 must provide their academic advisor with a proposal describing how the elements of the Capstone sequence will be included in their curriculum. Course may be repeated to a maximum of 13 credit hours. Each credit hour requires 45 hours of relevant work experience. Prerequisite: Junior standing [Spring, Summer, Fall, Winter] Applied Learning-Internship [3-13 credits] [3-13 contact hours]

ENVR 480 | Envrnmntl Profssns Colloquium

This course is designed to provide Environmental Management students with a real-world experience working with a professional in an Environmental Management related discipline. The specific nature of the exposure will vary depending on the Environmental professional contracted. The professional experience will consist of a minimum of 120 hours, although students are encouraged to have a full summer or semester worth of applied experience. Students will be required to create a set of learning objectives with an academic faculty mentor, with input and reporting from the Environmental professional, and to submit a full report at the end of the experience. Graded S or U. Prerequisite: 60 credits of coursework [Fall, Spring] [3 credits] [3 contact hours]

Foundation for College Success

FFCS 101 | Foundation for College Success

The Foundations for College Success course focuses on first-year students as they transition from their high school or post high school experience to the college experience. Through a variety of comprehensive curricular and co-curricular initiatives, students will develop the skills and attitudes necessary to maximize their academic success. This experience will also familiarize students with campus resources and how to use them; will foster development of positive relationships between and among students, faculty, staff, and administrators; will introduce students to the processes of academic and career planning; and will prepare students to become life-long learners, responsible citizens, and effective leaders. This course is required of all incoming freshmen so course withdrawals are not permitted; a passing grade is required for graduation. This is a 12-week course and is S/U graded only. [Fall, Spring] [1 credit] [2 contact hours]

FFCS 102 | Cultivating Academic Success

The Cultivating Academic Success course focuses on assisting first-year students with developing knowledge, skills, and abilities for restoring academic standing and achieving academic success. The course will facilitate a self-reflective and individualized approach to planning for academic success. Students will learn and apply study techniques and personal management strategies, identify barriers to academic success and apply strategies to overcome them, create an academic development plan, and utilize educational resources and services. This course is required of all second semester first-year students with a grade point average below the requirements for academic retention, so course withdrawal is not permitted; a passing grade is required. This is an 8-week course and is S/U graded only. [Spring] [1 credit] [2 contact hours]

French

FREN 101 | Beginning French I (C)

This is the first semester of a two-semester sequence in the basic skills of understanding, speaking, reading and writing the French language. [Fall, Spring] Gen Ed World Languages, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

FREN 102 | Beginning French II

This is the second semester of a two-semester sequence in the basic skills of understanding, speaking, reading and writing the French language. Prerequisite: FREN 101 or three years of high school French and a 75 or higher on the NYS Regents [Spring] Gen Ed World Languages, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

FREN 201 | Continuing French I

This is the first semester of a two-semester sequence in intermediate-level French. Following a thorough review of basic grammar, this course will focus upon development of fluency in reading, writing, understanding and speaking the French

language. Prerequisite: permission of the instructor, high school French and a 75 or higher on the Regents [Fall] Gen Ed Foreign Language, Liberal Arts/Sciences Elective [3 credits] [4 contact hours]

FREN 202 | Continuing French II

A sequel to FREN 201, this is the second semester of a two- semester sequence in intermediate-level French. Prerequisites: FREN 201 or permission of the instructor. [Fall] Liberal Arts/Sciences Elective [3 credits] [4 contact hours]

Financial Services Management

FSMA 300 | Investments (C)

A survey of various investment vehicles with a focus on securities markets. Analysis of theories and practices in portfolio management, security analysis, investment programs and regulations. An assessment of the investment environment and market indicators is emphasized. Prerequisite: ACCT 235 or 335 [Spring] Applied Learning [3 credits] [4 contact hours]

FSMA 310 | Income Tax Planning (C)

This course will focus on the areas of federal income taxation that are commonly used in the financial planning process. Understanding the methods of calculating a taxpayer's federal liability and how the income-tax structure impacts an individual's financial planning decisions will be stressed. Co-requisite: FSMA 300 or permission of the instructor. [Spring] Applied Learning [3 credits] [3 contact hours]

FSMA 325 | Insurance & Risk Management(C)

The goal of this course is to enable the student to recognize and understand the terms and phrases used in various life, health, property, and liability insurance policies and to determine the proper circumstances warranting coverage. Students will gain skills in recommending the type and extent of insurance an individual should consider under his or her particular circumstances. [Fall] Applied Learning [3 credits] [3 contact hours]

FSMA 330 | Computer App Financial Svcs(C)

Computer software applications in preparing individual tax returns, recording transactions, reporting accounting activity, generating personal financial statements, and analyzing various aspects of a personal financial plan. A course designed for both accounting and financial services majors to bring together the theoretical knowledge acquired with the software commonly used in practice. Prerequisites: ACCT 101, ACCT 103, CITA 110, FSMA 201 [Spring] [3 credits] [4 contact hours]

FSMA 340 | Emp Benefit/Retirement Plan(C)

A study of retirement systems and employee benefit plans. Topics to be discussed include: social security, individual retirement accounts; tax-sheltered annuities; qualified vs. non-qualified plans; group life, health, and disability insurance; and deferred compensation. Prerequisite: FSMA 201 [Fall] Applied Learning [3 credits] [4 contact hours]

FSMA 410 | Estate Planning (C)

This course covers the principles involved in estate planning for the individual. Topics covered are an overview and the conceptual framework of estate planning, federal estate planning calculations, proper techniques of estate planning, trusts, gifting strategies, and planning for a closely held business. Prerequisite: FSMA 300 or permission of the instructor [Fall] Applied Learning [3 credits] [3 contact hours]

FSMA 420 | Case Studies Financial Plng(C)

Focus will be given to actual situation analysis and applying current insurance, investment, retirement planning, and tax tools and concepts to a variety of case studies. Each area of insurance, investments, income taxation, retirement and employee benefits, and estate taxation will have at least two directly related case studies. Also, each student will complete two comprehensive problems. Prerequisite: FSMA 410 Estate Planning. Applied Learning [3 credits] [3 contact hours]

Fisheries and Wildlife – Natural Resources

FWLD 101 | Intro Natural Resource Con (C)

A description of conservation movements in the United States with particular emphasis in the areas of fisheries and wildlife conservation. The present and future roles of conservation in development of the resources of our country are covered, in addition to descriptions of job opportunities and responsibilities in various fields of natural resource conversation. Field

opportunities for sampling fish and wildlife populations and habitat will be provided in the labs. This course is open to both majors and nonmajors. Co-requisite: FWLD 101X [Fall] Applied Learning-Field Study [3 credits] [2 contact hours]

FWLD 101X | Intro Natural Resource Con Lab

The lab component for FWLD 101. Co-requisite: FWLD 101 [Fall] [0 credits] [2 contact hours]

FWLD 112 | Aquaculture Techniques

This course is designed to give students hands-on experience working in the College aquaculture facilities. Students will develop skills and knowledge in fish health, feeding techniques, water quality monitoring, fingerling rearing techniques, brood-stock care and spawning techniques. Hours by arrangement. [Fall] Applied Learning-Field Study [1 credit] [3 contact hours]

FWLD 115 | Fisheries Techniques

The course will cover a wide range of laboratory and field techniques relating to chemical, physical and biological sampling of fish and their environments. Students will be provided with first-hand experiences in small boat operations, care and handling of live fish, capture and observational techniques, sonar, biotelemetry, hydroacoustics, tagging and marking, aging, habitat and water quality measurement, surveys and collections, analytical equipment maintenance and many other areas. (boots/waders required) [Spring] Applied Learning-Field Study [3 credits] [4 contact hours]

FWLD 125 | Wildlife Techniques

The course will cover a wide range of laboratory and field techniques related to the sampling of wildlife. Students will be provided first-hand experience with wildlife habitat improvement, developing Power Point presentations, global positional systems, 35 mm photography, and capture, handling, and banding of birds. Field trips will be taken to examine deer winter ranges and other wildlife habitats. Each student will independently conduct and write up a field study. (Fisheries and Wildlife majors only) Co-requisite: FWLD 125X [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Field Study [3 credits] [1 contact hour]

FWLD 125X | Wildlife Techniques Lab

The lab component for FWLD 125. Co-requisite: FWLD 125 [Spring] [0 Credits] [3 contact hours]

FWLD 209 | Fish Nutrition (C)

This course introduces students to the nutritional issues involved in the aquaculture industries including nutrient requirements and ration formulation, feed acceptability and feed processing and storage. [Fall] Applied Learning-Other [1 credit] [2 contact hours]

FWLD 211 | Wildlife Law Enforce & PR (C)

A presentation and interpretation of federal and state rules and regulations as they apply to hunting and fishing in the country. The role of the environmental conservation officer is discussed in relation to the legislation enactment and enforcement of these laws. The importance of public relations in law enforcement activities will be emphasized. Co-requisite: FWLD 211Y [Spring] [2 credits] [2 contact hours]

FWLD 211Y | Wildlife Law Enforce & PR

The recitation component for FWLD 211. Co-requisite: FWLD 211 [Spring] [0 credits] [1 contact hour]

FWLD 217 | Hatchery Techniques

This course is designed to give students hands-on experience working in the College's cold-water hatchery. Students will develop skills and knowledge in fish health, feeds, brood-stock care, egg incubation and fry rearing techniques. Hours by arrangement. [Spring] Applied Learning-Field Study [1 credit] [3 contact hours]

FWLD 220 | Wildlife Management (C)

Students will be taught the application of wildlife management techniques. The course will cover the management of a variety of game and non-game wildlife species. Skills will be developed in the use of topographic maps, aging of wildlife species, raptor census and banding, handling and censusing wildlife, radio tracking, habitat analysis and nuisance wildlife management. Each student will be required to independently conduct a field study. (Fisheries and Wildlife majors only) Co-

requisite: FWLD 220X [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [3 credits] [2 contact hours]

FWLD 220X | Wildlife Management Lab

The lab component for FWLD 220. Co-requisite: FWLD 220 [Fall] [0 credits] [4 contact hours]

FWLD 221 | Fisheries Science (C)

This course will introduce the student to the principles, techniques and applied research used by fishery scientists. The application and understanding of scientific methods used by practicing fishery biologists will be emphasized. Students will collect, process and contrast fisheries data w/emphasis on the purpose for which the data was collected. This is a field intensive course that looks at the pros and cons of how the choice of fisheries gear and methods can influence data and conclusions reached from that data. Co-requisite: FWLD 221X [Spring] Applied Learning-Research [3 credits] [1 contact hours]

FWLD 221X | Fisheries Science Lab

The lab component for FWLD 221. Co-requisite: FWLD 221 [Spring] [0 Credits] [3 contact hours]

FWLD 270 | Fish & Wildlife Field Studies

This course is for students who desire a broader look at ecological systems. Travel will be involved with this course as it is designed to be taught off-campus in an immersion experience field setting. Students will study some aspect of biology, ecology, fish and/or wildlife unique to the location. Students will be required to keep a journal and give a presentation on the experience upon return. Credits will be assigned based on trip duration. This course is repeatable up to 4 times. Prerequisite: BIOL 111 [Winter] Applied Learning-Field Study [3 credits] [3 contact hours]

FWLD 290A | Spec Projects Fish/Wild

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences in the field of fisheries and wildlife. Students will complete a project under the direction and guidance of their faculty advisor. At the conclusion of the semester, students will report their findings to Fisheries and Wildlife students and faculty. [Fall, Spring] Applied Learning-Research [1 credit] [1 contact hour]

FWLD 290B | Spec Projects Fish/Wild

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences in the field of fisheries and wildlife. Students will complete a project under the direction and guidance of their faculty advisor. At the conclusion of the semester, students will report their findings to Fisheries and Wildlife students and faculty. [Fall, Spring] Applied Learning-Research [2 credits] [2 contact hours]

FWLD 290C | Spec Projects Fish/Wild

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences in the field of fisheries and wildlife. Students will complete a project under the direction and guidance of their faculty advisor. At the conclusion of the semester, students will report their findings to Fisheries and Wildlife students and faculty. [Fall, Spring] Applied Learning-Research [3 credits] [3 contact hours]

FWLD 320 | Ecology & Management Waterfowl

An examination of the ecology of ducks, geese and swans of North America from the perspective of annual cycle events. Laboratory exercises concentrate on the application of current field techniques used in the study of waterfowl ecology, and the management of waterfowl populations and habitats. A weekend field trip to the St. Lawrence Valley is required. Prerequisites: BIOL 131, FWLD 220 or FWLD 221. [Fall] Gen Ed Comp-Information Literacy, Applied Learning-Research [3 credits] [5 contact hours]

FWLD 325 | Aquaculture Engineering (C)

An introduction to the basic principles of technical engineering practices applied to the design and maintenance of aquaculture facilities and equipment. Included are: surveying and leveling, design of water handling systems; basic electrical theory, circuit design, electric motor circuits and electrical troubleshooting; small marine engine theory and troubleshooting; and fiberglass tank repair. Prerequisite: MATH 111 or its equivalent. [Fall] Applied Learning-Other [3 credits] [4 contact hours]

FWLD 330 | Production Aqua/Mariculture

The objective of this course is to introduce students to the principles and practices applied in production aquaculture/mariculture. Emphasis will be placed on the underlying concepts and how they affect choices of equipment, methods and technology appropriate to the production of aquatic and marine organisms in North America and the world. Laboratories emphasize hands-on experiences with the grow-out of eggs, fry and fingerlings in the campus aquaculture facilities. Off campus field trips are an essential (and mandatory) part of this course. [Spring] Applied Learning-Field Study [3 credits] [4 contact hours]

FWLD 350 | Wetlands Assess & Delineation

A techniques course dealing with the recognition of hydric soils, hydric vegetation, wetland hydrology and the delineation of jurisdictional wetland boundaries. Hands-on laboratory exercises entail assessing the functional value of wetlands, collecting and identifying wetland vegetation, interpreting hydrological and biological indicators, and delineating wetland boundaries. Prerequisite: Introductory plant or soils course; B.T. students only [Fall] Applied Learning-Field Study [3 credits] [5 contact hours]

FWLD 351 | Wildlife Policy & Reg Comply

A review of the policies of federal and state agencies that regulate and manage wildlife populations and their habitats. Reviewing environmental impact statements will be emphasized, along with other procedures of regulatory compliance designed to evaluate impacts of land development on threatened and endangered wildlife. Prerequisite: FWLD 211, FWLD 350 [Fall] [1 credit] [1 contact hour]

FWLD 370 | Biodiversity Field Studies

This course will provide an immersion experience for students in an international setting. Students will apply the skills they have learned in their respective curricula to address advanced questions related to natural resource conservation within different cultural settings. Students will be required to keep a journal and give a presentation on the experience upon return. This course is repeatable up to 4 times. Prerequisite: BIOL 111 and permission of instructor. [Winter, Summer] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [2 credits- 90 contact hours] [3 credits – 135 contact hours]

FWLD 390A | Special Projects Fish/Wildlife

An advanced independent study of topics of special interest to Bachelors students enrolled in the Fisheries and Wildlife Department. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. Hours to be arranged. [Fall, Spring] Applied Learning-Research [1 credit] [1 contact hour]

FWLD 390B | Special Project Fish/Wildlife

An advanced independent study of topics of special interest to Bachelors students enrolled in the Fisheries and Wildlife Department. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. Hours to be arranged. [Fall, Spring] Applied Learning-Research [2 credits] [2 contact hours]

FWLD 390C | Special Project Fish/Wildlife

An advanced independent study of topics of special interest to Bachelors students enrolled in the Fisheries and Wildlife Department. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. Hours to be arranged. [Fall, Spring] Applied Learning-Research [3 credits] [3 contact hours]

FWLD 393 | Wildlife Crime Investigation

This course will instruct students on the essential steps and required techniques for criminal investigations of wildlife crime. Students will learn about the importance of proper crime scene management, methods involved in processing and reconstructing a crime scene, and the rules of physical evidence identification, documentation, collection, preservation, and forensic analysis. Students will participate in hands-on, practical exercises to learn the multiple methods of crime scene management and evidence gathering. Prerequisites: FWLD 211 and FWLD 220 [Fall] Applied Learning-Field Study [3 credits] [3 contact hours]

FWLD 395 | Wildlife Damage Mgmt (C)

This course is designed as an introduction to the fundamentals of prevention and control of damage caused by vertebrate species. Lectures cover the philosophical, ecological, and behavioral basis for controlling population levels or individuals of problem species. Students will acquire sufficient knowledge of the biological, regulatory, practical, and social considerations necessary for making decisions to manage wildlife damage. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Research [3 credits] [4 contact hours]

FWLD 400 | Pond Management (C)

The course objective is to provide an overview of pond management for production and/or recreational purposes. This course provides a synthesis of the diverse disciplines involved in culturing organisms in ponds and managing ponds for recreational fisheries. The focus is on management problems associated with site selection, design and construction, water quality and species. Prerequisite: BIOL 318 or permission of instructor. [Fall] Applied Learning-Field Study [1 credit] [4 contact hours]

FWLD 421 | Fisheries Management

This course will follow the principles and techniques used by practicing fisheries managers. Fisheries data and survey techniques essential in fisheries management will be examined, including population estimates, standard methods of habitat analysis and development of fisheries management plans. Emphasis will be placed on the management of northeastern aquatic environments, particularly environmental conditions, productivity, important species, abiotic and biotic interrelationships and sampling techniques. The biology and management of important northeastern commercial, recreational and aquacultural fisheries will also be emphasized. Prerequisites: FWLD 115, FWLD 221 and MATH 125. [Spring] Applied Learning-Research [3 credits] [4 contact hours]

FWLD 430 | Fish Hatchery Management

The focus of this course is on the application of modern aquaculture principles to the management of hatchery operations, systems, personnel and procedures. Analyzing the criteria on which hatchery decisions are made is emphasized. This course assimilates aquaculture knowledge, methods and techniques into advanced managerial planning. Case studies and actual hatchery situations provide students with hands-on experience in the management of important hatchery systems, procedures and personnel. Practical experience in the management of brood-stock, spawning, and incubation is provided at the campus hatchery. Prerequisite: FWLD 330 [Fall] Applied Learning-Field Study [3 credits] [4 contact hours]

FWLD 440 | Fisheries Research I

The course is designed to provide the opportunity for Fisheries and Aquaculture students to investigate areas of interest, to conduct independent study or research, or carry out an applied industry development project. The objective is to provide first-hand experience in data collection, interpretation and presentation. Further, this course provides the opportunity for Fisheries and Aquaculture students to pursue, under the guidance of a faculty member, a project that does not fit within the framework of the current curriculum. Available to BT students in the Fisheries and Aquaculture curriculum. Prerequisites: COMM 301 -Technical Writing and A.A.S. Fisheries courses. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [2 credits] [2 contact hours]

FWLD 441 | Fisheries Research II

This course is designed to be taken in sequence in the Fall semester immediately following FWLD 440 Fisheries Research I. The course is designed to provide the opportunity for Fisheries and Aquaculture students to investigate areas of interest, to conduct independent study or research, or carry out an applied industry development project. The objective is to provide first-hand experience in data collection, interpretation and presentation. Further, this course provides the opportunity for

Fisheries and Aquaculture students to pursue, under the guidance of a faculty member, a project that does not fit within the framework of the current curriculum. Available to BT students in the Fisheries an Aquaculture curriculum. Prerequisites: FWLD 440:Fisheries Research I. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [2 credits] [2 contact hours]

FWLD 444 | Wildlife Science (C)

This course is designed as a capstone course in the Wildlife Management BT program that guides students through the scientific research process. Students will explore a range of topics relating to primary scientific research including acquisition of funding, research design and hypothesis testing, statistical analysis, scientific/technical writing and presentation, ethics in science, and communicating scientific findings to a variety of audiences. Students will complete research projects and present their findings to peers and faculty. Co-requisite: FWLD 444X. Prerequisites: BIOL 220, FWLD 125, and MATH 125 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [3 credits] [2 contact hours]

FWLD 444X | Wildlife Science Lab

The lab component for FWLD 444. Co-requisite: FWLD 444 [Spring] [0 Credits] [2 contact hours]

FWLD 450 | Internship in Fish/Wildlife

Supervised field work in a selected fisheries and wildlife business, academic institution or government agency. Students carry out a planned program of educational experiences under the direct supervision of the off-campus owner, manager, director or supervisor. Each intern will be supervised by a member of the faculty on a regular basis. Evaluations will be based on the quality of work performed during the internship. Written and oral reports of internship experiences will be required. Graded as S/U only. [Fall, Spring, Summer] Applied Learning-Internship [15 credits] [15 contact hours]

FWLD 451 | Aquatic & Marine Resource Mgmt

Aquatic and marine resource management issues are technically and politically complex, involving many interests, perspectives and stakeholders. This course emphasizes the information needs for policy and decision making and provides examples of the interface between science and policy. This is accomplished through lectures, field experiences, and professional experiences in aquatic and marine resource management. The course is designed to encourage critical thinking on environmental issues and to introduce the information requirements for environmental management and decision making; to impart the technical and analytical skills which form the basis of resource assessment; and to reinforce and develop transferable skills in communication, planning, leadership, and teamwork. Prerequisites: BIOL 215 and BIOL 415 [Spring] Applied Learning-Research [3 credits] [4 contact hours]

Graphic Arts and Design

GART 112 | Digital Media

An introduction to the basic concepts and techniques of digital media. This course provides a foundation for use of the computer as a design and production tool for graphic design. It introduces the student to the use of operating systems, server environment, word processing, and multimedia presentations. The student acquires a knowledge of digital image processing and production, including input devices, color representation, imaging file formats, basic digital editing and various output devices. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

GART 151 | Typography and Layout

A combination lecture/studio course that introduces the student to the technical vocabulary of typography and the basic principles of page layout. The course includes a historical overview of the development of writing systems, type, publishing, and typesetting. The student will use the computer and page layout software to create a variety of documents in which images and text are combined. Particular emphasis will be placed on the principles of design as they pertain to page layout. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

GART 251 | Computer Graphics I

An introduction to the basic concepts and techniques of graphic illustration using vector-based software. Students will have hands-on experience designing a variety of illustrations and documents in which illustrations are incorporated. Projects

include logos, a product label, poster and advertisements. Using Illustrator for both paper-based and Web-based publications will be covered. Prerequisite: GART 151 [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

GART 252 | Computer Graphics II

A study of the concepts and techniques used in the creation of raster-based images using image editing software. The course will cover the integration of raster and vector images in paper-based publications, and the creation and optimization of images for use in on-line documents. Particular emphasis will be placed on the application of the elements of design in all documents produced. Prerequisite: GART 251 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning [3 credits] [3 contact hours]

GART 265 | Web Design

This course introduces the student to the design principles and basic markup languages used to create the layout of web pages. We will examine the components of positive user experience in terms of interface design, information architecture, page navigation, and layout to construct several different types of web sites. The creation and preparation of graphic elements for web publication will also be discussed. Particular attention will be paid to the role that visual design plays in user experience. File size considerations, file formats, and color models will also be covered. [Fall, Spring] Applied Learning [3 credits] [4 contact hours]

GART 270 | Digital Imaging (C)

This course will introduce the student to the principles of digital photography. These include the operation of digital cameras, the downloading of images and the editing and manipulation of photographic images with image editing software. Topics include the creation of composite images, resolution issues and output devices. Design and composition will be emphasized. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

GART 280 | Portfolio Prep & Presentation

In this course, students compile works from all the Art and Graphic Design courses they have taken during their two years at the College. Presentation options will be examined, resume design and content possibilities reviewed and a mock interview conducted in which students present and discuss their work. Each student will also prepare a Web site that highlights their best creative efforts while at Cobleskill. [Fall, Spring] [1 credit] [1 contact hour]

GART 290A | Special Project

An independent or small group study course designed to permit an individual student or group of students to pursue topics or projects approved by the supervising faculty. This course is repeatable up to 2 times. Prerequisites: Must have the approval of the supervising faculty before signing up for the course. Must be a Graphic Design major, have completed 30 credit hours, and have at least a 2.50 overall GPA. [Fall, Spring] Applied Learning [1 credit] [1 contact hour]

GART 290B | Special Project

An independent or small group study course designed to permit an individual student or group of students to pursue topics or projects approved by the supervising faculty. This course is repeatable up to 2 times. Prerequisites: Must have the approval of the supervising faculty before signing up for the course. Must be a Graphic Design major, have completed 30 credit hours, and have at least a 2.50 overall GPA. [Fall, Spring] Applied Learning [2 credits] [2 contact hours]

GART 290C | Special Project

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by the supervising faculty. Prerequisites: Must have the approval of the supervising faculty before signing up for the course. Must be a Graphic Design major, have completed 30 credit hours, and have at least a 2.50 overall GPA. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

GART 299B | Motion Graphics

This course introduces students to concepts and techniques required to effectively communicate using motion graphics. Students will study the application of motion graphics in a variety of media including television, film, commercials, gaming, and interactive media. While gaining technical proficiencies, students will apply fundamental motion graphic principles including: planning, storyboarding, composition, timing, and audio integration. Projects will focus on the successful

combination of vector, raster, typographic, and audio elements to effectively communicate ideas. Prerequisite: GART 251 [Spring] [3 credits] [3 contact hours]

GART 330 | Web Design II

This course builds on the student's knowledge in the use of design principles and markup languages and introduces the design principles and programming languages used to create dynamic content and interactivity. Topics also include The World Wide Web Consortium (W3C) standards, browser capabilities, information architecture, bandwidth considerations, image formats, image maps, frames, and computer-generated imagery. This course is cross-listed with CITA 330. Prerequisites: CITA 130 or GART 265. Course fee of $45 is required. [Spring] [3 credits] [3 contact hours]

GART 351 | Advanced Typography

This course expands on the fundamentals covered in Typography and Layout by emphasizing type as a communicative and aesthetic tool, and explores legibility and meaning through composition. Students develop further typographic fluency for print and screen through advanced exercises in form and content, information design, proportional systems, and experimental typography. Each project will consider digital prepress production requirements by focusing on digital workflow, preflight software, file analysis and PDF document creation. Prerequisite: GART 151 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

GART 352 | Digital Prepress Production

This course explores the many facets of digital prepress production for print by focusing on preflight software, fonts, text and graphic requirements. Students learn to build electronic mechanicals and to recognize problem files using manual techniques and preflight software. The course content and assignments lead to an understanding of the process of digital workflow, files analysis and repair. Industry standard software is used for prepress production, proofing and PDF document creation for the print and publishing industry devices. Prerequisites: GART 112, GART 151, GART 251, GART 252. [Fall] Applied Learning [3 credits] [3 contact hours]

GART 375 | Web Design III

This course builds on the student's knowledge in the use of markup and programming languages to provide proficiency in the coding and application of interactivity in online media. Basic animation techniques will also be introduced. The practice of this knowledge will be explored through lecture, discussion, exercises, and a semester-long project. Graphic design principles will be used to analyze problems and solve them visually. This course is cross-listed with CITA 375. Prerequisite: CITA 330 or GART 330 or permission of the department. Co-requisite: GART 375X [Fall] Gen Ed Comp-Information Literacy, Applied Learning [2 credits] [2 contact hours]

GART 375X | Web Design III Lab

Laboratory experience directly related to the material in GART 375. Student projects will be required. This course is cross-listed with CITA 375X. Co-requisite: GART 375 [Fall] Gen Ed Comp-Information Literacy, Applied Learning [1 credit] [2 contact hours]

GART 385 | Web Animation

This course provides comprehensive instruction into the creation and application of interactive animation for web pages and on-screen media. Students will develop and design interfaces using advanced animation techniques, coding languages, and supporting applications. Prerequisite: CITA 130 or GART 265 [Spring] Gen Ed Comp-Information Literacy [3 credits] [3 contact hours]

GART 390B | Special Project

An advanced independent or small group study course designed to permit an individual student or group of students to pursue topics or projects approved by the supervising faculty. This course is repeatable 1 time. Prerequisites: Must have the approval of the supervising faculty before signing up for the course. Must be a Graphic Design major, have completed 30 credit hours, and have at least a 2.50 overall GPA. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

GART 390C | Special Project

An advanced independent or small group study course designed to permit an individual student or group of students to pursue topics or projects approved by the supervising faculty. This course is repeatable 1 time. Prerequisites: Must have the

approval of the supervising faculty before signing up for the course. Must be a Graphic Design major, have completed 30 credit hours, and have at least a 2.50 overall GPA. [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

GART 460 | Senior Seminar I

This seminar, taken in a sequence with GART 461, represents a culmination of the student's coursework in the Graphic Design Technology program. In this course, a student will do advanced research, write a paper and present about a sustained, themed design project. The project will be created and produced in the following seminar semester. Prerequisite: The core requirements for the program. [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning [3 credits] [3 contact hours]

GART 461 | Senior Seminar II

This seminar, taken in a sequence with GART 460, represents a culmination of the student's coursework in the Graphic Design Technology program. In this course, a student will create and produce the sustained, themed design project they proposed and completed in the previous seminar. The final work will be exhibited at semester end. Prerequisite: The core requirements for the program. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy [3 credits] [6 contact hours]

GART 480 | Graphic Design Internship

The internship, along with GART 460-461, represents a culmination of the student's coursework in the B.S. in Graphic Design Technology program. It is an optional course in the curriculum that requires faculty approval. The internship will consist of 120 hours of applied experience in graphic design or a graphic design related field. An internship would include a component that considers digital prepress production requirements by focusing on digital workflow, preflight software, and file analysis. Students should seek faculty advisement well in advance of internship placement to ensure a suitable fit for the student's interests and talents in tandem with program requirements. Prerequisites: For upper-level students: may be taken incrementally over the last two years of study. Applied Learning [3 credits] [3 contact hours]

GART 499X | Senior Seminar II Lab

Taken in conjunction with GART 461 Senior Seminar II, this lab section allows students to engage in extended work time with the faculty and other students. The lab will allow students to experience the valuable discussion and feedback that comes in a shared design studio environment. Weekly goals will be assigned, and students are expected to present their work for critique weekly. Students will use this lab section to develop all of the design work for the Graphic Design Senior Show. Students will print and install their design work in the gallery and create a final presentation for the college community. Co-requisite: GART 461 [Spring] [0 credits] [3 contact hours]

Geographic Information Systems Technology

GIST 130 | Geographic Info Systems

This course is designed to introduce students to the principles of GIS, and discuss the collection, management, manipulation, analysis and display of geographically referenced data. Students will apply GIS in a variety of "hands-on" laboratory exercises and assignments. Co-requisite: GIST 130X. [Fall, Spring] [2 credits] [2 contact hours]

GIST 130X | Geographic Info Systems Lab

Hands-on application of the topics covered in GIST 130. Co-requisite: GIST 130. [Fall, Spring] [1 credit] [2 contact hours]

GIST 300 | GIS Projects in Environ Mgmt

In this course, students will use a suite of contemporary software tools to develop, manage, and communicate GIS-based environmental management projects. Proficiency in advanced GIS techniques, project management, remote sensing, and computer-aided design software tools will be achieved through class exercises, lectures, lab activities, and development of environmental management project plans. Prerequisites: GIST 130 and Junior-standing, or permission of instructor. Co-requisite: GIST 300X [Fall] Applied Learning-Field Study [3 credits] [1 contact hour].

GIST 300X | GIS Projects in Environ Mgmt Lab

Hands-on application of the topics covered in GIST 300. Co-requisite: GIST 300 [Fall] [0 credits] [4 contact hours].

Government

GOVT 141 | American Government (C)

A survey of the federal government, its institutions and operation, and the political processes related thereto. [Fall, Spring] Gen Ed American History, Gen Ed Social Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

GOVT 143 | Comparative Politics

This course examines the political process in a variety of European, Asian and Latin American countries. In an introductory fashion, study of historical political development, social forces and cultural pressures is pursued so as to acquaint students with the world's governments. Course includes field trip to United Nations - cost $30 Prerequisite: GOVT 141 or permission of instructor [Fall, Spring] Gen Ed Social Sciences, Gen Ed Other World Civ, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

GOVT 242 | State & Local Politics

An examination of the types of state and local governments, with a special focus on rural politics and New York State politics. Special attention is paid to public influence on state and local government, and the modern pressures on these governments. Prerequisites: GOVT 141 [Fall, Spring] Gen Ed American History, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

GOVT 290A | Special Projects Government

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

GOVT 290B | Special Projects Government

An independent or small group study course designed to permit an individual student or a group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

GOVT 290C | Special Projects Government

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. [Fall, Spring] [3 credits] [3 contact hours]

GOVT 312 | The American Legal System

This course presents an overview of American law. Students will read cases that will be discussed in class. The course is designed to provide students with a basic understanding of important legal topics, including: family law, the law of contracts, basic tort law, basic property law, criminal law, administrative law, and various other legal topics. Prerequisites: GOVT 141 - American Government, or permission of the instructor. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

GOVT 322 | American Constitutional Law

This course presents an overview of U.S. constitutional law. Topics include the nature and scope of due process law, the Bill of Rights, judicial review, separation of powers, the nature of executive and congressional power, federalism and the Interstate Commerce Clause, the right to privacy and equal protection of law. Issues to be considered will include the right to an abortion, freedom of religion, freedom of the press, affirmative action, gay marriage and the power of the government to restrict individuals' private property rights. Prerequisite: GOVT 141 - American Government, or permission

of the instructor. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

GOVT 345 | International Relations

This course introduces the historical development of modern nation-state relations, as well as some basic theories covering the interactions of the modern nation-state. The bulk of the course covers the major contemporary issue areas of international relations, e.g., international economics, global environmental crisis and the U.S. in the post-Cold War world. As part of this course, students are required to participate in a field trip to the United Nations, with a cost of $30 Prerequisite: GOVT 141, HIST 102 or GOVT 143 or permission of instructor [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

GOVT 355 | Cur Issues Crime,Criminolgy&Law

This course presents an overview of important issues in American crime, criminology and law. Students will read about issues and cases that will be discussed in class. The course is designed to provide students with a basic understanding of significant issues impacting the U.S. justice system and the underlying causes of crime. It also considers the forms of control that society has devised to deal with crime and other important issues in the administration of justice in the U.S. Prerequisites: ENGL 101 and one of the following courses: GOVT 141, PSYC 111, SOSC 111, SOSC 112, or BADM 223 or permission of the instructor [Spring, Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

GOVT 390C | Special Project – Government

An advanced independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. [Fall, Spring] [3 credits] [3 contact hours]

History

HIST 101 | Hist Western Civilization I(C)

This course surveys the origins and development of social, economic, political, and technological processes which have culminated in historic Western Civilization. Lecture topics include the rise of states in the ancient Near East, the legacy of Greek and Roman civilization, post-Roman European culture, the Middle Ages and the Renaissance. Emphasis is placed upon such topics as agricultural production, social organization, the evolution of law and government, commercial activity, varied religious and philosophical orientations, urban growth, and cultural achievements. [Fall] Gen Ed Western Civilization, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 102 | Hist Western Civilization II

This course is a continuation of HIST 101. Topics include the Reformation, Age of Exploration, Traditional European monarchies, absolutism, constitutionalism, the Agricultural and Scientific Revolutions, the Enlightenment, the French Revolution, Industrialization, the political and social upheavals of the nineteenth century, colonialism, imperialism, nationalism, and nineteenth century state building, and the political, economic and social crises of the twentieth century. HIST 101 is not a prerequisite for HIST 102. [Spring] Gen Ed Western Civilization, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 103 | Hist World Civilization I (C)

Beginning with an introduction to the nature and study of history, this course is concerned with the emergence and development of world civilizations to about 1500 A.D. in the Near East, India, China, Europe, Africa and the Americas. Special attention will focus on the development of political, economic and religious systems. [Fall] Gen Ed Other World Civ, Gen Ed World History and Global Awareness, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 104 | Hist World Civilization II (C)

This course is concerned with civilizations and their influences on each other. Emphasis will be on forces that have shaped the contemporary world-industrialization, urbanization, nationalism, militarism, imperialism, liberalism, communism and

revolution. [Spring] Gen Ed Other World Civ, Gen Ed World History and Global Awareness, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 121 | History of United States I (C)

An investigation of the political, economic and social development of the United States. The course begins with contact of Europeans, Africans and Native Americans and ends with Reconstruction. [Fall, Spring] Gen Ed American History, Gen Ed U.S. History and Civic Engagement, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 122 | History of United States II(C)

An investigation of the political, economic and social development of the United States. The course begins with Reconstruction and moves to the 1990s. [Fall, Spring] Gen Ed American History, Gen Ed U.S. History and Civic Engagement, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 205 | Latin America Soc/Civilization

This is a specialized introductory course which examines the political, economic and cultural evolution of Latin America from pre-Columbian times to present day efforts at promoting regional economic integration. Prerequisite: HIST 102 or HIST 104 or HIST 121 or HIST 122 or SOSC 111. [Spring] Gen Ed Other World Civ, Gen Ed World History and Global Awareness, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

HIST 290A | Special Projects History

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirement for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

HIST 290B | Special Projects History

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

HIST 290C | Special Projects History

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

HIST 310 | Triumph/Tragedy History of 60s

This course is an examination of the extraordinary changes in politics, technology, society, and culture that overwhelmed the United States in the period from 1960 until 1975. In the course, material will focus on political events (the Kennedy, Johnson, Nixon Presidencies), the Vietnam War and the resultant social forces unleashed in the US, the Civil Rights Movement, the tragic events exemplified by the assassinations of the Kennedy's and King, changes in music and movies, the rise of the environmental and women's rights movements. The course will be presented in a multi-media setting, utilizing lectures, discussions, video and music. Prerequisite: HIST 122. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning [3 credits] [3 contact hours]

HIST 320 | Special Topics in History

The course will explain, in depth, a particular historical period or issue. The topic of the course will change each semester in which it is offered and will be announced prior to registration. Prerequisite: ENGL 102 or permission of the instructor Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level, Applied Learning-Other [3 credits] [3 contact hours]

HIST 350 | History U.S. Foreign Relations

Analysis of U.S. Foreign Relations from 1776 to the present. Points of examination will include war and diplomacy. The role of the military, the intelligence communities, non-governmental organizations, technology, economic interests, peace activists, trade practices, and policies advanced by these groups in both peace and war will also be examined. Prerequisites: ENGL 101 and one of the following: HIST 102, HIST 104, HIST 121, HIST 122 or GOVT 141; and completion of 24 credits of coursework or permission of the instructor [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

HIST 390C | Special Projects History

An advanced independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

HIST 399 | Latin America and the World

This is a specialized thematic course which examines the political, economic, and cultural evolution of Latin America from pre-Columbian times to present day efforts at promoting regional economic integration. The course will examine the quest for national self-determination, economic development, and efforts to create viable democratic institutions via an examination of the region's role in world affairs. Prerequisite: HIST 102 or HIST 104 or HIST 121 or HIST 122 or SOSC 111. [Fall/Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

Honors

HONR 201 | Honors Seminar

An intensive small-group seminar on major public or intellectual issues. It is intended for Honors students from all majors: its appeal will be general and/or interdisciplinary, its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for seminar sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.25 GPA or permission of instructor. [Fall, Spring] [1 credit] [4 contact hours]

HONR 201A | Honors Seminar

An intensive small-group seminar on major public or intellectual issues. It is intended for Honors students from all majors: its appeal will be general and/or interdisciplinary, its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for seminar sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.25 GPA or permission of instructor. [Fall, Spring] [1 credit] [4 contact hours]

HONR 201B | Honors Seminar

An intensive small-group seminar on major public or intellectual issues. It is intended for Honors students from all majors: its appeal will be general and/or interdisciplinary, its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for seminar sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.25 GPA or permission of instructor. [Fall, Spring] [1 credit] [4 contact hours]

HONR 201C | Honors Seminar

An intensive small-group seminar on major public or intellectual issues. It is intended for Honors students from all majors: its appeal will be general and/or interdisciplinary, its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for seminar sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.25 GPA or permission of instructor. [Fall, Spring] [1 credit] [4 contact hours]

HONR 201D | Honors Seminar

An intensive small-group seminar on major public or intellectual issues. It is intended for Honors students from all majors: its appeal will be general and/or interdisciplinary, its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for seminar sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.25 GPA or permission of instructor. [Fall, Spring] [1 credit] [4 contact hours]

HONR 205C | Independent Study

An independent study course designed to permit an Honors Student, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] [3 credits] [3 contact hours]

HONR 290C | Honors Special Project

An independent study course designed to permit an Honors Student, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] [3 credits] [3 contact hours]

HONR 295 | Honors Capstone Project

This Capstone Project is a culminating course offered to associate degree-seeking Honors Students. The semester-long independent project focus is a topic or issue within the student's major field. Topics and requirements will vary, but the course will require students to exhibit an ability to research and write in the field. Prerequisite: Six hours of Honors Program work. [Fall, Spring] General Elective Credit ONLY, Applied Learning-Research [3 credits] [4 contact hours]

HONR 495 | Honors Capstone Project

This Capstone Project is a culminating course offered to baccalaureate degree-seeking Honors Students. The semester-long independent project focus is a topic or issue within the student's major field. Topics and requirements will vary, but the course will require students to exhibit an ability to research and write in the field. Prerequisite: Twelve hours of Honors Program work. [Fall, Spring] General Elective Credit ONLY, Applied Learning-Research [3 credits] [4 contact hours]

Humanities

HUMS 101 | Intro to the Humanities

An introductory course in the development of knowledge and understanding of music, theater, dance, film, painting, architecture, sculpture, geography, religions and history in Western Civilization and their interrelationship with world cultures. The means used will be lecture, live experiences and media. Understanding developed through work in the humanities may, it is hoped, change lives as well as ideas. Course fee of $30 is required. [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

HUMS 201 | Humanities Seminar

This course serves as a capstone experience for Humanities majors. Specific topics will vary depending on the expertise and interest of the instructor. Students will work within a general topic (determined by the course instructor and publicized in advance), bringing to bear their own interest and learnings from their experience in the program, showing their competency in core learning outcomes such as teamwork, critical thinking, information literacy, writing and speaking proficiency, and a depth of knowledge in some area of the humanities. Activities will include, but are not limited to, a group project, an oral presentation, and a written paper or papers. Projects that in some way involve the campus community are encouraged. This course should be taken in the student's final semester. Prerequisites: ENGL 101, ENGL 102, HUMS 101, and a minimum of 18 additional credit hours completed. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [3 credits] [3 contact hours]

HUMS 210 | Cinema and Society

This course introduces the student to cinema as an art form that both reflects and affects society, starting with an introduction to the various elements of film-making and working through both individual and societal responses to filmic representations. Students are encouraged to go beyond the "entertainment only" approach to film and consider how film constructs the self, contributes to or contradicts society's metanarratives, and serves as a powerful force of representation

in our culture. Students will be guided in thinking critically about film and expressing their thoughts in well-developed essays. Course fee of $30 is required. Prerequisite: ENGL 101 or ENGL 102 [Fall, Spring] Gen Ed Arts, Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

HUMS 215 | Multicultural Cinema

This course explores the diversity of human experience through the lens of cinema. The course will investigate how cinema reflects the historical and contemporary social and cultural factors that shape individual and collective identities; how various identities - ethnic, racial, national, gender, sexual, class, religion, etc - intersect; and how these identities are portrayed in American as well as international cinema. Furthermore, the course examines structural forces in the society that create and perpetuate social injustice and how individuals and communities strive to reshape those forces into a more just and equitable society. To facilitate a more nuanced appreciation of film as an art form, students will be introduced to the basic elements of cinematography. Evaluation is based upon class participation, group work, quizzes and exams, and written assignments. Course fee of $30 is required. Prerequisite: ENGL 101 or ENGL 102 [Fall, Spring] Gen Ed Humanities, Gen Ed Diversity: Equity, Inclusion, and Social Justice, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

HUMS 243 | Children's Literature

The course is designed to introduce students to the history, development and current trends in children's literature. Students will read and analyze a wide variety of genre with a world view perspective, be able to critically evaluate, select, and develop strategies for response to quality children's literature. Criteria for book awards, author studies, and research of the impact of children's literature on society and education will be explored. Prerequisite: ENGL 101 or ENGL 102; or by permission of instructor [Fall, Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

HUMS 290A | Spec Projects Humanities

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course [Fall, Spring] Applied Learning [1 credit] [1 contact hour]

HUMS 290B | Spec Projects Humanities

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course [Fall, Spring] Applied Learning [2 credits] [2 contact hours]

HUMS 290C | Spec Projects Humanities

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course [Fall, Spring] Applied Learning [3 credits] [3 contact hours]

HUMS 310 | Selected Topics Humanities

This course will explore, in depth, a particular issue in humanities. Themes of the course will change each semester in which it is offered and will be announced prior to registration. Prerequisites: HUMS 101 and ENGL 101 or ENGL 102; or by permission of instructor. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

Internship Preregistration

INTR 400 | Internship Preregistration

Students who have completed the Internship Eligibility Form with their advisor will be provided the alternative pin to register for this course. Students are required to consult the Internship Manual found on the Career Development Center webpage and must complete the Internship Learning Agreement (ILA). Students will be dropped from this course if they fail to complete the ILA and secure an internship. If you have questions concerning internship, you should speak with your advisor or the Career Development Center. [12 credits]

Journalism

JOUR 202 | Journalism Newswriting/Report

The techniques of reporting and newswriting will be practiced in light of major trends in reporting styles and the ethical problems a contemporary journalist encounters. Prerequisite: Student must have achieved at least a grade of "B" in either ENGL 101 or ENGL 201 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Practicum [3 credits] [3 contact hours]

JOUR 302 | Feature Writing

This course is geared to advanced student writers who already have a foundation in writing basics from beginning writing and reporting classes. The course will focus on the techniques for finding ideas, researching and conducting interviews for feature articles. The feature article will be treated as a specific genre with its own conventions. Emphasis is placed on development of a writing style that incorporates elements commonly found in newspaper and magazine feature stories, in their construction and expression. Prerequisite: ENGL 201 or permission of instructor [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

JOUR 402 | The News Media Landscape

This course will examine news media's relationship with society in historical, intellectual, economic, political, and social contexts. The course requires research projects, presentations and extensive analysis of news outlets (print, TV, online, radio) and is an upper-level major field requirement for Communications majors. Students in all bachelor programs may take it for upper-level elective credit. The endgame is to make students more aware and critical consumers of news media. Students will be responsible for three research papers of at least 10 pages (Chicago Manual of Style formatting), as well as extemporaneous in-class writing via essay exams (i.e., open- ended questions answered in paragraph form in a "blue book"). Students should emerge from the class with an expansive overview of issues that "news" is facing in a high-speed world of "new" media. Critical thinking/analysis, research, and conceptualization through writing are major focuses. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

Mathematics

MATH 101 | Introduction to College Math

A course in introductory algebra including a brief review of operations with integers and rational numbers. Major topics include an introduction to operations with polynomials, linear equations and inequalities in one variable, problem-solving, factoring, exponents, rational expressions, graphing, equations of a line, square roots and quadratic equations in one variable. The course carries three college credits. It does not satisfy the mathematics or Liberal Arts and Sciences requirements for any A.A.S., A.S., A.A., B.B.A., B.S. or B.T. degree. The course can only be used as free elective credit. This course is not open to students who have successfully completed MATH 101X, MATH 103 or higher. Placement based on high school or college transcript. [Fall, Spring] General Elective Credit ONLY [3 credits] [3 contact hours]

MATH 111 | College Algebra

A course in Algebra for college students with a strong emphasis on problem-solving and applications. Topics include: introduction to functions and their graphs; linear and quadratic functions; solution of a variety of types of equations and inequalities using algebraic, numeric and graphical techniques; systems of equations, operations with polynomials; rational, radical, exponential and logarithmic expressions; and exponential functions. Use of a graphing calculator may be an integral part of the course. Prerequisite: placement per high school transcript, completion of MATH 101 or MATH 101X with "C-" or higher, or by permission of the Mathematics Department. [Fall, Spring] Gen Ed Mathematics (and Quantitative Reasoning), Liberal Arts/Science Elective [3 credits] [3 contact hours]

MATH 112 | College Algebra & Trigonometry

A study of functions and their properties and applications from algebra and trigonometry. Topics include linear, quadratic, polynomial, rational, exponential, logarithmic, and trigonometric functions. Use of a graphing calculator may be an integral part of the course. Prerequisite: Placement per high school transcript - three units of high school math including at least some work in Course III, Math B, Algebra II, or their equivalent is recommended, MATH 111, or by permission of the Mathematics Department. [Fall, Spring] Gen Ed Mathematics, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MATH 113 | Mathematics of Finance

A course in which arithmetic and algebra are applied to personal finance and business problems including ratio, proportion, percentage, formula derivation and transformation, systems of equations, income statement analysis, simple interest and bank discount, compound interest and present value, consumer and business credit, annuities, amortization, taxes, debt extinction and depreciation. Prerequisite: placement per high school transcript, completion of MATH 101 with a grade of C- or higher, or by permission of the Mathematics Department. Gen Ed Mathematics, Liberal Arts/Science Elective [Fall, Spring] Gen Ed Mathematics (and Quantitative Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MATH 114 | Math for Elementary Education

Topics in foundations of mathematics may include: problem solving strategies, set theory, whole number properties/operations/models/algorithms, numeration systems, positional systems, number theory, integers, fractions, rational numbers, decimals, real numbers, proportions. Note: this course does NOT satisfy General Education Requirements. Prerequisite: MATH 111. [Fall, Spring] [3 credits] [3 contact hours]

MATH 115 | Liberal Arts Mathematics

A course encompassing a broad array of content from different mathematical disciplines with a strong emphasis on quantitative literacy and problem solving. Topics may be drawn from any of the following: logic, sets, numeration systems, real numbers, linear functions, polynomial functions, consumer math, probability, statistics, voting theory, graph theory, etc. Prerequisite: placement per high school transcript, completion of MATH 101 with a grade of C- or higher, or by permission of the Mathematics Department. [Fall, Spring] Gen Ed Mathematics (and Quantitative Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MATH 125 | Statistics (C)

A basic course in general statistics with applications in the fields of business and the natural, behavioral and social sciences. Elementary probability theory and descriptive statistics are introduced, but the emphasis is on inferential statistics including significance tests, confidence intervals, and linear regression and correlation. Prerequisite: one of the following: placement per high school transcript, a grade of C- or better in MATH 111, MATH 112, MATH 131 or above, or by permission of the instructor. [Fall, Spring] Gen Ed Mathematics (and Quantitative Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MATH 131 | Pre-Calculus

A course designed to provide the necessary foundation for a standard calculus course. The focus of pre-calculus is the concept of a function with special emphasis on graphing functions. Topics include types of functions, graphing techniques, properties and graphs of polynomials and rational functions, exponential and logarithmic functions, and trigonometric functions. A graphing calculator may be required. Not recommended for students with four units of high school mathematics. Not open to students with credit for Calculus I except by permission of the Mathematics Department. Prerequisite: Three units of high school mathematics including NYS Course III or NYS Math B, or MATH 112, or by permission of the Mathematics Department. [Fall, Spring] Gen Ed Mathematics, Liberal Arts/Sciences Elective [4 credits] [4 contact hours]

MATH 225 | Statistical Methods

A review of basic statistical concepts, probability concepts, discrete and continuous distributions, sampling techniques and sampling distributions, point estimation, interval estimation, testing statistical hypotheses, analysis of variance, basic design of experiments, simple and multiple regression, analysis of covariance, nonparametric techniques, analysis for categorical data. Prerequisite: MATH 125 or its equivalent with a minimum grade of "C." [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MATH 229 | Linear Algebra

Geometrical vectors, matrices and linear equations, determinants, vectore spaces and linear transformations. Prerequisite: MATH 231 or higher, or by permissions of Mathematics Department. [Fall] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MATH 231 | Calculus I (C)

A course in plane analytic geometry, functions, limits, continuity, differentiation and antidifferentiation of algebraic, trigonometric and exponential functions of a single variable with applications. An introduction to definite integrals is included. A graphing calculator as well as a computer algebra system (MAPLE) may be used. Prerequisite: Four units of high school regents mathematics including pre-calculus, MATH 131 ("C" or better), or by permission of the Mathematics Department. [Fall, Spring] Gen Ed Mathematics, Liberal Arts/Sciences Elective [4 credits] [4 contact hours]

MATH 232 | Calculus II (C)

A continuation of MATH 231. Topics include the definite integral, applications of integration, advanced integration techniques numerical approximations of definite integrals, indeterminate forms, improper integrals and infinite series. Prerequisite: MATH 231 [Fall, Spring] Liberal Arts/Sciences Elective [4 credits] [4 contact hours]

MATH 290A | Spec Projects Math

An independent or small group study course designed to permit an individual student or a group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. A faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [contact hours]

MATH 290B | Spec Projects Math

An independent or small group study course designed to permit and individual student or a group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. A faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

MATH 290C | Spec Projects Math

An independent or small group study course designed to permit an individual student or a group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. A faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] [3 credits] [3 contact hours]

MATH 310 | Differential Equations (C)

Solution of various types of ordinary and partial differential equations including first order equations, second order equations of the first degree, and miscellaneous differential equations of higher order. Geometric and physical science applications. Prerequisite: MATH 232. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [4 credits] [4 contact hours]

MATH 325 | Advanced Statistical Methods

Quick review of all tests and important concepts in MATH 225 (Statistical Methods) as related to hypothesis testing of both one and two samples; Effect Size calculations for tests relating to discrete and continuous data sets; Review of Non-Parametric methods; Rank Sum Correlation and Tukey's Med – Med line; Math Modeling, Multiple Linear Regression and Logistic Regression; Analysis of Covariance (ANCOVA); Introduction to Big Data and Meta-Analytics. Prerequisite: MATH 225 or its equivalent with a minimum grade of "C." [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

Marketing

MKHT 311 | E-Marketing

E-Marketing is a major component of electronic commerce, the fastest growing area of business. As such, workers and students with expertise in this field are in great demand. This course provides an introduction to the field and explains the various roles of E-Marketing in an organization's total marketing program. Students will be trained how to specifically use the internet and related technology to strategize and implement research, advertising, merchandising, customer service and other marketing mix-related functions. This is a practical, hands-on course. It explores Internet technologies as products in and of themselves, as mass and personal communications tools, and as a distribution/transaction channel. It will also address user characteristics and behavior, direct marketing and online strategies for relationship marketing. The

basics of Web design will be introduced. This course is cross-listed with BADM 311. Prerequisite: HOTL 205 or BADM 134 [Fall, Spring] [3 credits] [3 contact hours]

MKHT 405 | Consumer Behavior

The most complex aspect of marketing is the consumer. This course will provide tools to better understand consumer behavior. Topics will include consumer motivation, values, psychographics and lifestyle influences, individual and group decision making, demographic and cultural influences. Practical applications of psychological principles will be emphasized, including frequent guest programs, promotional strategy and marketing planning. This course is cross-listed with BADM 405. Prerequisites: BADM 134 or HOTL 205 or permission of the instructor [Fall, Spring] [3 credits] [3 contact hours]

Music

MUSC 111 | Choir

A performance-based singing group who study and perform standard choral literature of all musical genres. Choir is arranged in standard format of soprano, alto, tenor, and bass. Students must be able to match pitch. There is no limit on the number of semesters a student may elect this course. [Fall, Spring] Gen Ed The Arts, Applied Learning [1 credit] [2 contact hours]

MUSC 121 | Introduction to Music

An introductory course in music listening and appreciation. The instruction blends theoretical components of music with historical, biographical context and analysis of Western musical compositions from the Middle Ages to the beginning of the 20th century. [Fall, Spring] Gen Ed The Arts, Gen Ed Humanities, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

MUSC 131 | Instrumental Music

Instrumental performance may include participation in one or more of the following: Concert Band, Jazz Ensemble, Orchestra and Ensembles. Open by permission of the director to all qualified students, faculty, staff and community members on either a credit or an audit basis. There is no limit on the number of semesters a student may elect this course. Gen Ed Arts [Fall, Spring] [1 credit] [2 contact hours]

MUSC 132 | Jazz Band

The jazz band plays music using the 18-piece big band arrangements from various genres including swing, rock, funk, Latin, and popular tunes. Instrumentation includes: Trumpet, Trombone, Saxophone, Clarinet, Piano, Guitar, Bass, Drum Kit, and Percussion. Vocalists are accepted by permission from director. Musicians must be able to read music. Various performances and concerts are conducted each semester. There is no limit on the number of semesters a student may elect this course. [Fall, Spring] Gen Ed The Arts, Applied Learning-Other [1 credit] [2 contact hours]

MUSC 133 | Concert Band

Musicians will rehearse and perform with the Schoharie Valley Concert Band. Instrumentation includes woodwinds, brass, and percussion. Students must be able to read music. Four concert series are performed each year. There is no limit on the number of semesters a student may elect this course. [Fall, Spring] Gen Ed The Arts, Applied Learning-Other [1 credit] [2 contact hours]

MUSC 223 | American Music

This course is a study of American music including Jazz, Blues, Rock and Roll, Pop, and Orchestral scores. American music will be analyzed in regard to the composition, composer, artist/group, and placement in society. Modern musical theory and historical aspects will be discussed, as well as a research component. Prerequisite: ENGL 101 or permission of the instructor [Fall, Spring] Gen Ed The Arts, Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

MUSC 290A | Spec Projects Music

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [1 credit] [1 contact hour]

MUSC 290B | Spec Projects Music

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [2 credits] [2 contact hours]

MUSC 290C | Spec Projects Music

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [3 credits] [3 contact hours]

MUSC 310 | Selected Topics in Music

This course will explore, in depth, a particular issue in music. Themes of the course will change each semester in which it is offered and will be announced prior to registration. Students will be required to research a selected topic and give a presentation. Prerequisites: ENGL 101 and one of the following: MUSC 121, MUSC 132, MUSC 133, or MUSC 223 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

MUSC 390A | Special Projects Music

An advanced independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. This course is repeatable up to 2 times. Prerequisite: Must have approval of supervising faculty before signing up for course. [1 credit] [1 contact hour]

MUSC 390C | Special Projects Music

An advanced independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [3 credits] [3 contact hours]

Native American Studies

NAMS 111 | Intro to Iroquois (C)

The Iroquois (Haudenosaunee) are the oldest and longest functioning spiritual-political system in what is now New York State. This course will cover the culture, history and prehistory of the Iroquois as well as their contributions to today's American society. Time will be spent on the Mohawks, who occupied the Mohawk Valley and the surrounding areas. This course should give students a better understanding as to who the Iroquois are and what Indian country is like today. [Fall, Spring] Gen Ed Other World Civ, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

NAMS 121 | Intro Native American Studies

The course is intended to provide students with an introduction to Native American Societies in the present-day U.S. from prior to the arrival of Europeans until U.S. independence. As a survey course, students will be introduced to social structures, political structures, spiritual practices, and inter-tribal/nation relations. Focus will be on the tribal nations of the Northwest, the Great Plains, and the Southwest. The course will also deal with the arrival of Spanish, British, and French colonizers and the impacts that they had -- along with the emergent U.S. -- on native nations. [Fall, Spring] Gen Ed Other World Civ, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

NAMS 122 | Intro Native Am Studies II

The course is intended to provide students with an introduction to Native American Societies in the present- day U.S. from the life and death struggles in the first century of the American Republic, through various government programs that sought to destroy natives' way of life, to the resurgence of native nations with the 1970's. The course will focus on the survival stories of native peoples who defended their ways of life against the U.S. onslaught and reached a point in the 21st century of being flourishing communities dealing with modern challenges while maintaining traditional perspectives. [Spring] Gen Ed Other World Civ, Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

NAMS 290C | Native Amer Studies Spec Proj

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [3 credits] [3 contact hours]

NAMS 361 | Native Am Phil/Spirituality

An exploration of the great variety of Native American world views in the present-day United States. The course examines pre-European contact and contemporary Native Nations' philosophical perspectives on social structures, human interactions, and the natural environment. The course also examines spiritual beliefs and practices of a selection of Native nations prior to and after contact. The course will draw from historical and contemporary sources, and the cases to be studied will include representative nations from Eastern Woodland, Southwestern Puebloan, Great Plains, and the Plateau. Prerequisite: NAMS 111 or NAMS 121. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

NAMS 390C | Native Amer Studies Spec Proj

An advanced independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [Fall, Spring] [3 credits] [3 contact hours]

Nutrition

NTRN 122 | Nutrition Science

A study of the macro- and micro-nutrient requirements of individuals coupled with a study of the food composition with the goal of understanding how diet choices influence health. Nutrition needs for the life cycle, especially in infancy and childhood, will be presented. Students will have an opportunity to evaluate food choices in the context of nutrition requirements using appropriate computer software. This course includes a lab that provides students the opportunity to demonstrate an understanding of the methods scientists use to study nutrition including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis, and to apply the data collected in lab to formulate concepts and models in nutrition science. Lab fee $35. Co-requisite: NTRN 122X [Fall, Spring] Gen Ed Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [2 contact hours]

NTRN 122X | Nutrition Science Lab

A laboratory experience directly related to the material in NTRN 122. Co-requisite: NTRN 122 [Fall, Spring] [0 credits] [2 contact hours]

Ornamental Horticulture

ORHT 102 | Green Industry Orientation

This orientation course aims to familiarize students with the diverse opportunities and fundamental operations in the green industry, including greenhouses, nurseries, landscape design, construction and maintenance, plant healthcare, agriculture, agritourism, allied horticultural businesses, and public gardens. The multi-day field trip will take students to visit various businesses, gardens, and production facilities, providing an orientation to industry professionals and developing a practical perspective on the various challenges and opportunities in the green industries. Travel will be a necessary component of the course. [Fall] Applied Learning-Other [0.5 credit] [1 contact hour]

ORHT 106 | Careers in Plant Science

Introductory course for students planning a career in Plant Sciences. The course includes an overview of the agricultural and green industries, as well as development of professional skills required for a successful career. Students will have an opportunity to hear from representatives of those industries. Students will be provided with the basis for an assessment of future career opportunities as well as the opportunity to evaluate their individual needs for continuing education. Through a self-assessment of interests, values, and abilities, students will develop an educational plan to meet career objectives. [Fall, Spring] [1 credit] [2 contact hours]

ORHT 111 | Basic Floral Design

Basic principles of floral design with emphasis on practices and design techniques encountered in commercial florist establishments. This course is taught in three five- week modules that have both lecture and a hands-on lab component. Module one will emphasize flower identification, care and conditioning, essential techniques, color theory and the principles and elements of basic design. Module two covers ribbons and bows, corsages, boutonnieres, and pricing. The third module provides practical planning, buying, marketing, selling, budvases, and trips to wholesalers. Lab fee of $125 required. Co-requisite: ORHT 111X [Fall, Spring] Applied Learning-Other [3 credits] [1 contact hour]

ORHT 111X | Basic Floral Design Lab

A laboratory experience directly related to the material in ORHT 111 lecture. Co-requisite: ORHT 111 [Fall, Spring] [0 Credits] [4 contact hours]

ORHT 113 | Horticultural Field Experience

The course deals with the operation and maintenance of horticultural facilities and equipment. The care and use of these items is also emphasized. Students have the opportunity to practice many of the techniques employed in the various phases of general horticulture. [Fall, Spring] Applied Learning-Practicum [1 credit] [2 contact hours]

ORHT 114 | Horticultural Field Experience

The course deals with the operation and maintenance of horticultural facilities and equipment. The care and use of these items is also emphasized. Students have the opportunity to practice many of the techniques employed in the various phases of general horticulture. [Fall, Spring] Applied Learning-Practicum [1 credit] [2 contact hours]

ORHT 121 | Woody Plant Materials (C)

A detailed study of deciduous and evergreen trees, shrubs and vines; their identification, growth habits, cultural requirements, ecological usefulness and use in the landscape. Emphasis will be placed on the study of both native and introduced species. Co-requisite: ORHT 122X [Fall] Liberal Arts/Science Elective, Applied Learning-Other [3 credits] [2 contact hours]

ORHT 121X | Woody Plant Materials Lab

The lab component for ORHT 121. Co-requisite: ORHT 121 [Fall] [0 credits] [2 contact hours]

ORHT 122 | Environmental Design I

Apply foundational principles of landscape design through structured, studio-based creative practice. Analyze site conditions, spatial organization, and sustainable landscape strategies to inform the integration of plants and hardscape elements into functional outdoor environments. Utilize professional drafting techniques to generate precise scaled drawings, functional diagrams, and conceptual plans, enhancing design communication and problem-solving skills. Engage in iterative studio projects, structured critiques, and applied field studies to refine design proficiency and prepare for careers in landscape architecture, contracting, urban planning, or environmental restoration. Some drawing and drafting supplies are required. A course fee of $20 is required. Co-requisite: ORHT 122X [Fall, Spring] Applied Learning-Creative Works [3 credits] [1 contact hour]

ORHT 122X | Environmental Design I Lab

Apply fundamental landscape design principles through structured, hands-on studio practice. Utilize technical drawing techniques, presentation graphics, design visualization, and rendering methods essential to professional landscape design. Participate in structured critiques and applied exercises to develop problem-solving and communication skills necessary for design professionals. Co-requisite: ORHT 122 [Fall, Spring] [0 credits] [4 contact hours]

ORHT 133 | Horticulture Crop Production

This course is designed to be an introduction to the products and services produced and sold by the nursery and greenhouse industry. Emphasis will be placed on learning basic horticulture concepts and skills, production and maintenance of quality plants, and learning products common to retail markets and gardens. Students are required to grow assigned crops and develop production skills necessary to produce and sell a quality product. There is one required all day

field trip ($30-75). This course is repeatable up to 1 time. Co-requisite: ORHT 133X [Fall] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 133X | Horticulture Crop Production Lab

The lab component for ORHT 133. Co-requisite: ORHT 133 [Fall] [0 credits] [2 contact hours]

ORHT 160 | Contracts and Estimates (C)

This five-week course introduces fundamental landscape business operations, cost estimating, and contract formulation. Emphasizing job costing, bidding, and contract development, students will analyze performance methods, apply estimating techniques, and evaluate fundamental contract structures essential to landscape management, contracting, and design careers. Co-requisite: ORHT 160X [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ORHT 160X | Contracts and Estimates Lab (C)

This practical lab component of ORHT 160 provides students with experience in cost estimating, contract drafting, and project planning. Students will apply fundamental calculations to develop project and bid proposals and use common industry software. Co-requisite: ORHT 160 [Fall, Spring] [0 credits] [3 contact hours]

ORHT 161 | Landscape Graphics (C)

This 10-week hands-on course develops technical and graphical skills essential for illustrating and communicating landscape designs. Students will practice plan view drafting, construct sections and elevation drawings, and develop presentation graphics and rendering techniques as part of professional visual communication. Whether pursuing landscape architecture or contracting, graphical communication is a critical skill. A course fee of $20 is required. Co-requisite: ORHT 161X [Fall, Spring] Applied Learning-Creative Works [2 credits] [1 contact hour]

ORHT 161X | Landscape Graphics Lab

This practical lab component of ORHT 161 provides students with studio-based experience in drafting, rendering, and graphical communication techniques to produce functional landscape graphics for landscape design projects. Co-requisite: ORHT 161 [Fall, Spring] [0 credits] [3 contact hours]

ORHT 165 | Bee Culture

A study of the lives of honeybees and the basic requirements and responsibilities of keeping bees. This course covers the mechanics of the hive, tools involved, elements of site selection and basic seasonal maintenance tasks, bee anatomy, hive congruency and design to benefit the colony, bee health, pest and disease management, swarming and methods for recognizing the needs of bees. Instruction includes interacting with local beekeepers, hands-on work in a hive, assembling hive woodenware, harvesting honey when available and pollinator plant identification. This 8-week course meets once a week for a single, two hour lecture. [Fall] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 166 | Medicinal Plants and Culinary Herbs

The course will be a one credit, eight week, two hour per week module hosting a broad range of guest speakers who have expertise in locally foraged plants & herbs such as ginseng and mushrooms. Focus will be placed on the most common medicinal plants and herbs of the Northeast region. Students will learn the history and origins of many local plants used in medicine or in cooking. Utmost safety will be emphasized on using, growing and handling plants during the course. Propagation methods and preserving practices will be covered. Other lecture time may include basic plant morphology, industry regulations, trends, Native American uses and current research. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 168 | Maple Syrup Production

Survey course exposing students to multiple facets of the maple sugar and other tree sugar industries. This hands-on course covers the science of maple sap flow, forest management, sap collection, processing, economics, and marketing of maple products. At the end of the course students will gain a higher understanding and appreciation for the maple syrup industry and will gain the knowledge necessary to start or improve their own operation. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 200 | Occ Exp/Nursery Production

Course designed in a selected area of specialization to provide hands-on training to Plant Science, second-year students. Each semester a list of the course offerings for the next semester will be published prior to pre-registration. Admission to the course is by permission of the instructor since the course is intentionally kept small to permit proper supervision. Instructor's permission required. This course is repeatable up to 1 time. [Fall, Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 203 | Landscape Olympics - NCLC

The National Collegiate Landscape Competition (NCLC) is an annual three-day event that brings together landscape and horticulture students to demonstrate their skills in real-world, competitive events and network with national and regional industry partners. Events include individual and team events in business operations, design, horticulture, turf grass management, construction, equipment operation, and installation. This 10-week course prepares students for NCLC through simulated events, skill-building, and direct feedback. Participation in the NCLC is required, and travel will be a necessary component of this course, with costs ranging between $200-$600 based on the host school's location. This course is repeatable up to 3 times. [Spring] Applied Learning-Other [1 credit] [3 contact hours]

ORHT 205 | Occ Exp/Turf Management

Course designed in a selected area of specialization to provide hands-on training to Plant Science, second-year students. Each semester a list of the course offerings for the next semester will be published prior to pre-registration. Admission to the course is by permission of the instructor, since the course is intentionally kept small to permit proper supervision. Instructor's permission required. This course is repeatable up to 1 time. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 208 | Occ Exp/Greenhouse Mgt

Course designed in a selected area of specialization to provide hands-on training to Plant Science, second-year students. Each semester a list of the course offerings for the next semester will be published prior to pre-registration. Admission to the course is by permission of the instructor, since the course is intentionally kept small to permit proper supervision. Instructor's permission required. This course is repeatable up to 1 time. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 209 | Occ Exp/Bonsai

Course designed in a selected area of specialization to provide hands-on training to Plant Science, second-year students. Each semester a list of the course offerings for the next semester will be published prior to pre-registration. Admission to the course is by permission of the instructor, since the course is intentionally kept small to permit proper supervision. Instructor's permission required. This course is repeatable up to 1 time. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 210 | Occ Exp/Golf Course Management

Course designed in a selected area of specialization to provide hands-on training to Plant Science, second-year students. Each semester a list of the course offerings for the next semester will be published prior to pre-registration. Admission to the course is by permission of the instructor, since the course is intentionally kept small to permit proper supervision. Instructor's permission required. This course is repeatable up to 1 time. [Spring] Applied Learning-Other [1 credit] [2 contact hours]

ORHT 212 | Intermediate Floral Design

Intermediate principles of floral design with an emphasis on sympathy design. The course is taught in three five-week modules that have both lecture and a hands-on lab component. Module one will emphasize designs in glass, permanent botanicals, contemporary and global design. Module two covers traditional sympathy, casket and urn design, pillows consultation and pricing. The third module expands sympathy design to flowers for the home, firesides, and set pieces (sprays, hearts, crosses, wreaths). Co-requisites: ORHT 212X. Prerequisites: ORHT 111. Lab fee of $200 required. [Spring] Applied Learning-Other [3 credits] [1 contact hour]

ORHT 212X | Intermediate Floral Design Lab

A laboratory experience directly related to the material in ORHT 212 Lecture. Co-requisite: ORHT 212 [Spring] [0 credits] [4 contact hours]

ORHT 215 | Interior Plantscapes & Maint

This course is designed to educate the student in the wide range of foliage material available for interior plantscape and the cultural requirements for this group of plants. In-depth studies will include the interior/plantscape environment, installing and maintaining plants, designing, planning and implementing of a successful interior plantscape. Students are required to learn the identification, cultural requirements and design characteristics of over 170 commonly used interior plant species. Required field trips - cost about $40-$75. [Spring] Applied Learning-Other [3 credits] [4 contact hours]

ORHT 221 | Landscape Construction

This course introduces students to the materials, methods, and structural systems used in landscape construction. Students will explore techniques in hardscape installation, structural assembly, site preparation, and outdoor electrical systems, including low-voltage lighting. The course also prepares students for industry-recognized Concrete Masonry & Hardscape Association certifications. A lab fee of $35 and field trips are required. Co-requisite: ORHT 221X [Fall] Applied Learning-Field Study [2 credits] [2 contact hours]

ORHT 221X | Landscape Construction Lab

Hands-on application applies concepts from ORHT 221 through direct application of construction techniques and skills. Students will practice hardscape installation, structural assembly, and site preparation, reinforcing landscape industry skills and practices. Co-requisite: ORHT 221, unless ORHT 221 has been previously completed successfully. This course may be repeated once to develop skills and proficiency. [Fall] Applied Learning-Field Study [1 credit] [3 contact hours]

ORHT 223 | Environmental Design II (C)

This studio-based course refines skills in spatial composition, material selection, native plantings and sustainable design for residential, commercial, and public landscapes. Students will engage in real-world client projects, conduct advanced site analysis, and apply professional presentation techniques. Emphasis is placed on planting strategies, hardscape integration, and site engineering fundamentals, including grading and drainage. A course fee of $20 is required. Field trips and drawing supplies will be required at additional cost. Co-requisite: ORHT 223X. Prerequisite: ORHT 122 or consent of instructor [Fall] Applied Learning-Creative Works [3 credits] [1 contact hour]

ORHT 223X | Environmental Design II Lab

Apply advanced landscape design principles through structured, hands-on studio practice. This lab reinforces skills in professional presentation methods, real-world client interactions, and design visualization. Students will refine complex landscape plans while integrating grading and drainage fundamentals, advanced planting strategies, and hardscape design techniques. Co-requisite: ORHT 223 [Fall] [0 credits] [4 contact hours]

ORHT 251 | Greenhouse Management

Greenhouse Management is intended to provide the latest information on efficient operating and management of a commercial greenhouse business outside the sphere of specific crop production methods. Special consideration is given to the industry, location, construction, heating, ventilation/cooling, energy conservation, alternate energy sources, soil media, watering systems, fertilizer programs, cost of production, computer-operated greenhouses, new greenhouse technology and business management practices. The Plant Science Department computer-operated greenhouses provide working laboratories. Required field trips to commercial floriculture and ornamental horticulture businesses. Additional course fees, including field trips, are required. Co-requisite: ORHT 251X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 251X | Greenhouse Management Lab

The lab component for ORHT 251. Co-requisite: ORHT 251 [Spring] [0 credits]]2 contact hours]

ORHT 282 | Arboriculture (C)

This course will include the care and maintenance of trees and other woody plants used in urban, residential, recreational, park, street and water shed (municipal) plantings and include the use, care and application of tools, equipment and other

materials in the maintenance of wood plants. The assets and liabilities of woody plants will also be included in the course. Co-requisite: ORHT 282X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 282X | Arboriculture Lab

The lab component for ORHT 282. Co-requisite: ORHT 282 [Spring] [0 credits] [2 contact hours]

ORHT 290A | Spec Projects Orn Hort

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences. Further, the faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Open to department majors only. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ORHT 290B | Spec Projects Orn Hort

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences. Further, the faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Open to department majors only. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ORHT 290C | Spec Projects Orn Hort

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic based on previous interest and experiences. Further, the faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Open to department majors only. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ORHT 317 | NY Wildflowers & Habitats

New York's ecological communities form a diverse and distinctive natural heritage. This course explores the state's ecological communities, emphasizing the identification of indicator plant species and their roles in sustaining native landscapes. Students will examine environmental stewardship principles and conservation strategies while applying hands-on propagation and management techniques of New York and US native plants in a greenhouse setting. Field-based learning reinforces practical skills in native plant cultivation and habitat restoration. Co-requisite: ORHT 317X. Completion of AGSC 111, BIOL 116, and computer competency is highly encouraged. [Spring] Applied Learning-Field Study [3 credits] [2 contact hours]

ORHT 317X | NY Wildflowers & Habitats Lab

This lab-based course extends the learning from ORHT 317 by incorporating native plant crop production, ecological fieldwork, and conservation assessment applications. Students will engage in field-based plant community assessments, seed-based propagation, and native plant cultivation. Co-requisite: ORHT 317 [Spring] [0 credits] [2 contact hours]

ORHT 321 | Herbaceous Plant Materials

A study of herbaceous plant materials used in the floriculture, nursery and landscape industries. Emphasis is placed on the identification, the cultural requirements and the uses of this group of plants. Additional course fees, including field trips to greenhouses and botanic gardens, are required. Co-requisite: ORHT 321X [Fall] Applied Learning-Field Study [3 credits] [2 contact hours]

ORHT 321X | Herbaceous Plant Materials Lab

The lab component for ORHT 321. Co-requisite: ORHT 321 [Fall] [0 credits] [2 contact hours]

ORHT 329 | Hydroponics (C)

Students will investigate the basics of soilless culture, and will be provided an opportunity to grow a variety of hydroponic crops in the College greenhouses. Topics will include plant nutrition and nutrient formulations; plant culture; basics of controlled environmental agriculture; rockwool, perlite, and bark culture; nutrient film technique; vertical hydroponic

systems; raft systems; as well as hydraulics and system mechanics. Field trips to commercial hydroponic growers will supplement the classroom instruction. Co-requisite: ORHT 329X. Prerequisite: AGSC 111; BIOL 116; CHEM 101 or CHEM 111 [Fall] Applied Learning-Field Study [3 credits] [2 contact hours]

ORHT 329X | Hydroponics Lab

The lab component for ORHT 329. Co-requisite: ORHT 329 [Fall] [0 credits] [2 contact hours]

ORHT 335 | Irrigation (C)

This course emphasizes the design and installation of irrigation systems for landscape planting, lawns, golf courses, athletic fields, nurseries, vegetable crops and orchards. Topics covered include basic hydraulics, piping systems, backflow prevention, product selection, system automation, crop water requirements and system winterization. Seminars by industry irrigation specialists supplement the classroom instruction. Practical experience will include the actual installation or trouble-shooting of a system on campus. Co-requisite: ORHT 335X [Fall] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 335X | Irrigation Lab

The lab component for ORHT 335. Co-requisite: ORHT 335 [Fall] [0 credits] [2 contact hours]

ORHT 340 | Biofuels and Bioenergy

Biofuels and Bioenergy will provide students with basic understanding of biofuels and bioenergy. The primary focus of the course is on the renewable feedstocks (non-food plants, food crops, and agricultural waste) used in the production of biofuels which can be used as transportation fuels, heat, and electricity. The production, harvesting, storage and processing of feedstocks to biofuels and biodiesel will be discussed. Other topics include conversion of biofuel residues into bio-oil, biodiesel production from oil seeds and biomass conversion to fuel grade bio ethanol, heat and electricity. The course consists of a vigorous lecture series, informal discussions, review of current literature on biofuels and bioenergy and oral presentations. Students will also get the opportunity to listen to guest speakers working on biofuels and bioenergy. Prerequisites: CHEM 231 or Instructor permission, AND BIOL 116 OR BIOL 117, AND Junior status [Spring] Applied Learning-Other [2 credits] [2 contact hours]

ORHT 356 | Plant Propagation (C)

This course emphasizes the reproduction of plants for commercial purposes. Methods of sexual and asexual propagation such as seed germination, rooting of cuttings, budding and grafting, bulb division and tissue culture will be considered. Co-requisite: ORHT 356X. Prerequisite: BIOL116 within the last five years. [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 356X | Plant Propagation Lab

The lab component for ORHT 356. Co-requisite: ORHT 356 [Spring] [0 credits] [2 contact hours]

ORHT 360 | Adv Contracts & Estimates (C)

Success in the landscape industry depends on the ability to budget, estimate, and manage contractual relationships effectively. This course builds upon foundational estimating and contract knowledge to explore pricing strategies, contract law, budgeting, proposal preparation, and sales for landscape operations. Students will engage in real-world takeoff measurements, contract analysis, and cost estimation exercises, gaining applied experience in maintenance, construction, and enhancement proposal development. Industry-standard software for estimating, budgeting, and pricing is introduced to integrate takeoffs, financial planning, and job pricing. Completion of ORHT 160 and computer competency is highly encouraged. Co-requisite: ORHT 360X. Prerequisite: MATH 111 or higher [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 360X | Adv Contracts & Estimates Lab

This lab provides students with hands-on experience in financial modeling, contract negotiation, and pricing strategies. Students will estimate projects, develop service proposals, and engage in business management simulations to strengthen financial planning and operational efficiency. Co-requisite: ORHT 360 [Spring] [0 credits] [2 contact hours]

ORHT 377 | Integr Pest Mgt Ornamentls (C)

This course teaches students how to develop an integrated pest management (IPM) program for ornamental and agronomic crops. The purpose of an IPM program is to minimize the need for pesticides. The course is designed for students interested in protecting trees and shrubs, turfgrasses, floricultural crops, grains, forage crops, vegetables, and fruit crops from insects and diseases. Biological control of pests is emphasized. Co-requisite: ORHT 377X [Fall] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 377X | Integr Pest Mgt Ornamentls Lab

The lab component for ORHT 377. Co-requisite: ORHT 377 [Fall] [0 credits] [2 contact hours]

ORHT 390A | Spec Projects Plant Science

An advanced independent study of topics of special interest to the Bachelor of Technology student in Ornamental Horticulture. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

ORHT 390B | Spec Projects Plant Science

An advanced independent study of topics of special interest to the Bachelor of Technology student in Ornamental Horticulture. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

ORHT 390C | Spec Projects Plant Science

An advanced independent study of topics of special interest to the Bachelor of Technology student in Ornamental Horticulture. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

ORHT 399 | Advanced Horticulture Prod

This course combines production principles with environmental concepts and advances in technology to provide a comprehensive training in production of herbaceous ornamentals and tropical plants. Emphasis will be on controlled environments, production schedules, plant propagation, irrigation practices, and selling/marketing as a retail operation. Students will cultivate and sell plants for the annual spring plant sale. Prerequisites: ORHT 133 or ORHT 208. Co-requisite: ORHT 399X [Spring] Applied Learning-Practicum [1 credit] [1 contact hour]

ORHT 399X | Advanced Horticulture Prod Lab

Laboratory to accompany ORHT 399 Advanced Horticulture Prod. Prerequisites: ORHT 133 or ORHT 208. Co-requisite: ORHT 399 [Spring] Applied Learning-Practicum [2 credits] [4 contact hours]

ORHT 421 | Landscape Plants Assoc & Use

An upper-level approach to the study of landscape trees, shrubs and vines, their identification, growth habits, cultural requirements, ecological usefulness and landscape uses. This course is designed to build on the knowledge obtained in ORHT 121. Prerequisite: ORHT 121 within the last two years. Co-requisite: ORHT 421X [Spring] Applied Learning-Other [3 credits] [2 contact hours]

ORHT 421X | Landscape Plants Assoc & Use Lab

The lab component for ORHT 421. Co-requisite: ORHT 421 [Spring] [0 credits] [2 contact hours]

ORHT 433 | Landscape Firm Management

Landscape, snow, and green industry companies require owners and managers to understand efficient operations while applying structured systems for budgeting, planning, and sustaining profitable margins. This course explores business management principles through case studies and firm visits. Students will analyze industry challenges, develop strategic planning skills, and evaluate financial management strategies essential for running a successful landscape, snow, and green industry business. Additional course fees for field trips may be required. Computer competency is recommended. Co-requisite: ORHT 433X [Fall] Applied Learning-Field Study [3 credits] [2 contact hours]

ORHT 433X | Landscape Firm Management Lab

This lab-based course extends the learning from ORHT 433 by incorporating native plant crop production, ecological fieldwork, and conservation assessment applications. Students will engage in field-based plant community assessments, seed-based propagation, and native plant cultivation. Co-requisite: ORHT 433 [Fall] [0 credits] [2 contact hours]

ORHT 444 | Landcadd

This course covers the use of LANDCADD, a computer-aided drafting and design program for the landscape industry. Students will learn how to generate landscape and irrigation designs as well as perform quantity takeoffs and cost estimates using computer assisted design and drafting. Prerequisites: ORHT 122 or permission of instructor, and CITA 110 or its equivalent Co-requisite: ORHT 444X [Fall, Spring] Applied Learning-Other [3 credits] [1 contact hour]

ORHT 444X | Landcadd Lab

The lab component for ORHT 444. Co-requisite: ORHT 444 [Fall, Spring] [0 credits] [4 contact hours]

ORHT 450 | Internship Ornamental Hort

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality and quantity of experiences gained from the internship. 15 weeks. This course is S/U graded only. Prerequisite: Minimum of 30 upper-division credits, concurrent enrollment in ORHT 451 [Fall, Spring] Applied Learning-Internship [12 credits] [12 contact hours]

ORHT 451 | Orn Hort Internship Reporting

Plant Science Bachelor of Technology students enrolled in ORHT 450 - Internship in Ornamental Horticulture - must be concurrently enrolled in this course. Students will prepare their internship agreement paperwork; submit daily log entries while on their internship; submit periodic, mid-term, and final evaluations; and give their final presentation at the conclusion of the internship. Internship advisors may assign additional reports as well. This course will be letter graded (A-F). Prerequisite: Minimum of 30 upper-level credits; concurrent enrollment in OHRT 450. [Fall, Spring] Applied Learning-Internship [3 credits] [3 contact hours]

ORHT 452 | Internship Ornamental Hort I

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular business. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality and quantity of experiences gained from the internship. Prerequisite: Minimum of 60 credits completed [Fall, Spring, Summer] Applied Learning-Internship [3 credits] [3 contact hours]

ORHT 453 | Internship Ornamental Hort II

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality and quantity of experiences gained from the internship. 15 weeks. This course is S/U graded only. Prerequisite: Minimum of 90 credits completed [Fall, Spring, Summer] Applied Learning-Internship [12 credits] [12 contact hours]

Physical Education, Recreation and Sport Studies

PERS 201 | Foundations Physical Education

An overview of the physical education profession including major historical events and associated philosophies. Other sub-disciplines such as exercise physiology, biomechanics, psychology and sociology of sport will be introduced. The class format will be lecture, small group discussions, and additional hours involving outside participation/observation. [Fall, Spring] [3 credits] [3 contact hours]

PERS 211 | First Aid and C P R

A study of preventive measures and approved procedures in pre-medical treatment. Laboratory work includes opportunities to demonstrate first aid. Students will have an opportunity to meet American Red Cross requirements. [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning, Applied Learning-Other [3 credits] [4 contact hours]

PERS 213 | Current Issues Health/Wellness

This course is designed to assess the many areas of lifestyle to include the five dimensions of wellness: physical, intellectual, emotional, social and spiritual wellness. Students are expected to engage in a high level of individual assessment of the various domains of wellness. This course will encourage the modification of current lifestyle to a healthier alternative, as well as explore other activities and consumptions that contribute to a high-quality lifestyle. Majors Only. Prerequisite: PERS 201 [Fall, Spring] [3 credits] [3 contact hours]

PERS 214 | Care/Prevent Athletic Injuries

A course designed to develop the fundamental knowledge of athletic-related injuries. Various techniques will be explored related to the prevention of injuries, treatment of injuries which do occur and the rehabilitation of the injured athlete. The course will also include practical applications of the principles discussed through supervised work with the Athletic Trainer. Majors Only [Fall, Spring] [3 credits] [4 contact hours]

PERS 215 | Organiz Admin PhysEd, Athl&Rec

This course is designed to provide an overview of philosophic foundations of administrative leadership. Also included in the course will be an emphasis on methods and procedures for successful management. Pertinent information will be provided related to the operation of physical education, recreation and athletics management. Prerequisite: PERS 201 [Fall, Spring] [3 credits] [3 contact hours]

PERS 216 | Theory & Techniques Coaching

This course is designed to provide a background in the theory and techniques of coaching. The course begins with the development of a coaching philosophy, and understanding of sport psychology, and fundamental principles of sport pedagogy. The second section of the course deals with the physiology of sport. The performance skills, technical information, training techniques, and sport-specific conditioning for various sports will be discussed. The final section of the course deals with sport management skills. Majors Only. Prerequisite: PERS 201 [Fall, Spring] Gen Ed Comp-Critical Thinking & Reasoning [3 credits] [3 contact hours]

PERS 230 | Motor/Learning Behavior

This course investigates the principles of human performance and the acquisition of motor skills. Upon successful completion of the course, students are able to assess motor performance, understand the concept of motor control, attention/memory, skill learning, instruction, feedback and practice conditions. [Spring] [3 credits] [3 contact hours]

PERS 240 | Facilities and Event Mgmt.

This course studies the guidelines and principles of managing sport and recreation events and facilities. Topics include event logistics, critical planning techniques, negotiations, funding, and facility design, operation and maintenance. Prerequisite: PERS 250 [Spring] [3 credits] [3 contact hours]

PERS 250 | Intro to Sports Management

The course introduces the principles and practices associated with the sports industry. Included in the course will be an overview of the knowledge and skill set necessary for the successful sports manager, as well as information relative to current trends in the industry. The course will also examine the burgeoning sports world both on the national and international stage. The course will also introduce management practices and policies along with unique legal and business practices associated with the industry. The student will also be exposed to career opportunities in this diverse and dynamic profession. [Spring] [3 credits] [3 contact hours]

PERS 290C | Special Projects

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular activity; this should be based on previous experience or interest in pursuing a particular

topic. The faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Project must be approved by the chairperson of the Physical Education Department. Open to second-year students only. [Fall, Spring] [3 credits] [3 contact hours]

PERS 340 | Sport and Society

An introduction to the sociology of sport using concepts, theories and research to raise critical questions about sport as it relates to culture and our society. The class examines issues that have been systematically studied in the sociology of sport. Prerequisite: PSYC 111 or SOSC 111 or SPIN 101 [Fall] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Science Elective, Liberal Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

PERS 350 | Psyc & Soc of Sport & Exercise

Through completion of this course, the student shall understand the theoretical background of sport and exercise psychology and sociology and their application in the field. The curriculum will include the following units: understanding of the field; motivation; effects of arousal and anxiety on performance; cognitive and behavioral interventions; social psychology of sport; and psychobiology of sport and exercise. Prerequisite: SPIN 101 or PSYC 111 [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Science Elective, Liberal Arts/Sci Upper-Level [3 credits] [3 contact hours]

PERS 360 | Sports Marketing

This course will examine the field of Sports Marketing as it relates to the specific application of marketing principles and processes in the marketing of sports products and non-sports products through association with the sports industry. Prerequisite: PERS 201 or PERS 250 [Spring] Gen Ed Comp-Critical Thinking & Reasoning [3 credits] [3 contact hours]

PERS 390A | PERS Special Project

An opportunity for advanced independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular activity; this should be based on previous experience or interest in pursuing a particular topic. The faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Project must be approved by the chairperson of the Physical Education Department. Open to second-year students only. [Fall, Spring] [1 credit] [1 contact hour]

Physical Education

PHED 106 | Aerobic Dance Co-Ed

Introduction to the practices and principles of aerobic fitness through dance. Consists of regular participation in an aerobic dance program as well as emphasis on the physiology of aerobic fitness. [Fall] [0.5 credits] [2 contact hours]

PHED 107 | Archery

Instruction in basic fundamentals of target archery, which includes form, safety, and the selection and care of equipment. An introduction to clout shooting and field archery will be included. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 108 | Aquacize Co-Ed

An aquatic aerobics program designed to provide the student with the opportunity to engage in an exercise program in the aquatic environment. The course will include, in addition to a regular exercise program, instruction to improve the individual's overall physical fitness and develop an appreciation of the importance of maintaining good cardiovascular fitness. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 109 | Backpacking-Orienteering

An introductory course that focuses on skills and knowledge. Use of compass, map reading, care and selection of equipment, physical conditioning of the trail and camp cooking are some of the topical areas covered in this course. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 110 | Badminton

Instruction in basic techniques including basic strokes, serving, court positioning in singles and doubles, strategy and rules. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 111 | Basketball for Men

A comprehensive study of fundamental skills, strategy and rules of basketball with emphasis on skill competency. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 117 | Bowling

Course stresses mechanics of bowling including approach, hook, curve, and straight ball delivery, pin and spot aiming, use of lines and making spares, and splits. Etiquette, scoring and safety factors also considered. Students who elect this course may pay a fee for use of alleys and shoe rental. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 118 | Canoeing

Instruction in basic canoeing techniques, includes basic strokes, safety, and selection and care of equipment. Prerequisite: Successful completion of course swim test. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 119 | Cross Country Skiing

Instruction in basic cross country skiing techniques. Terminology, equipment and safety will be included. Classes to be held both on- and off-campus. [Spring] [0.5 credits] [2 contact hours]

PHED 120 | Beginning Golf

Instruction in the fundamental techniques of golf. Course topics include swing mechanics, putting, rules, etiquette, and the selection and care of equipment. Practical application is emphasized. Course designed for golfer whose average score is over 100 for 18 holes. Some classes may be held at local golf course which require greens fees. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 121 | Jogging

Instruction in the use of jogging to develop aerobic fitness. Consists of regular participation in a jogging program. Course material includes basic physiology, the benefits of jogging, the mechanics of jogging, equipment, and basic fundamentals of training. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 124 | Basic Self Defense for Women

Instruction in the principles and application of defensive and counter techniques used in self-defense, as well as preparation against physical attack. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 128 | Beginning Swimming

A basic level course designed for the individual who has little or no swimming ability to develop the individual's personal aquatic safety skills and knowledge for activity in or near the water. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 136 | Beginning Tennis

This course is designed to teach a beginning tennis player the fundamental skills of the game stressing forehand, backhand and serve. It also covers history, scoring, rules for singles and doubles, terminology, etiquette, strategy, and the care and selection of equipment. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 140 | Volleyball - Women

Instruction in fundamentals of volleyball including the techniques of the pass, set, spike, block, and serve as well as the rules and strategy. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 141 | Volleyball - Men

Instruction in fundamentals of volleyball including the techniques of the pass, set, spike, block, and serve as well as the rules and strategy. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 145 | Basic Weight Training

Instruction in a number of different methods of weight training which will enable the student to design his/her own program for a lifetime of physical fitness. Includes training on Cybex machines and traditional dumbbells and barbells. This basic course includes discussion on overload, specificity, progression and cardiovascular fitness. Incorporates anatomy, exercise physiology, flexibility and biomechanics. [Fall, Spring] [0.5 credits] [2 contact hours]

PHED 151 | Wellness

A course designed to assess the many areas of lifestyle choices and their relationship to an individual's health and wellness. The course will encourage regular physical activity participation on an individual basis in areas that include: lifetime sports, recreational activities, and overall fitness. The course covers topics related to college students such as: nutrition/weight management, stress reduction, mental health, injury prevention, cancer, substance use and abuse, sexually transmitted infections/diseases, overweight/obesity, the rise in chronic disease, alcohol, and risks associated with tobacco use. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [2 contact hours]

PHED 161 | Mountain Biking

Students will develop the skills and techniques required to maneuver safely through backroads, trails and urban streets. In addition, students may develop skills in basic mechanics. Students must provide their own bicycles. [Spring] [0.5 credits] [2 contact hours]

PHED 181 | Walking

This course is designed to get students started with an appropriate walking program. It is personalized so that a student can develop a habit of walking that suits his/her comfort level, goals and lifestyle. Instruction in the use of walking to developing aerobic fitness. Consists of regular participation in a walking program. Course material includes basic physiology, the benefits of walking, and basic fundamentals of training. [Spring] [0.5 credits] [2 contact hours]

PHED 199 | Horseback Rider Strength& Cond

In this course, students will perform bodyweight and weighted exercise with the goal of increasing strength and will take part in cardiovascular and interval training with the goal of improving conditioning. Topics such as body image, nutrition, importance of macronutrients, and adaptations of the body will be discussed. This is a required course for members of the Hunt Seat riding team but is open to all students. It can be repeated up to 8 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

PHED 199A | Disc Golf

This course introduces the fundamentals of disc golf, including rules, techniques, and strategies. Students will engage in the game's theoretical and practical aspects, developing skills through hands-on experience. This is a 5-week course. [Spring] [1 credit] [2 contact hours]

PHED 290A | Special Projects Phys Ed

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

PHED 290B | Special Projects Phys Ed

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

PHED 290C | Special Projects Phys Ed

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with

whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

Philosophy

PHIL 101 | Intro to Philosophy (C)

A course designed to introduce students to philosophy both as a subject for study and as an activity of the human mind. Basic philosophic questions and problems will be surveyed and explored, and the significant approaches and orientations to these questions and problems will be examined and evaluated. The student will be encouraged to question, analyze, synthesize, evaluate, and to develop the critical and reflective attitude of mind that is basic to philosophic thinking. [Spring, Summer] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

PHIL 102 | Intro to Asian Philosophy (C)

This course will introduce students to fundamental philosophical questions concerning human existence; for example, the nature of knowledge, self and reality. In particular, students will study one of the most important focal points of Asian thought: the search for harmony in life at both the individual and social levels. The course will focus on the Vedic traditions, Buddhism, Confucianism, and Taoism. [Spring] Gen Ed Humanities, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

PHIL 290A | Spec Projects Philosophy

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

PHIL 290B | Spec Projects Philosophy

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

PHIL 290C | Spec Projects Philosophy

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable 1 time. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PHIL 305 | Ethics Science, Medicine, Tech

This writing-intensive and discussion-based course is an upper-level philosophy/science course focused on the elements of moral philosophy, especially as they apply to emerging ethical dilemmas in science, medicine, and technology. Emphasis will be on gaining cognitive skills and applying reason to all decision-making processes, including the appropriate use of emerging science and technologies. This course is cross-listed with BIOL 305. Prerequisites: Students must have completed at least 30-credit hours, including ENGL 101, any BIOL course, and an additional science course, or permission of the instructor; philosophy course recommended. [Fall, Spring] Gen Ed Diversity, Equity, Inclusion, and Social Justice, Gen Ed Humanities, Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PHIL 320 | Ethics and Management

An application of general moral theory to some of the more important moral problems arising in the areas of business and management; an analysis of motivation, of the norms of activity, of corporate responsibility as such, and of the relations of these to the range of "social responsibilities" (e.g. pollution control, environmental protection, equal opportunities, consumer protection, and government regulation). This course is cross-listed with BADM 320. Prerequisite: Junior status or permission of the instructor. [Fall, Spring] Gen Ed Humanities, Applied Learning-Other [3 credits] [3 contact hours]

PHIL 390C | Special Projects in Philosophy

An advanced independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable 1 time. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

Physics

PHYS 101 | Principles of Physics I (C)

Students will learn the principles of the science and behavior of DC and AC electrical circuits, magnetism, electronics and heat energy. Activities will include applications utilizing current technology to develop skills for explaining, testing and diagnosing various electrical/electronic devices and circuits. Use of digital and analog testing instruments will be stressed. Course fee of $25 is required. Co-requisite: PHYS 101X [Spring] General Education-Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

PHYS 101X | Principles of Physics I Lab(C)

Hands-on application of the topics covered in the Principles of Physics I lecture including electrical safety, ohms law, circuits, schematic drawings, voltage, measurement of current and resistance, electrical meters and other test equipment, batteries, solenoids, switches, relays, motors and alternators. Co-requisite: PHYS 101 [Spring] General Education-Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

PHYS 102 | Principles of Physics II (C)

This course is designed to provide students with an understanding of the basic principles of physics dealing with measurement, machines, heat properties of solids, liquids and gases; and the calculations required to solve for mechanical applications. Examples selected will be directly utilized in various technologies through the application of vectors, basic algebra and trigonometry processes. The concepts of work and energy will be applied throughout the course. Co-requisite: PHYS 102X [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Science Elective [3 credits] [3 contact hours]

PHYS 102X | Principles of Physics II Lab (C)

Hands-on application of the topics covered in PHYS 102. Co-requisite: PHYS 102 [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning [1 credit] [3 contact hours]

PHYS 111 | College Physics I

The first semester of a two-semester course in general physics. The emphasis will be placed on all branches of physics and their mathematical implications. It is assumed that each student will be quite familiar with the process of algebra and right triangle trigonometry. Areas of study will include: classical mechanics using a vector approach to statics and dynamics of rigid and non-rigid bodies, concepts of work, energy, power, momentum, heat and thermodynamics. Course fee of $25 is required. Co-requisite: PHYS 111X and PHYS 111Y (however, this course may be repeated without lab if PHYS 111X has been successfully completed previously). Prerequisites: Satisfactory completion of three years of high school mathematics or MATH 111. This course consists of 3 class hours and 1 one-hour recitation [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PHYS 111X | College Physics I Lab

Laboratory experience directly related to the material in PHYS 111. The activities are designed to develop a better understanding of the concepts covered in lecture, and to develop skills in measurement, error analysis, observation and interpretation. Computers will be used for data acquisition and analysis. This course consists of 1 three-hour lab. Co-requisite: PHYS 111 [Fall] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

PHYS 111Y | College Physics I Recitation

The recitation for PHYS 111. Co-requisite: PHYS 111 [Fall] [0 credits] [1 contact hour]

PHYS 112 | College Physics II

PHYS 112 is a continuation of PHYS 111. Topics of study will include: electricity and magnetism; wave phenomena; geometrical and physical optics; and an introduction to modern physics (including special and general relativity and quantum theory). This course consists of 3 class hours and 1 one-hour recitation. Course fee of $25 is required. Co-requisites: PHYS 112X and PHYS 112Y (however, this course may be repeated without lab if PHYS 112X has been successfully completed previously). Prerequisites: PHYS 111 and PHYS 111X [Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PHYS 112X | College Physics II Lab

Laboratory experience directly related to the material in PHYS 112. The activities are designed to develop a better understanding of the concepts covered in lecture, and to develop skills in measurement, error analysis, observation and interpretation. Computers will be used for data acquisition and analysis. This course consists of 1 three-hour lab. Co-requisite: PHYS 112 [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

PHYS 112Y | College Physics II Recitation

The recitation for PHYS 112. Co-requisite: PHYS 112 [Spring] [0 credits] [1 contact hour]

PHYS 211 | Calculus Physics I

Emphasis will be placed on familiarity with all branches of physics and the application of calculus to derivation of equations, problem solving, data analysis and error analysis. It is assumed that each student will be familiar with elementary techniques of differentiation and integration. Areas of study will include: classical mechanics, work and energy, conservation laws, simple harmonic motion, wave motion, gravitation, heat and thermodynamics. Credit may not be earned for both PHYS 111 and PHYS 211. This course consists of 3 class hours and 1 one-hour recitation. Course fee of $25 is required. Co-requisite: PHYS 211X and PHYS 211Y (however, this course may be repeated without lab if PHYS 211X has been successfully completed previously). Prerequisite: High School Regents Physics or PHYS 111 AND one semester of calculus (MATH 231) [Fall] Gen Ed Sciences, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PHYS 211X | Calculus Physics I Lab

Laboratory experience directly related to the material in PHYS 211. The activities are designed to develop a better understanding of the concepts covered in lecture, and to develop skills in measurement, error analysis, observation and interpretation. Computers will be used for data acquisition and analysis. This course consists of 1 three-hour lab. Co-requisite: PHYS 211 [Fall] Gen Ed Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

PHYS 211Y | College Physics I Recitation

The recitation for PHYS 211. Co-requisite: PHYS 211 [Fall] [0 credits] [1 contact hour]

PHYS 212 | Calculus Physics II

PHYS 212 is a continuation of PHYS 211. Topics of study will include: electrostatics and electrodynamics, magnetostatics and magnetodynamics, electromagnetic radiation, geometrical and physical optics, and an introduction to modern physics (including special and general relativity and quantum theory). This course consists of 3 class hours and 1 one-hour recitation. Credit may not be earned for both PHYS 112 and PHYS 212. Course fee of $25 is required. Co-requisite: PHYS 212X and PHYS 212Y (however, this course may be repeated without lab if PHYS 212X has been successfully completed previously). Prerequisite: PHYS 211 [Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PHYS 212X | Calculus Physics II Lab

Laboratory experience directly related to the material in PHYS 212. The activities are designed to develop a better understanding of the concepts covered in lecture, and to develop skills in measurement, error analysis, observation and interpretation. Computers will be used for data acquisition and analysis. This course consists of 1 three-hour lab. Co-requisite: PHYS 212 [Spring] Liberal Arts/Sciences Elective, Applied Learning-Other [1 credit] [3 contact hours]

PHYS 212Y | College Physics II Recitation

The recitation for PHYS 212. Co-requisite: PHYS 212 [Spring] [0 credits] [1 contact hour]

PHYS 290A | Physics Special Proj

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

PHYS 290B | Physics Special Proj

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

PHYS 290C | Physics Special Proj

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable 1 time. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PHYS 303 | Applied Thermodynamics

Applied Thermodynamics is an advanced three-credit course that provides the student with a comprehensive understanding of the basic principles, concepts, and methods of thermodynamics with emphasis on the First and Second Laws. The macroscopic variables of pressure, volume, and temperature will be introduced and related to the thermodynamic concepts of work, internal energy, enthalpy, and entropy. Course work will also cover the ideal gas laws, phase diagrams, conservation of mass and energy and will include a discussion of reversible and irreversible processes. Students will develop their ability to analyze problems in a simple and logical manner by applying the basic principles of thermodynamics. While the course will be an introduction to classical thermodynamics, the approach to the material will be from an engineering perspective with examples and problems taken from real-life scenarios. This course is cross-listed with ENVR 303. Prerequisites: PHYS 111/111X or PHYS 211/211X and MATH 231 [Fall] Applied Learning-Other [3 credits] [3 contact hours]

Physical Science

PSCI 101 | Astronomy

An introduction to the origin, structure and behavior of the Universe. From the starting point of medieval astronomy, the course progresses through a survey of the solar system; stars, galaxies, and stellar evolution; and ends with an examination of current thinking about cosmology. Suitable for both science and non-science majors, the course emphasizes the cultural, historical and humanistic contributions of astronomy. Co-requisite: PSCI 101X [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [2 contact hours]

PSCI 101X | Astronomy Lab

The lab component for PSCI 101. Co-requisite: PSCI 101 [Fall, Spring] [0 credits] [2 contact hours]

PSCI 102 | Physical Geology

A broad survey course covering the composition and structure of the Earth's surface, with an emphasis on the processes that have created and shaped it. Topics include: Plate Tectonics, earthquakes, volcanology, fluvial processes, the ocean and general geologic principles. This course is suitable to both science and non-science majors. Co-requisite: PSCI 102X [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [2 contact hours]

PSCI 102X | Physical Geology Lab

The lab component for PSCI 102. Co-requisite: PSCI 102 [Fall, Spring] [0 credits] [2 contact hours]

PSCI 104 | Energy and the Environment

This course will aim to present the concept of sustainability in terms of physical principles and the concept of energy. The central idea running through the course will be energy: its physical definition, its various forms (thermal, nuclear, chemical,

solar, electrical, etc.) and processes involved in the production, extraction, distribution, and use of energy. We will examine traditional and non-traditional modes of energy production including the technologies of those modes of production and the associated advantages and disadvantages of each mode. The goal is to provide the student with a broad-based physical and technical understanding of energy and to provide him/her with a basis for evaluating, understanding, and deciding upon the complex energy issues of the 21st century. [Spring] Gen Ed Sciences [3 credits] [4 contact hours]

PSCI 105 | Environmental Sci & Technology

This course considers the operational parameters of Planet Earth, stretching from its birth to the present day. Particular reference is made to the various natural cycles that keep it habitable, and the manner in which those cycles may have been compromised by its inhabitants. Recent technologies developed to return the earth to proper balance will round out the course. Co-requisite: PSCI 105X. Prerequisite: MATH 101 (with a minimum grade of C-) or higher [Fall, Spring] Gen Ed Natural Sciences (and Scientific Reasoning), Liberal Arts/Sciences Elective [3 credits] [2 contact hours]

PSCI 105X | Environmental Sci & Technology Lab

The lab component for PSCI 105. Co-requisite: PSCI 105 [Fall, Spring] [0 credits] [2 contact hours]

PSCI 221 | Soil and Water Conservation

This course provides a comprehensive overview of the processes that lead to the loss or degradation of soil and water resources, and emphasis on problem-solving skills to address those impactors. Quantitative skills are applied to evaluate the impact of various land use practices on soil loss due to wind and water erosion. Students assess land use practices that impact the availability and quality of freshwater and the different forms of water pollution that result from a wide range of land use practices, including agricultural, silvicultural, recreational, and urban. Critical thinking skills are used to solve problems related to the loss or degradation of soil and water resources. The role of current issues, such as climate change, in altering impacts on both soil and water resources, is also explored. Prerequisites: AGSC 111, MATH 111 or higher, and CHEM 101 or placement in CHEM 111. Co-requisite: PSCI 221X. This course replaces AGRN 121. [Spring] Gen Ed Comp-Information Literacy, Liberal Arts/Sciences, Applied Learning-Field Study [3 credits] [2 contact hours]

PSCI 221X | Soil & Water Conservation Lab

The lab component of PSCI 221 Soil and Water Conservation. Co-requisite: PSCI 221X. [Spring] [0 credits] [2 contact hours]

PSCI 290A | Physical Science Special Proj

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [1 credit] [1 contact hour]

PSCI 290B | Physical Science Special Proj

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective [2 credits] [2 contact hours]

PSCI 290C | Physical Science Special Proj

An independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable 1 time. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PSCI 303 | Field Geology

This course is designed to improve geological skills through direct observation of geologic phenomena in the field. Activities for this course will include walks in the field, a modicum of hill climbing, and time spent at roadside outcrops. Mapping exercises will be combined with field trips to explore the geologic history of New York. The course takes advantage of the Saturday modular schedule and runs for 8 consecutive weeks, 6 hours per weekend. Pre-requisite: ENGL 101 or equivalent

[Mod H Spring] Gen Ed Sciences, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Field Study [3 credits] [4 contact hours]

PSCI 324 | Applied Hydrology

Applied Hydrology is an advanced three-credit course that features a comprehensive study of the global hydrological cycle and its component processes. The course focuses on surface freshwater and groundwater environments, with principal attention given to water storage and flow mechanisms. Physical and chemical properties of freshwater are also explored. This course is cross-listed with AGRN 324. Co-requisite: PSCI 324X. Prerequisites: AGSC 111 and CHEM 111/111X. [Fall] Applied Learning-Other [3 credits] [2 contact hours]

PSCI 324X | Applied Hydrology Lab

The lab component for PSCI 324. Co-requisite: PSCI 324 [Fall] [0 credits] [2 contact hours]

PSCI 390C | Physical Sci Special Project

An advanced independent or small group study course designed to permit an individual student or group of students, to pursue on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course is repeatable 1 time. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

Psychology

PSYC 111 | General Psychology (C)

Consideration of the methods and points of view involved in the scientific study of the psycho-physical basis of human behavior with emphasis on maturation, intelligence, development, learning, motivation, personality, and individual differences. [Fall, Spring, Summer] Gen Ed Social Sciences, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PSYC 221 | Child Psychology (C)

A study of human development from infancy through early adolescence. The dynamics of the behavior of children including physical, social, intellectual, emotional and environmental aspects are considered. Developmental, dynamic, behaviorist and phenomenological theories will be included. Prerequisite: PSYC 111 [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PSYC 222 | Adolescent Psychology (C)

Physical, intellectual, social and emotional development of the individual. Patterns of behavior and modes of adjustment are presented in order to understand the process of adolescence. Prerequisite: PSYC 111 [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PSYC 231 | Social Psychology (C)

The scientific study of the activities and behavior of the individual as influenced by other individuals, society, culture and environment. Prerequisite: PSYC 111 [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

PSYC 250 | Research Methods in Behav Sci

This course addresses issues in conducting research in the behavioral sciences, including experimental and non-experimental research designs and methods. Emphasis will be on the selection of an appropriate research design for the research problem, instrument development, data collection and analysis techniques. The course is designed to permit the student to pursue a research project under the direction of the supervising faculty member. Completion of the course requires a presentation of the semester project to the Social Sciences faculty. Prerequisites: PSYC 111 or SOSC 111, and MATH 125 each with a grade of C- or better [Spring] Gen Ed Social Sciences, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Applied Learning-Research [3 credits] [3 contact hours]

PSYC 290A | Special Projects Psychology

An independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with

whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [1 credit] [1 contact hour]

PSYC 290B | Special Projects Psychology

An independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [2 credits] [2 contact hours]

PSYC 290C | Special Projects Psychology

An independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [3 credits] [3 contact hours]

PSYC 300 | Intro to Community Psychology

This course is designed to be an introductory course in community psychology. While the focus will be on the research strategies and strategies that promote community change, this course will also explore community psychology's core values and assumptions. Prerequisite: PSYC 111 [Fall] Gen Ed Diversity: Equity, Inclusion, and Social Justice, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

PSYC 310 | Special Topics in Psychology

This course will explore, in depth, a particular issue in psychology. Themes of the course will change each semester in which it is offered and will be announced prior to registration. Prequisite: PSYC 111 with a grade of C- or higher [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

PSYC 320 | Personality Psychology

This course studies the psychological forces that make people unique - their personalities. This course focuses on helping students broaden their knowledge and understanding of personality theory and application through the importance of the major theorists in personality. Students will be introduced to some of the measurement tools used to evaluate personality and learning to apply them in the 'real world'. Prerequisite: PSYC 111 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level, Applied Learning-Research [3 credits] [3 contact hours]

PSYC 323 | Adult Development & Aging

This course will take an in-depth look at the psychological as well as the physical and social changes associated with adulthood and aging. Particular attention will be paid to race, ethnicity and gender and their effects on the aging process. The issue of age-based discrimination will also be addressed. Prerequisite: PSYC 111. [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

PSYC 330 | Psychology of Learning

In this course students will learn the major psychological theories of learning. They will be able to apply their understanding to human and animal populations, and will understand the impact of learning on human and animal experience. Students will gain an introduction to the interrelationship between learning and memory, and the basic processes involved in memory. Prerequisites: PSYC111 with a grade of C- or better [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 332 | Sport Psychology

Through completion of this course, the student shall understand the theoretical background of sport and exercise psychology, and the application within the field. The curriculum will include the following units: understanding of the field; motivation; effects of arousal and anxiety on performance; cognitive and behavioral interventions; social psychology of sport; psychology of fans; and current topics in sport and exercise science. Prerequisite: PSYC 111 with a grade of C- or

higher [Fall, Spring, Summer] Liberal Arts/Science Elective, Liberal Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 341 | Organizational Psychology (C)

A study of the changing structure and purpose of organizations and the impact of these changes on individual and interpersonal changes. Prerequisite: PSYC 111 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 342 | Health Psychology

An in depth exploration of fundamental theoretical principles of health psychology with an emphasis on the psychological, behavioral, social and biological influences on personal health. Additional emphasis will be on the application of health psychology principles to personal lifestyle and relationships. Prerequisite: PSYC 111 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 345 | Psychological Resilience

A study of Psychological Resilience that begins with an examination of the sources of resilience in people and how resilience is developed and fostered. Resilience is a topic that is very relevant to students interested in fields such as mental health, healthcare, education, and international relations. The course will center on the discussion of the development of the concept of psychology resilience and how our understanding of it has changed over time. Emphasis will be placed on applying and relating resilience tools to populations of interest to the student. Prerequisite: PSYC 111 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 350 | Abnormal Psychology

This course reviews the historical perspective on abnormal behaviors and provides a survey of the etiology of disorders, the techniques for diagnosis and contemporary treatments. Illustrative case studies will be used to understand specific disorders. Students will be expected to think critically, and apply their knowledge in identifying disorders and suggesting possible treatments. Prerequisite: PSYC 111 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 352 | Theories of Counseling

This course provides a broad survey of various theories of psychotherapy, including psychodynamic, existential, person-centered, (cognitive-)/behavioral, feminist, postmodern, and family systems approach. In each theory, key concepts, techniques, and therapeutic procedures will be discussed. In addition to addressing each individual theory, an integrative perspective will also be presented along with the scientific evidence behind it. Prerequisite: PSYC 111 with a grade of C- or higher [Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 360 | Group Dynamics

This course will explore group structure, interaction, dynamics and leadership. By introducing current psychological theories and models as they relate to groups, students will learn to work more effectively in groups, increase their understanding of leadership and make more effective decisions. The focus will be on demonstration and practice. Students will be introduced to the different types of groups and will be involved in group activities whenever practical. Prerequisite: PSYC 111 [Fall] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 370 | Wellbeing in the Workplace

A study of wellbeing in the workplace with an organizational and industrial psychology perspective. The course will center on exploring current models of workplace wellbeing and the application of models in different occupations and industries. Prerequisite: PSYC 111 with a grad of C- or higher [Fall, Spring, Summer] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

PSYC 372 | Workplace Training & Development

A study of workplace training and development with an organizational and industrial psychology perspective. The course will explore historical foundations to contemporary models of workplace training, with an emphasis into how these practices are shaped by psychological principles and applied across diverse industries. Prerequisite: PSYC 111 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

PSYC 390A | Special Projects in Psychology

An advanced independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [1 credit] [1 contact hour]

PSYC 390B | Special Projects in Psychology

An advanced independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. This course is repeatable up to 2 times. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [2 credits] [2 contact hours]

PSYC 390C | Special Projects in Psychology

An advanced independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. The faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirements for any degree. [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning [3 credits] [3 contact hours]

PSYC 400 | Field Exp in Applied Psyc I

This course offers three credits of volunteer-learning experience in an applied setting with a cooperating psychological, human services agency or private business or industry setting. Students will volunteer at least 45 hours per semester in an approved agency, participate in on-campus seminar meetings and complete additional in- and out-of-classroom assignments. In addition to the volunteer-learning work, this course will be organized as a seminar to prepare students for careers in the industrial/organizational and rural community psychology fields. Majors only. Prerequisites: PSYC 111 and 9 credits of PSYC prefixed courses. [Spring] Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Community Service [3 credits] [3 contact hours]

PSYC 410 | Adv Research Methods App Psyc

This course will expand the knowledge gained in PSYC 250 (Research Methods in Behavioral Sciences) and take the topics into greater depth. This course will focus more on program development and evaluation, drawing from the knowledge gained in PSYC 250. Emphasis will be on methods of evaluation and research design, instrument development, data collection techniques within a public/applied setting. This course will help the student to learn the methods of program design and evaluation, and additionally, apply these methods to appropriate settings. At the conclusion of this course, students will have completed an original evaluation research project in conjunction with work at the internship site. Prerequisites: Majors only; 2.5 overall GPA. Co-requisite: PSYC 470 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Research [3 credits] [3 contact hours]

PSYC 470 | Field Exp in Applied Psyc II

This course will provide students the opportunity to work in a supervised field experience in a selected business/organizational or community agency. They will gain at least 480 hours of work experience. Students carry out planned program experiences under the direct supervision of the agency supervisor. Each intern will also interact with the Cobleskill faculty member supervising the interns on a regular basis. This course is S/U graded only. Prerequisites: Majors Only; 2.5 overall GPA. Co-requisite: PSYC 471 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Internship [8 credits] [8 contact hours]

PSYC 471 | Field Experience II: Reporting

This course is a four-credit course taken simultaneously with PSYC 470 Field Experience II. PSYC 471 is designed for students to engage in active critical thinking, problem solving, discussion, and reflection upon academic and professional experience by documenting and reporting on their field experience throughout the experience. The main goal of the course is to maximize the student learning while working in the field and to ensure the work is relevant and useful to the student for

professional growth. Students complete a project/final presentation for members of the College community. Prerequisites: Majors only; 2.5 overall GPA. Co-requisite: PSYC 470 [Fall, Spring] Applied Learning-Internship [4 credits] [4 contact hours]

Recreation and Sports Area Management

RECM 203 | Advanced Snow Management

This snow-specific online training program includes four individual learning modules and certificates culminating in a Snow and Ice Managers Association (SIMA) Advanced Snow Managers (ASM) credential. The course consists of understanding core principles of production and weather, Ice Management, Plowing Operations, and Sidewalk Management. Previous coursework in estimating or snow and ice management experience is encouraged. All individuals who successfully complete the course will have earned the professional accreditation of Advanced Snow Manager and the rights to use the certification logo to represent their credentials publicly. A lab fee of $800 is required and provides access to the SIMA modules and additional online course materials. Concurrent enrollment in RECM 204 Applied Snow Management is encouraged but not required. [Spring] [1 credit] [3 contact hours]

RECM 204 | Applied Snow Management

Applied Snow Management is an optional co-requisite of RECM 203 Advanced Snow Management. This course is a supervised work experience course consisting of the actual work experience with cooperative partners. The course is designed to apply in a workplace environment the SIMA ASM learning modules. Students will perform and demonstrate proficiency in seasonal snow and ice operations and gain experience in tasks and records to be completed as part of snow and ice management operations. A minimum of 45 hours of approved supervised experience is required. Prerequisite: Concurrent enrollment in RECM 203 or completion of RECM 203 with a grade of "C" or better within the past 2 years. [Spring] Applied Learning-Internship [1 credit] [3 contact hours]

RECM 222 | Turfgrass Management (C)

The establishment and maintenance of turfgrass are studied in this course. Lawn, golf course and athletic field care are emphasized. Laboratory experiences include: seeding, installing sod, fertilizing, mowing, spraying, aerating and other commonly performed maintenance practices. Students also will learn to identify the turfgrasses and important weed species. Co-requisite: RECM 222X [Fall] Applied Learning-Other [3 credits] [2 contact hours]

RECM 222X | Turfgrass Management Lab

The lab component for RECM 222. Co-requisite: RECM 222 [Spring] [0 credits] [2 contact hours]

RECM 245 | Intro Golf Course Management

An introduction to golf course management techniques. Construction and maintenance activities such as soil testing, fertilization programs, mowing, topdressing, aeration, irrigation, pest control and bunker repair will be discussed. Business management practices specific to golf course management will also be covered. Co-requisite: RECM 245X. Prerequisite: RECM 115 [Spring] Applied Learning-Other [2 credits] [1 contact hour]

RECM 245X | Intro Golf Course Management Lab

The lab component for RECM 245. Co-requisite: RECM 245 [Spring] [0 credits] [2 contact hours]

RECM 290A | Spec Projects Rec Land Mgt

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic, based on previous interest and experiences. Further, the faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Open to department majors only; preferably second-year students. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

RECM 290B | Spec Projects Rec Land Mgt

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic, based on previous interest and experiences. Further, the faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Open

to department majors only; preferably second-year students. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

RECM 290C | Spec Projects Rec Land Mgt

An opportunity for independent study under the guidance of a department faculty member. Students should have a strong inclination toward a particular topic, based on previous interest and experiences. Further, the faculty member with whom the student chooses to work must be in full agreement with the student's choice of project at the time of enrollment. Open to department majors only; preferably second-year students. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

RECM 378 | Golf Course Management (C)

This course is composed of a series of seminars taught by representatives of the golf course industry and the course instructor. It is an advanced turfgrass management class which covers topics such as turfgrass integrated pest management, golf course maintenance budgets, personnel management, golf course design and construction, greens and bunkers renovation, tournament preparation, disease identification and control, biostimulants and micronutrients, fairway mowing programs and equipment selection. Students will visit several golf courses. Co-requisite: RECM 378X. Prerequisites: RECM 222 and RECM 223 [Spring] Applied Learning-Field Study [3 credits] [2 contact hours]

RECM 378X | Golf Course Management Lab

The lab component for RECM 378. Co-requisite: RECM 378 [Spring] [0 credits] [2 contact hours]

RECM 390A | Spec Projects Rec Land Mgt

An advanced independent study of topics of special interest to the Bachelor of Technology student in Recreation and Sports Area Management. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [1 credit] [1 contact hour]

RECM 390B | Spec Projects Rec Land Mgt

An advanced independent study of topics of special interest to the Bachelor of Technology student in Recreation and Sports Area Management. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [2 credits] [2 contact hours]

RECM 390C | Spec Projects Rec Land Mgt

An advanced independent study of topics of special interest to the Bachelor of Technology student in Recreation and Sports Area Management. Student must have prior approval from a cooperating faculty member and the advisor to enroll in this course. This course is repeatable up to 2 times. [Fall, Spring] Applied Learning-Other [3 credits] [3 contact hours]

RECM 413 | Advanced Golf Course Mgmt

This course covers business and personnel management responsibilities required of all golf course superintendents. The major emphasis will be on communications, budgeting, short- and long-term planning, employee relations and record-keeping. Prerequisite: RECM 223 or RECM 245, RECM 378 [Spring] Applied Learning-Entrepreneurship [3 credits] [3 contact hours]

RECM 450 | Internship In Rec and Sport

Supervised field work in a selected agricultural business. Students carry out a planned program of educational experiences under the direct supervision of the owner, manager or supervisor of the business. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. Evaluation will be based on the quality and quantity of experiences gained from the internship. This course is S/U graded only Prerequisite: Minimum of 30 upper-level credits, concurrent enrollment in RECM 451 [Fall, Spring] Applied Learning-Internship [12 credits] [12 contact hours]

RECM 451 | Rec Land Mgmt Intern Reporting

Plant Science Bachelor of Technology students enrolled in RECM 450 - Internship in Recreational Land Management - must be concurrently enrolled in this course. Students will prepare their internship agreement paperwork; submit daily log entries while on their internship; submit periodic, mid- term, and final evaluations; and give their final presentation at the

conclusion of the internship. Internship advisors may assign additional reports as well. This course will be letter graded (A-F). Prerequisite: Minimum of 30 upper-level credits, concurrent enrollment in RECM 450. [Fall, Spring] Applied Learning-Internship [3 credits] [40 contact hours]]

Sociology

SOSC 111 | Introduction to Sociology (C)

An introduction to the nature of social organization, culture, socialization, group structure and social process. [Fall, Spring] Gen Ed Social Sciences, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

SOSC 112 | Social Problems (C)

The application of sociological methods, concepts, analysis and theories to the study of contemporary problems. Both micro-level and macro-level problems will be examined. The process of defining situations as social problems and a critical analysis of information concerning social problems will be an objective of the course. [Fall, Spring] Gen Ed Social Sciences, Gen Ed Comp-Critical Thinking & Reasoning, Gen Ed Comp-Information Literacy, Liberal Arts/Sciences Elective, Applied Learning-Other [3 credits] [3 contact hours]

SOSC 211 | Sociology of the Family (C)

The purpose of this course is to examine the family as a social institution within the framework of sociology. An analysis of the historical and cross-cultural variations of the family within American society will be addressed. Sociological methods, concepts, analyses and theories will be used to study contemporary family issues and problems. The emphasis of this course is on the development of critical thinking skills as they pertain to the family within a sociological perspective. Prerequisite: SOSC 111 [Fall, Spring] Liberal Arts/Sciences Elective, Applied Learning-Research [3 credits] [3 contact hours]

SOSC 290A | Spec Projects Social Science

An independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirement for any degree. This course is repeatable up to 2 times. [Fall, Spring] [1 credit] [1 contact hour]

SOSC 290B | Spec Projects Social Science

An independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirement for any degree. This course is repeatable up to 2 times. [Fall, Spring] [2 credits] [2 contact hours]

SOSC 290C | Spec Projects Social Science

An independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. This course does not meet the Social Science requirement for any degree. [Fall, Spring] [3 credits] [3 contact hours]

SOSC 311 | Rural Sociology

This course will use the sociological perspective in the study of rural communities. The course will examine the characteristics of rural areas as well as the social institutions of rural America. Demographic changes and their impact on the rural community will be examined. Social problems in rural areas will be studied. A major part of the course will concentrate on research using archival data, research from land grant colleges and other agencies studying rural America. A requirement of the course is 20 hours of volunteer work for a community agency, accompanied by a research paper on the agency. Prerequisite: SOSC 111 or SOSC 112 [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

SOSC 312 | Sociology of Community (C)

This course reviews and analyzes historic, classic, and contemporary studies about community at the advanced level. Concepts of comparative community will concentrate on transformations, structures, theories, and problems. Examination of community as a system of social relationships from small towns to the global community. The course will include a significant amount of reading as well as the application of social science research. Prerequisite: SOSC 111 or permission of the instructor. [Fall, Spring] Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level, Applied Learning-Other [3 credits] [3 contact hours]

Spanish

SPAN 101 | Beginning Spanish I (C)

This is the first semester of a two-semester sequence in the basic skills of reading, writing, understanding and speaking the Spanish language. Prerequisites: None; however, students already possessing a basic knowledge of written Spanish will not be admitted. [Fall, Spring] Gen Ed Foreign Language, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

SPAN 102 | Beginning Spanish II (C)

A sequel to SPAN 101, this is the second semester of a two- semester sequence. Prerequisites: SPAN 101 or the equivalent or permission of instructor. [Fall, Spring] Gen Ed Foreign Language, Gen Ed World Languages, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

SPAN 201 | Continuing Spanish I

This is the first semester of a two-semester sequence in intermediate-level Spanish. Following a thorough review of basic grammar, this course will focus upon development of fluency in reading, writing, understanding and speaking the Spanish language. Prerequisites: SPAN 102 or the equivalent or permission of the instructor. [Fall, Spring] Gen Ed Foreign Language, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

SPAN 202 | Continuing Spanish II

A sequel to SPAN 201, this is the second semester of a two- semester sequence in intermediate-level Spanish. Prerequisites: SPAN 201 or the equivalent or permission of instructor. [Fall, Spring] Liberal Arts/Sciences Elective [3 credits] [contact hours]

SPAN 390C | Special Projects Spanish

An advanced independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] [3 credits] [3 contact hours]

Sport Industry

SPIN 101 | Intro to Sport Industry

This course is designed to introduce the Sport Industry field. In the sports industry overview, students will understand the essential historical background, practical management skills, philosophies, principles, and leadership skills for effective management and operations, recreation, leisure, and fitness facilities, essential historical background, practical management skills, perspectives, principles, and leadership skills for effective management in the public and private sector from youth to professional levels. [Fall] [3 credits] [3 contact hours]

SPIN 220 | History of American Sport

This course explores the history of American sport from various perspectives. It examines political, economic, social, and cultural questions related to equity, citizenship, ethics, culture, identity, and commercialization. The course focuses on the tensions between amateurism and professionalism, the relationship between American sport and notions of nationalism, the intersection of sport and race, class, gender, and sexuality, and debates concerning the parameters of fair play and competition. Through this course, students will develop critical thinking and historical methodologies by analyzing an aspect of American life that is too often overlooked in academic discourse. [Fall, Spring] Gen Ed U.S. History and Civic Engagement, Liberal Arts/Science Elective [3 credits] [3 contact hours]

SPIN 346 | Gender and Sport

This course explores the intersection of gender and sport, examining how cultural, social, and historical factors shape our understanding of gender within the context of sports. Students will critically analyze issues such as representation, stereotypes, access, and participation in sports, as well as the impact of gender on athletic performance and the sports industry. The course will also explore the role of activism and policies in promoting gender equity in sports. Prerequisite: PSYC 111 or SOSC 111 [Spring] Gen Ed Diversity: Equity, Inclusion, and Social Justice, Liberal Arts/Sciences Elective, Lib Arts/Sci Upper-Level [3 credits] [3 contact hours]

Sustainability Studies

SUST 101 | Introduction to Sustainability

This introductory course examines the multifaceted concept of sustainability in the world. During the semester, students will analyze approximately two dozen topics related to sustainability. Topics may include animal rights, pollution, clean water, environmental justice, global warming, agriculture, energy, land use, population, consumption, and transportation. The instructor will present a broad spectrum of historical and theoretical perspective to help students better understand our changing natural world. Students will review and analyze historic, classic, and contemporary studies about the environment. Concepts of a sustainable society will concentrate on theories, problems, and solution. The course will include a significant amount of reading as well as the application of a written research project. [Fall, Spring] Gen Ed Social Sciences, Liberal Arts/Sciences Elective [3 credits] [3 contact hours]

SUST 390B | Special Projects Sustainability

An advanced independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] [2 credits] [2 contact hours]

SUST 390C | Special Projects Sustainability

An advanced independent or small group study course designed to permit an individual student or group of students to pursue, on their own initiative, topics or projects of their own design in which they have a specific interest. Faculty member with whom the student works must be in full agreement with the student's choice of project at the time of enrollment. [Fall, Spring] [3 credits] [3 contact hours]

Academic Policies

TABLE OF CONTENTS

SECTION A: Admissions Policies

SECTION B: Transfer Policies and Credit by Examination

SECTION C: Student Classification

SECTION D: Enrollment, Withdrawal, Waiver Policies

SECTION E: Academic Integrity

SECTION F: Student Rights and Responsibilities

SECTION G: Responsibilities of Teaching Faculty

SECTION H: Grades

SECTION I: Grade Transactions

SECTION J: Academic Standing

SECTION K: Graduation Requirements

SECTION L: Awarding of Degrees

SECTION M: Family Educational Rights and Privacy Act of 1974 (FERPA)

SECTION A - ADMISSIONS POLICIES

1.00 **Full Opportunity -** Admissions to SUNY Cobleskill follow the admissions policies and guidelines of State University. The College will, to the limits of its resources, admit all applicants it judges capable of successfully completing a prescribed program of study.

1.01 The College reserves the right to issue qualified acceptances.

1.02 The director of admissions will inform the applicant of the nature of the qualification.

1.03 Qualified applicants will be reviewed without regard to race, creed, color, sex, age, national origin, or physical or learning disability.

1.10 **Admissions Requirements -** To be eligible for admission, a candidate must graduate from a fully accredited and approved high school, receive a certificate of completion from a home school program which is in compliance with the laws of the student's home state, or earn a General Equivalency Diploma (GED).

1.12 All applicants from Schoharie County will be given additional consideration for admission. Applicants from other counties will be admitted in keeping with SUNY admissions policies for Colleges of Agriculture and Technology which have liberal arts and sciences programs.

1.20 **Notification of Acceptance -** The College uses "rolling admissions" whereby all applications are acted on as promptly as possible following completion of all admissions procedures.

1.30 **Early Admissions -** High school students may be admitted full-time to the College. They must be in good academic standing at their high schools, recommended by their counselors, have written permission from their parents or guardians, and have completed the SUNY formal application. The students will be responsible for completing the arrangements for meeting high school graduation requirements.

1.50 **Educational Opportunity Program -** An applicant for the Educational Opportunity Program must be a resident of the State of New York, must have obtained a high school diploma or its equivalent, and must be judged educationally and economically disadvantaged.

1.51 An applicant is judged educationally disadvantaged if the applicant does not meet the minimum academic standards required for admission to the College in an Associates Degrees (AS, AAS, AA).

1.52 An applicant is judged economically disadvantaged if the applicant's family income or applicant's income adheres to criteria established for Higher Educational Opportunity Programs administered by the New York State Education Department.

1.60 **International Students -** The College encourages applications from citizens of other countries.

1.61 Students are expected to demonstrate competency in both written and spoken English by obtaining a minimum score of 500 on the Test of English as a Foreign Language (TOEFL) or Internet-Based score of 61.

1.62 An evaluation of the previous education of each foreign applicant is made. Each applicant must present credentials equivalent to a completed program of secondary education in the United States in order to be eligible for admission to the undergraduate program.

1.70 **Readmissions Procedure -** Former full-time students who wish to apply for readmission to Cobleskill after a lapse of a semester or more must complete an application for readmission. A decision may not be rendered if the student has outstanding college holds.

1.70a **Readmissions of Military Service Members -** The College will promptly readmit service members, who could not attend school due to military service, with the same academic status as they had when last attended the school or accepted for admission to the school. Students need to notify their VA contact on campus or Admissions office of their intention to return. The readmission process for service members is fully aligned with and follows the Chapter 3 of Volume 2 of the Federal Student Aid Handbook.

1.71 If a student who requests readmission has a quality point average of less than 2.00, his/her request will be reviewed; and if reinstated, s/he will continue on academic probation.

1.72 If a student who requests readmission was academically dismissed, a minimum of 6 credit hours of college level courses work with a grade of "C" or better must be earned to regain admission. The six credit hours must be completed at the students' local SUNY institution. Schoharie county residents will have the option to return to SUNY Cobleskill on a part-time basis.

1.80 **Second Degree Procedures -** The College provides the opportunity to earn two associate degrees and/or bachelor degrees, provided the second curriculum does not significantly duplicate the primary curriculum.

The General Education requirements for the first degree may be applied toward the General Education requirements of the secondary degree. When the secondary degree is to be awarded at the same time as the primary degree, please refer to policy 11.00a, Dual Degrees.

For a secondary associate degree, the requirements are as follows:

- A minimum of 15 credit hours of significantly different academic work above and beyond the primary associates degree must be earned at SUNY Cobleskill as prescribed for the program of study for the secondary degree.
- Residency requirements are still in effect (see policy 2.03)
- A minimum cumulative GPA of 2.00 of all coursework completed in the secondary associate degree is required.

For a secondary bachelor degree, the requirements are as follows:

- A minimum of 30 credit hours of significantly different academic work above and beyond the primary bachelor degree must be earned at SUNY Cobleskill as prescribed for the program of study for the secondary degree.
- Residency requirements are still in effect (see policy 2.03)
- No fewer than 15 credits ***MUST*** be earned by fulfilling upper level major field/professional requirements.
- A minimum cumulative GPA of 2.00 of all coursework completed in the secondary bachelor degree is required.

The appropriate internship must be completed if required by the secondary degree program.

1.81 Matriculation for a second associate or bachelor degree requires satisfactory academic achievement in the first associate or bachelor degree program.

1.82 Students must file an application with the Admissions Office for a second degree.

1.83 Final approval for a second degree rests with the Director of Admissions.

SECTION B - TRANSFER POLICIES AND CREDIT BY EXAMINATION

2.00 Official copies of college transcripts or prior learning credit should be forwarded to the Office of Admissions as part of the application. The Office of the Registrar will use a faculty-approved transfer guide to course equivalencies to evaluate credit. Credits are accepted, grades are not and will not be used to calculate the student's grade point average at Cobleskill. To determine academic standing and eligibility for retention, residence credit and transfer credit hours will be totaled. The total will be used to determine academic progress and standing.

2.01 With verification of the registrar, the appropriate dean, after consultation with department chair(s), may grant credit for courses completed successfully at other accredited institutions of higher education. Credits evaluated and accepted into one major field of study may *NOT* necessarily be accepted toward the major field requirements in another field of study. Change of major *REQUIRES* reevaluation of transfer credit by the registrar.

2.02 Credit may be granted for credit courses from accredited colleges, as certified by the registrar, in which grades of "D" (1.0)* or better were earned as long as the overall index of the courses being transferred remains at 2.0 or higher, subject to evaluation by the appropriate dean with input from the department chair. Physical Education transfer credits of Pass/Satisfactory may be applied towards Physical Education requirements regardless of legend.

*Certain degree programs require a grade of “C-” or better in major field requirement/track areas. If this is the case, the “D” grade will NOT satisfy these requirements.

2.03 **Residency Requirements** – (1) Associate and Bachelor degree students must complete a minimum of 25% of their credits from SUNY Cobleskill to meet the residency requirements. A minimum of one-half of the residency requirement must be major field requirements. (2) The minimum percentage of residency credits for certificates and microcredentials are based on program requirements. The minimum percentage of residency credits for students completing minors is 50%. A student may appeal to the Provost regarding the residency requirements.

2.04 Courses which have been evaluated as "*elective*" may be used to fulfill degree requirements (e.g., courses which are evaluated as SOSC, HIST or PSYC *"elective"* fulfill part or all of six hours of social science requirement). The prefix FREL, or Free Elective, is used when there is no equivalent prefix at Cobleskill. When there is an equivalent prefix but there is not an equivalent course at Cobleskill students will receive credit at a 1XX or 2XX level for the subject area.

Courses evaluated as a "*general elective*" may only be used to fulfill the "*general elective*" requirement. The number of electives required may differ based on the student's curriculum and degree. If necessary, course equivalencies are determined by an appropriate department representative as determined by the dean.

2.05 All hours granted under "Cobleskill Equivalent" are *semester* hours. Transfer institutions which use quarter hours are so noted on the evaluation. Roughly quarter hour equivalency is 2/3 that of semester hours. 5 Qtr. Credits = 3 Semester Credit Hours at Cobleskill. 4 Qtr. Credits = 2.5 Semester Credit Hours at Cobleskill.

2.06 **Refusal of Credits** – Cobleskill accepts credits from other accredited institutions when the nature, content, and level of the transfer credit is comparable to courses at Cobleskill. Transfer credit must be appropriate and applicable to the student's degree program and their educational goals. Cobleskill has the right to refuse credit which does not meet these considerations.

2.15 **Transfer Credit to Complete Degree Requirements** – The date of graduation is determined by the date which SUNY Cobleskill receives the official transcript. In addition, all degree requirements must be met prior to the degree being awarded.

2.20 **Approval of Credits Obtained at Other Colleges after Admission to Cobleskill** – Students currently enrolled in a degree program must have prior approval from the advisor and dean (via signature on Transfer Course Approval Form) for transfer of credits obtained at other colleges after admission to Cobleskill. Repeat of courses at another college already taken at Cobleskill will not change the grade earned at Cobleskill.

2.30 **Categories of Transfer Credit** – In addition to credit received from other accredited colleges, the credits accumulated in the following areas also count toward degree: New York State College Proficiency Examination Program, the College External Examination Board Advanced Placement Examination, the College Level Examination Program and challenge examinations administered at Cobleskill College.

2.31 Credit may also be awarded for courses taken in non-collegiate settings. Credit will reviewed by the Office of the Registrar in accordance with established non-collegiate organizational agreements. The department/school faculty must approve the valuative guidelines, such as Guidelines to Educational Programs in Non-Collegiate Organizations, published by New York State Education Department, and Guide to Educational Experiences in the Armed Forces,

published by the American Council on Education in establishing non-collegiate organizational agreements.

2.40 **Challenge Examinations** – Students who are registered and enrolled in courses designated with a (C) in the College catalog may challenge the course via examination within the add/drop period. Application may be made with the instructor, dean or department chair, depending on the department.

2.41 Successful challenges are recorded on the challenge transmittal form, which is forwarded to the registrar. Students are assigned credit on the transcript, and a grade of "S" is recorded. See Section H - Grades, subsection 8.50 S/U Grades.

A part-time student who completes a successful challenge may enroll in another course carrying an equal number of credit hours during the add/drop period without paying additional tuition and fees. Part-time students may add another course providing it does not bring them above 11.5 credits.

2.42 Students who fail the examination may not repeat the attempt. No credit is received and no entry is made on the transcript. Students must continue in the course in order to earn the credit or withdrawal.

2.43 Limits on Challenge: Challenge examinations may not be used for (a) courses previously taken (whether passed or failed), or (b) courses at a level lower than the one in which the student has been placed or has completed earlier at any college.

2.50 **Credit by Published Examinations** – Matriculated students may receive credit by passing published proficiency examination(s) (see sections 2.54-2.56) provided the content is that of college course(s). Credit by Examination is reviewed for application of credit by the Office of the Registrar. When necessary, the registrar will consultation with departmental leadership if a course equivalency has not been determined.

2.51 The registrar may grant credit if a grade of "C" or better is earned on the CPE or CLEP examinations, or if a “3” or better is earned on the College Entrance Examination Board Advanced Placement Examination (CEEB). Students should be advised that in transferring to other colleges, their AP credit may not be accepted at that level.

2.52 Results from the College Entrance Examination Board Advanced Placement Examination (CEEB) should be sent to the director of admissions.

2.53 The registrar will evaluate the scores for CEEB and CLEP. The College will not count credit hours toward fulfillment of degree requirements in the areas that would normally not receive credit when transfer credits are evaluated.

2.54 CEEB Examinations: The College will accept requests for advanced placement and/or credit based on the College Entrance Examination Board Advanced Placement Examination. Students must meet College entrance requirements and be accepted and enrolled. A score of no less than 3 on the CEEB Advanced Placement Examination must be earned in order for students to receive equivalent credit at Cobleskill.

2.55 CLEP Examinations: The College will grant up to six credits in each exam area for successful completion of CLEP General Examinations in English Composition, Mathematics, Humanities, Natural Science, Social Sciences, Foreign Language and History. Accepted scores are based on the American Council on Educations recommended scores and vary based on the exam.

2.56 CPE Examinations: A score of "C" or better must be earned on the College Proficiency Examination or the student must have passed the college course examination.

2.57 **International Baccalaureate Course Equivalents** (Adopted from U Albany Policy): The college will award 30 credits to students completing the requirements for the IB Diploma with a cumulative score of at least 30 (including both Standard Level and Higher Level exams) and no score lower than a 4 (satisfactory). The credits will be awarded as follows:

- 12-24 credits assigned course credit equivalents on a course-by-course basis for Higher Level courses completed with a score from 4 (satisfactory) to 7 (excellent).
- 6-18 credits assigned as elective credit for the completion of the balance of the Standard Level courses and the Extended Essay requirement.

In addition, the college will consider for credit and/or placement on a course-by-course evaluation those IB subjects completed at the Higher Level without completion of the IB Diploma if a score from 4 (satisfactory) to 7 (excellent) is earned.

2.60 **One Plus One Programs** – Articulation agreements have been developed with several other SUNY colleges. Students may complete a prescribed first year at one of the colleges stated in the agreements and transfer to Cobleskill to complete a degree program. Admission to Cobleskill is contingent upon completing the first year with a grade point average of 2.00.

2.65 **Transfer Credit Appeals -** Students may appeal transfer credit evaluation decisions after an official transcript has been evaluated and processed by the Office of the Registrar. Appeals can be submitted if a course transfer is denied or a student wants to have it reevaluated for a specific SUNY Cobleskill course or applied to a particular degree requirement. The appeal must be made during the student's first semester of enrollment at SUNY Cobleskill.

Appeals must be submitted in writing to the Office of the Registrar with supporting (justification statement, syllabus, student learning outcomes, course material examples, and/or list of associated texts). Following submission of an appeal, the Registrar will coordinate review of the appeal with the appropriate department chair and dean. The Registrar will determine if a revision can be made immediately or will explain the appeal process. If a formal appeal is requested, the student will complete the Transfer Credit Appeal Form and submit it to the Registrar's Office for review with the appropriate department and dean. The appeal will be reviewed, and a decision made, within seven working days of receipt of the form. The department chair will email the decision to the student. If the appeal is approved, the form will be processed. If the appeal is not approved, the student will have seven working days to appeal to the vice president for academic affairs (VPAA) for the final review. The VPAA will have the chairperson of the Academic Policies Committee convene a three (3) member review panel to make recommendations to the VPAA. The decision of the VPAA shall be final and not subject to further appeal. Notice will be sent to the student in writing. The form will be returned to the Registrar's Office. Students transferring from SUNY schools, who are not satisfied with the Cobleskill decision, can appeal to the SUNY Provost. The appeal form and instructions are available at: http://system.suny.edu/academic-affairs/student-mobility/student-transfer-appeal-process/

2.70 **Credit for Prior Learning** – 1) Credit for Prior Learning (CPL) provides students the opportunity to document verifiable, college-level learning gained outside of a traditional classroom. It is important to note that though 'prior learning' is a widely used term, the award of academic credit by evaluation can be applied to learning concurrent to one's program of study (pursuant to SUNY Award of Academic Credit by Evaluation Policy - memo dated 2-7-2023). Examples may include professional and industry certifications and licenses or other credentials, non-credit and continuing education study, non-credit microcredentials (credit-bearing microcredentials follow policies 2.0 -2.20), on-the-job training/education, and work experience. 2) Students must complete an application through the Dean's Office and pay a processing fee. Students are encouraged to apply for CPL within the first year of study. 3) Evaluation, assessment, and approval will be conducted by teaching faculty/content experts from the relevant area of study.

Students seeking to appeal a denial of credit for prior learning must submit a written appeal using the Credit for Prior Learning Appeal Form to the Dean's Office no later than fourteen (14) calendar days after receiving the outcome of the Credit for Prior Learning application. The appeal must be submitted by the student and not a third party. The Dean's Office will forward

the appeal to the appropriate department chair, who will review the request in consultation with faculty content area experts. The department chair will provide a written response to the student within fourteen (14) calendar days of receipt of the appeal, with a copy sent to the Dean's Office. If the student is not satisfied with the department chair and faculty member's decision, they may submit a secondary appeal in writing to the Dean's Office within fourteen (14) calendar days of the faculty member's response. In the event that the student feels that a satisfactory outcome has not been reached, they may forward their appeal in writing to the Vice President for Academic Affairs (VPAA) within seven (7) calendar days of receiving the decision. The VPAA will direct the chairperson of the Academic Policies Committee to convene a three (3) member review panel to evaluate the appeal and provide recommendations. The VPAA will review these recommendations and issue a final decision within thirty (30) calendar days, which is not subject to further appeal. Notice of the final decision will be sent in writing to the student, and the completed appeal form will be forwarded to the Registrar's Office for official recordkeeping.

SECTION C - STUDENT CLASSIFICATION

3.00 **Matriculated Student** – An individual who has been formally admitted as a full- or part-time student, is registered in a degree or certificate program under standard college and State University of New York admissions procedures, and who continues their program successfully, has matriculated status in that program.

3.01 An individual is eligible for matriculation if they hold a high school diploma or its equivalent. A high school student is eligible for matriculation subject to the limitations of the early admissions program.

3.10 Non-Matriculated or Non-Degree Students are not formally enrolled in a degree program**.**

3.11 Non-matriculated students may only enroll in up to 11 credit hours per semester.

3.12 Non-matriculated students are not eligible for financial aid.

3.13 Non-matriculated students may not accumulate more than 12 credit hours in nonmatriculated status (advisement and permission is required for students approaching the 12 credit mark). Exceptions are only made for those students who do not intend on earning a degree at SUNY Cobleskill.

3.14 Students must be at least 16 years old or have completed high school in order to enroll in courses at SUNY Cobleskill.

3.15 Registration - Non-matriculated students may enroll in SUNY Cobleskill courses as long as the course has seat availability and the student meets course pre-requisites. Priority is first given to current SUNY Cobleskill students. (3.10 – 3.15 Updated/Revised January 2013)

3.20 **Major Course of Study** – A major is a course of study pursued by a student which meets requirements of a program or an option of the A.A., A.S., A.A.S., A.O.S., BT, BBA, BS, or certificate programs. A student may change major by following the outlined procedure, as listed on the student change of status form available in the Registrar's Office.

3.21 **Minor Courses** - Matriculated Bachelors students seeking a minor need to meet the department requirements for the minor as defined in the catalog. A student can enroll in a maximum of two minors.

A student must see an academic advisor to declare a minor. Students must submit a change of status to add the minor to their program of study. Declaring a minor ensures the course requirements appear on the students' degree audit and the transcript upon completion. Cobleskill follows the State University of New York diploma policy which excludes minor information from displaying on the diploma.

A minor is 15 credits or more in a secondary area of study. A maximum of 9 credits may be shared between major field requirements and a minor. A majority of credits for a minor normally would be 200 level courses or higher.

Additional remaining credits may be met with courses selected from the following: General Education, Liberal Arts and Sciences options, and elective credit requirements. A maximum of 18 credits may be shared if more than one minor is pursued.

Minor credits that are not also part of the major field requirements do not qualify for financial aid. Since students must be enrolled in at least 12 aid eligible credits to receive full time financial aid, students may have to take more than 12 credits per term to maintain eligibility when pursuing a minor.

Students must complete both major and minor requirements before applying for degree completion. Courses not completed at the time of degree conferral will mean the minor will not be included on the transcript.

3.30 **Full-time Student** – A student carrying 12 or more credit hours during a semester is considered a full-time student.

3.31 A student must maintain full-time status in order to be eligible for on-campus residence.

3.32 If a student amends their full-time/part-time status, their residential housing and financial aid could be impacted. Students should consult with Residential Life and the Student Financial Services Office before making changes to their student statuses.

3.33 If a student is currently enrolled as a part-time matriculated student and is seeking to attend full-time, a change of status form must be completed. The advisor and department chair for the program the student is enrolled will provide approval via the Change of Status Form. The Change of Status is submitted to the Office of the Registrar and documented in the record. Student Financial Services Office should be consulted; there may be more aid options for full-time status students.

3.40 **Part-time Student** – A student carrying fewer than 12 credit hours is classified as part-time.

3.42 Part-time non-matriculated students who wish to enroll as matriculated students must complete the application process designated by the director of admissions. In order to meet degree requirements, part-time students must meet all admissions requirements and request matriculation in a program.

3.44 Applicants for matriculated status must present evidence of a high school diploma or its equivalent.

3.45 High school seniors are accepted as non-matriculated students when they complete the Parttime Non-Matriculated Application and Course Selection Form. Students are not enrolled in a degree program, may enroll in up to 11 credits, are not eligible for financial aid and students must be at least 16 years of age to enroll.

3.50 **Special Student*** - The College also recognizes that students who have graduated may want to return to explore a new degree program.

3.51 Students not holding a degree from Cobleskill may elect to take course work in a different major without declaring this major for a period not to exceed one semester.

3.52 Students who have graduated from Cobleskill may return for a period not to exceed one semester for the purpose of exploring a different degree program. Graduates will be matriculated in the same school as their original degree program.

3.53 A student who has filed an approved change of status form for either of these changes will be considered a "special student" and remain an advisee of the school where previously registered.

3.60 **Credit Bearing Badges** – Definition: Micro-credentials represent a learner's "competency based" achievements. Badges arising from credit bearing course(s), i.e., credit bearing badges, are the electronic representation of a Micro-credential, and are used as portable evidence of competencies and accomplishments that individuals use to boost their résumés and to showcase skills. Badges may be displayed on online platforms, including LinkedIn, Twitter, Facebook and any digital badge backpack, such as Mozilla Open Source. Badges may also be listed on resumes and CVs. Badges are issued to learners who have successfully completed the criteria for the badge. The learning or achievements represented by badges can take place in any environment, (lecture, lab, workshops etc.) within formal educational programs. Combined together, a series of aligned credit bearing badges may be used to fulfill a larger integrated digital credential or a larger set of requirements, for either a minor or degree.

Policy: Elements of a badge should encompass clear, measurable learning outcomes, assessments aligned to the outcomes, and evidence of student mastery of the outcomes through reliable and valid assessment.

Anyone who is eligible to take the required courses may earn a badge. There is no special application for badge programs. An application must be submitted by non-matriculated student to earn a badge in for-credit courses. Students already matriculated in a program simply register for the course(s) required.

The badge must show the qualifications of SUNY Cobleskill and their trustworthiness.

The badge must show the relationship between the badge and larger programs, professional learning pathways, and/or larger skill sets.

All credit bearing badge proposals will have to go through the same channels as traditional classes.

Badges must be held to a high standard that will be evident to business/industry.

Credit bearing badges must contain a minimum of 45 contact hours of course work or three credits and must focus on discrete skills. The quality of work to earn a credit bearing badge must be consistent with a letter grade of C or better. All credits earned for badges may be used toward minors, associates degrees, or bachelor degrees, subject to the degree program requirements.

Upon Completion: Badge credits are awarded as "badged" upon successful completion of the requirements for that badge. The badge grade is included on the student's transcript. In addition, students completing a badge will receive an appropriately worded designation, such as an electronic badge, signifying that it was issued by SUNY Cobleskill and what was required to complete the badge.

Approval Process: Proposals for new badges must begin with the Badge Planning Form provided by the Curriculum Committee. If the badge proposal is selected to go forward, then it should follow the standard curriculum review process.

Criteria for Approval: A demonstrated need must exist in order for a badge proposal to be evaluated positively. Additionally, course work should offer clear educational objectives. The deans, chairs, and other administrators should address resource issues in their statement of support.

*To review eligibility for financial aid, contact the Student Financial Services Office.

SECTION D - ENROLLMENT, WITHDRAWAL, WAIVER POLICIES

4.00 **Registered Student** – Students are considered officially registered when they enroll in classes and have fulfilled all college-related financial obligations.

4.01 All students who have not completed all financially-related obligations by the close of business on the semester due date will be charged a late registration fee and a late payment fee monthly while the balance is still due.

4.02 **Add/Drop (Schedule Adjustment)** – Courses may be added or dropped only during the period so designated and announced by the registrar. After consultation with the advisor and obtaining the Alt PIN, all transactions are done through Banner Web. Students can consult with the instructor of a course when Banner Web restrictions prevent them from accessing a seat in

a course(s). It is the instructor's discretion to determine if a Registration Override may be authorized for a seat in a course(s).

4.03 **Advisement** – A student is assigned a faculty advisor who is to be consulted regarding all academic transactions. These include, among others, add/drop, scheduling, withdrawal from College, withdrawal from courses, degree requirements, progress toward the degree, course substitutions, waiver of requirements, transfer of off-campus credits, carrying over 19 hours, rebates, repeating courses, dual degrees, and changes of major. Advisement week for preregistration typically occurs during the last week in October for Spring Registration and the last week in March for Summer and Fall Registration.

4.04 **Class Enrollments** – A student must enroll for courses at the times designated by the registrar of the College, including the first five days of the semester. Students must consult with their academic advisors and register via banner web to be deemed enrolled in classes.

4.05 **Enrollment Priorities** – Matriculated students are given enrollment priorities in required and elective courses as determined by their total completed credits at the College: seniors (>91 credits) first, then juniors (61-90), sophomores (31-60), and students who have achieved fewer than 30 credits. In addition, the first registration time block on the first day is reserved for military veterans/service members only and the second registration time block will include Honors students, student-athletes, resident assistants, and Accessibility Resources students who need accommodations. Non-matriculated part-time students may enroll in courses on a space available basis. Students with extraordinary circumstances may petition the Provost's office for a change in enrollment priority.

4.06 **Registration of Part-Time Students** – New part-time degree students should contact the Office of Admissions. Continuing non-degree students register through the Registrar's Office.

4.07 **Late Registration -** A fee is charged if registration is not completed by the close of business on semester check-in day.

4.09 **Early Enrollment of Classes** – Students may select and record the classes in which they will be enrolled in the subsequent semester. In order to register for courses student must meet with their academic advisor and upon consultation will be given an alternative pin which is used to register for classes for the upcoming term. This occurs during the 11th week of the semester typically the first week in November for Spring Registration and the first week in April for the Summer and Fall Registration.

4.10 **Normal Course Load** – Full-time students carry 12 to 19 credit hours per semester.

4.11 **Below Minimum Course Load (12 Credits)** – Students who fall below 12 credit hours for whatever reason:
(a) may jeopardize financial aid;
(b) may lose eligibility to live on campus;
(c) may jeopardize EOP status.

4.12 **Over Maximum Course Load (19+ Credits)** – Students requesting to take 19.5 - 21 credits in a semester must hold a GPA of 3.0 or better and must obtain the signature of the Academic Advisor. The student may appeal a denied request to the Department Chair. Students requesting to take greater than 21 credits in a semester must hold a GPA of 3.25 or better and must obtain the signature of the Academic Advisor and Department Chair. Students without an established GPA may pursue greater than 19.5 credits with Academic Advisor and Department Chair approval. The student may appeal a denied request to the Dean.

4.20 **Official Withdrawal from College** – Students may withdraw from the College without academic penalty on or before the last day of class. Students are considered officially withdrawn when they complete the withdrawal process designated by the registrar. Students who fail to complete the process are liable for academic penalty.

4.21 **Withdrawal from College in First Ten Weeks of Semester** – Students who withdraw from College during the course withdrawal period (the first ten weeks of the semester) will receive grades of "W" in all semester-length courses. They will also receive grades of "W" in incomplete 5, 8, or 10-week module courses.

4.22 **Withdrawal from College After the Tenth Week** – Students who withdraw from College after the course withdrawal period and before completing final examinations will receive grades of "W".

4.23 **Leaving College: Unofficial Withdrawal** – Students who leave College without officially withdrawing are considered enrolled students and their grades will be recorded. This regulation may be waived by the Provost/VP for Academic Affairs when circumstances warrant.

4.24 **Withdrawal from Course(s) by Student** – A student may withdraw from a course(s) during the first ten weeks of a semester (pro-rated for modular courses) and will receive a grade of "W." After the tenth week, students may not withdraw from courses unless the instructor concerned, the student's advisor, and the dean in the degree program in which the student is

enrolled recommend such action to the Provost/vice president for Academic Affairs. The recommendations must be in writing with supportive statements as to the extenuating circumstances which warrant the withdrawal. If permitted to withdraw, a grade of "W" will be assigned (see 4.11).

4.25 **Withdrawal from Courses by Instructor** - An instructor may request that the school dean cancel a student's registration in a course because of excessive absences or violation of academic regulations and standards as stated in the course policies or the College academic code. The dean will inform the student in writing citing the reason(s) for the withdrawal. When a student is withdrawn for excessive absence within the first 10 weeks, a grade of "W" will be assigned. After 10 weeks, a grade of "F" may be assigned.

4.26 **Withdrawal from Courses by Instructor: Appeal** – Students may appeal removal from a course by an instructor via a letter to the dean, with a copy to the instructor, within seven days of the date of issuance of the academic withdrawal. If the appeal is denied by the dean, a student may appeal to the vice president for academic affairs who may appoint three persons from the Academic Policies Committee to hear the appeal.

4.27 **Academic Leave of Absence** – Full-time matriculated students who must interrupt their program at the College for reasons deemed acceptable to the vice president for academic affairs, may be granted an academic leave for a specified period of time. Full-time students must have a minimum GPA of 2.00 and must have completed one or more semesters to be considered for an academic leave of absence. Students may return to the campus following the leave by contacting the Registrar’s Office to select classes.

4.28 **Military Leave of Absence** – State law requires that any student in an institution of higher education who is a member of the national guard or other reserve component of the armed forces of the United States and is called or ordered to active duty or is a member of the state organized militia, and is called or ordered to active duty for the state, as defined in subdivision one of section six of the military law, the institution of higher education in which the student is enrolled shall grant the student a military leave of absence from the institution while such student is serving on active duty, and for one year after the conclusion of such service.

4.30 **Auditing Courses** – Audit is permitted on a space-available basis but may not include online courses and courses which have laboratory or studio activities. Current students may audit online lecture-based courses because they already have network access. Any interested person may audit a permitted course with the consent of the instructor and is subject to course policies.

There is no tuition charge; however, a registration fee of $50 will be charged per course. This registration fee will not be assessed to course auditors who are already enrolled as matriculated students. Auditors will also need to register their vehicle for on-campus parking and will be charged a parking permit fee.

By definition, auditors merely "sit in" on courses, are not officially enrolled nor listed on course rosters. Auditors attend without credit or formal recognition and are not required to meet the requirements of the course. Auditors are not given a Cobleskill email account or network access including access to course material in the learning management system.

Registration for audit courses must be completed during the add/drop period through the Registrar's Office. All documentation of audit courses will be maintained by the registrar.

4.40 **Waiver of Degree/Certificate Requirements** – Upon recommendation of the advisor and dean, the vice president for academic affairs may waive certain degree requirement(s) for a student. The total number of required credits cannot be waived, nor can the State Education Department's distributive requirements. An approved change of status form must be filed.

4.41 **Permanent Waiver of Physical Education Requirement** – This requirement may be waived by the Director of Sport and Exercise based on recommendations from the Wellness Center, Physical Education Department chairperson, or a physician with appropriate documentation. If waived, students must still complete the minimum credit requirement of their chosen degree program. An approved change of status form must be filed.

4.42 **Varsity Athletic Credit Toward Physical Education Requirement -** Varsity athletic credit earned at SUNY Cobleskill may be used to meet the physical education/college requirement PHED 151 Wellness or PHED elective.

SECTION E - ACADEMIC INTEGRITY

5.50 **Academic Integrity**

Academic Honesty

Preamble: Academic honesty is a necessary prerequisite for meaningful education. Academic universities rely on the integrity of their members and have particular concerns for academic honesty in the classroom.

At the heart of the university's educational mission is a belief that education confers a benefit to the individual and to society as a whole. Within the context of the classroom experience is an implied agreement, or "academic contract," between the students and the teachers. Teachers are expected to exercise their educational responsibilities in good faith; students are expected to expend their best efforts to learn course material.

Cheating or any form of academic dishonesty undermines the essence of the university's educational mission. It is therefore a serious matter that has substantial implications for all members of the university community.

Examples of Academic Dishonesty[1]

Academic dishonesty includes, but is not limited to, the following acts which violate the academic integrity of oneself, the classroom and one's peers, and the institution:

Collaboration - consists of helping another student cheat, plagiarize, or commit other acts of academic dishonesty. It does not apply to valid forms of academic collaboration such as working with partners in a laboratory setting or working on team projects

Copying - includes obtaining answers by duplicating or copying another person's work during a test, in the completion of one's homework, or any other context. An example of "any other context" would be copying a paragraph from a website on the internet, inserting it into a paper, and representing the work as one's own. This act would also be called plagiarism.

Cribbing - is a synonym for cheating or plagiarizing. In everyday academic usage, it means using prohibited materials such as cheat sheets, writing answers on one's clothes, on one's skin, etc. or receiving answers via electronic media such as cell phones.

Forgery - means the "crime of falsely and fraudulently making or alternating a writing or other instrument." (Webster's Seventh New Collegiate Dictionary)

Lifting - colloquially, it means the same as plagiarizing or stealing

Multiple Submissions - submitting work (without express permission of the second instructor) that has been submitted and evaluated in another course

Plagiarism - means representing another's work as one's own in including the use of work bought from a "research paper mill." See below for greater clarification and detail.

The use of "Ringers" - means having one student do another student's work including taking an exam, writing a paper, or doing an assignment.

Sabotage - means destroying another's work. Such acts would include discarding or destroying another's exam, homework, lab work, report or intentionally misplacing another's work. It

could also mean in a group setting, as in a laboratory, purposely misleading another student working in the same group as oneself.

Substitution - submitting for a second time without the instructor's permission a report or paper used in another class. In other words, multiple submissions of the same work for different classes is forbidden

[1] (These descriptions are paraphrased and modeled from Southern Vermont College Student Handbook, 2004-2006 and Oswego College Policy on Academic Honesty)

Statement of Responsibilities

Faculty and students alike are expected to maintain an atmosphere of academic integrity by practicing an ethic of academic honesty. While both faculty and students are partners in forming an atmosphere of high intellectual integrity, their responsibilities are different.

Student Responsibilities

1. Students will not participate, directly or indirectly, in any practice that could be construed as academic dishonesty or a violation of the principle of academic integrity.
2. Students will discourage academic dishonesty in the actions of fellow students
3. Students will report occurrences of academic dishonesty to their instructors or to the deans of schools in which their courses are housed.
4. Students will consult with their instructors concerning permissible degrees of collaboration and cooperation (e.g., in a laboratory where collaboration is expected but the idea of academic integrity and responsibility for one's own work is still in play).

Faculty Responsibilities

1. Faculty will work to create an environment of high academic integrity and high academic achievement by adhering to the policies and practices recommended in this document
2. Faculty will inform students at the outset of classes and through explicit documentation in the course syllabus of the college's academic integrity policy
3. For any particular course (for example, a lab science course), the specifics of how the policy of academic integrity will be implemented will be described and explained to the students
4. Faculty will actively discourage act of academic dishonesty through their actions, through leadership, and through education and instruction. Faculty will implement the recommended procedures for dealing with academic dishonesty in cases where substantial evidence of misconduct exists and which are deemed by the instructor to be a serious breach of academic integrity.
5. Individual faculty members within their classrooms are the ultimate judges of what constitutes a "serious breech." The honored tradition of academic freedom is not intended to be subverted by these policies.

Plagiarism - Plagiarism is a particular form of academic dishonesty that, because of its prevalence in academic environments, deserves its own discussion. Plagiarism, or any type of cheating, will not be condoned. Both involve presenting others' work as your own, whether it

be through copying a test, bringing in notes for an exam, or handing in papers either written by others or copied from sources, written or spoken, which are not acknowledged in the text.

Definition of Plagiarism - Plagiarism is the use of someone else's ideas or words and passing them off as one's own. It is a special kind of cheating reserved for intellectual theft. The word comes from the Latin plagiarius, meaning kidnapping. In an academic context, plagiarism is intellectual thievery. It is unethical and intolerable. This means that even if only three or four words in succession are taken from another text, they must be placed within quotation marks and properly documented. It also means that if the source is paraphrased, i.e. the ideas are rewritten; the original source must be given credit. Using another student's paper is plagiarism. Allowing another student to hand in a paper you wrote is condoning plagiarism and will be dealt with in the same manner as plagiarism and cheating.

There are certain acts of scholarship which are generally accepted by academicians as constituting plagiarism. They are:

1. an unacknowledged direct quotation of a source.
2. an unacknowledged paraphrase of a source.
3. the unacknowledged use of a source to establish the structure and logic of an argument.

Sample Cases

Case 1: A student is guilty of an academic integrity violation and the instructor decides that the case should be resolved in the classroom.

The instructor informs the student of the alleged violation, counsels the student, and proposes penalties (failure of assignment, failure of course, re-assignment, etc). (i) If the student accepts the judgment of the instructor and the penalties, then the case is closed and there is no record of cheating other than that which the instructor has kept for himself. (ii) If the student disputes the academic violation charge or if he disputes the penalty but not the charge, then the student may appeal to the dean of the school in which the course is housed.

Case 2: A student is guilty of an academic integrity violation and the instructor decides that the violation is serious enough that a record of it should be placed in the VPAA's office.

The instructor informs the student of the alleged violation and informs him of the penalties (failure for the assignment, failure for the course, etc) and his intent to place a record of the violation on file in the VPAA's office. The instructor also informs the student of his right to an appeal. The instructor completes the Academic Integrity Violation Form which includes copies to the VPAA, dean, student, and faculty member.
(i) If the student accepts the judgment of the instructor and the penalties, then the case is closed and a record of the incident is placed on file in the office of the VPAA. (ii) If the student disputes the academic violation charge or if he disputes the penalty but not the charge, then the student must appeal to the dean of the school in which the course is housed. If such an appeal is made, then the role of the dean is the same as that described in Case 1 with the

addition that the dean will suppress the formal complaint being passed onto VPAA's office until negotiation has been concluded. Resolution at the dean's level may be achieved and it may (or may not) result in a file of the violation being placed on record in the VPAA's office. The advantage of achieving a resolution without the intervention of the ARB is that it minimizes the bureaucracy needed to bring the matter to conclusion. Nevertheless, either the faculty member or the student may waive the negotiation and seek a hearing with the Academic Review Board. In this case, the dean acts as conduit and trigger for the convening of the ARB. The recommendations of the ARB will be passed onto the VPAA who will render the final decision about the case. By the time the case reaches the ARB and VPAA, few options remain. They are:

1. The student is found guilty of an academic integrity violation. A record of the violation is placed in the VPAA's office and in the student's record and the student is assessed an appropriate penalty.

2. The student is found not guilty of an academic integrity violation. The student is not assessed a penalty and no record is placed in the VPAA's office.

3. The VPAA and ARB recommend a course of action not included in the preceding two statements.

Academic Integrity - Penalties and Procedures:

If a faculty member suspects a student to be in violation of SUNY Cobleskill academic integrity policy the following steps should be taken:

- The faculty member will create a file describing the incident. The file should include a completed Academic Integrity Violation Form and any supporting documentation concerning the alleged infraction. This file is an important part of the investigation process for both the student and faculty member because it establishes a formal record of a case. The file is used in the appeals process and serves as a way to alert the faculty and administration of repeated violations.
- The faculty member will meet with the student to discuss the nature of the offence and take the appropriate disciplinary action such as:
- Failure for the assignment
- Revision and resubmission of the assignment
- Failure for the course
- Other course of action proposed by the Vice President of Academic Affairs (VPAA) and the Academic Review Board (ARB)

The faculty member may also elect to send a copy of the report to the Dean for support or advisement.

If this is an undisputed case and a violation has been found to have occurred, the disciplinary action is sustained and the case records are placed on file with the VPAA.

A follow-up letter documenting the violation and resulting disciplinary measures will be placed in the file with a copy sent to the student. If this is the first reported offense on file with the VPAA no further action will normally be taken.

If the student is found to be innocent of the suspected violation the case is closed and all disciplinary action dropped. No record of an incident will be placed on file with the Vice President of Academic Affairs.

If a student has been found to be in violation of the Academic Integrity Policy on two or more occasions the student is subject to a hearing by the Academic Review Board. The Academic Review Board acts as a recommending body to the Vice President of Academic Affairs and may suggest additional disciplinary action. These sanctions may include:

- Failure for the course
- Academic probation
- Suspension
- Dismissal
- Other course of action proposed by VPAA and ARB

Academic Review Board: The Academic Review Board is made up of nine/seven members, 6 faculty and 3 students or 5 faculty and 2 students.

Appeals Process: The student may appeal an unfavorable decision to the next higher authority for review. If an appeal is initiated at the faculty level, the following procedure is set in motion:

- The student may appeal the charge of Violation of Academic Integrity to the faculty member. The appeal must be made in writing within 5 business days of the charge date and resolved within 5 business days.
- If this appeal is unsatisfactory the student may appeal to the Dean in writing within 5 business days of the outcome of the first appeal. The Dean will resolve the appeal within 5 business days.
- If the student wishes to appeal the ruling at the Dean's level, the Dean will initiate a review of the case by the Academic Review Board. The Academic Review Board hears the case and makes a recommendation to the Vice President of Academic Affairs who makes the final decision.
- The student is responsible for the submission of any additional documentation which he or she feels is pertinent to the case.
- The student should continue to attend class pending the outcome of an appeal in cases of withdrawal.

SECTION F - STUDENT RIGHTS AND RESPONSIBILITIES

5.00 **Degree Requirements -** Responsibility rests with the student to know the requirements of the program in which they are enrolled, and if a full-time student, to carry no fewer than 12 credit hours per semester.

5.01 Students are also responsible for meeting deadlines as these relate to academic procedural matters, e.g. add/drop, course selection, course withdrawal.

5.10 **Course Requirements -** The student is expected to fulfill course requirements as specified in course outlines.

5.20 **Attendance Policy**

Overview
Registration in a course assumes full participation, and students are expected to attend all class sessions regularly. Each instructor is responsible for defining what constitutes excessive absences within their course policies, as outlined in the syllabus. A student's absence does not obligate the faculty member to repeat course content and the student is responsible for completing any missed coursework. Excessive absence, as defined by the instructor, may result in the cancellation of a student's course registration. If this occurs, the instructor will submit a request to the dean of the school responsible for the course, and a grade of "W" or "F" may be assigned. Students have seven (7) calendar days from the date of notification to appeal the withdrawal in writing to the academic dean.

Excused Absences
Certain absences are considered excused when students are officially representing the university or when other valid circumstances apply. These include, but are not limited to:

- **Religious Observances:** In accordance with State Education Law Section 224-a, students who are absent due to religious beliefs must be excused and provided with an equivalent opportunity to make up missed coursework, exams, or registration requirements without additional fees or penalties.
- **Military Obligations and Medical Treatment:** Absences due to military duty, required training, or related medical treatment should be coordinated with the Office of Veteran Affairs. Faculty should not penalize students for such absences, though in some cases, withdrawal from a course may be advisable.
- **Athletic Competitions:** Students participating in official collegiate athletic events (games, matches, or competitions) are representing the university and will be granted excused absences. Practices are not considered excused.
- **Field Trips and Field Experiences:** Absences due to participation in field trips, field-based research, or other academic experiences required for another course are excused.

- **Scientific Meetings and Conferences:** Attendance at professional conferences, research symposia, or scientific meetings related to a student's academic program qualifies as an excused absence.
- **University-Sanctioned Club Events:** Students attending events as official representatives of the university may receive excused absences. This applies to club activities where the student is competing or presenting on behalf of the institution.
- **Mental or Physical Health Issues:** Students are responsible for communicating with instructors if they miss classes due to short-term illness or injury. Every effort should be made to notify instructors before the missed class. A faculty member may request a physician's note, but they cannot request medical information.
- **Jury Duty:** Students summoned for jury duty must provide proof of service to their instructors.

Students must notify instructors as early as possible regarding anticipated absences and provide any required documentation. If faculty require confinnatiort, they can refer to SharePoint for announcements or contact the club advisor or the faculty member.

Regardless of the reason for an absence, students are responsible for completing all missed coursework in a timely manner. Instructors are expected to provide reasonable opportunities for students to make up exams, assignments, or other required work due to excused absences.

Attendance in an online course is defined by active participation, such as submitting assignments, engaging in discussions, or completing assessments. This definition applies to determining initial attendance, last date of attendance, and excessive absences as outlined in the course syllabus.

5.27 Student Al use in academic assignments is at the discretion of the instructor. Per academic freedom, instructors have the autonomy to prohibit AI use in their courses if they believe it is not conducive to learning outcomes. Instructors should specify whether AI tools are permitted, distinguish between generative or assistive AI, identify parameters for the extent of their use, and require the citation of AI-generated content. Course syllabi must include a statement on AI usage, whether permitted or prohibited, and the consequences for violations. Instructors permitting AI use should provide clear guidance on appropriate AI applications for each assignment.

If instructors choose to use an AI detection tool, the software must be supported or verified by SUNY Cobleskill to ensure compliance with FERP A, accessibility, and security requirements. Instructors are also responsible for reviewing the flagged content and should not be solely dependent on the detection tool when applying a grade or proceeding with an academic integrity violation.

Use of AI must align with, and violations will be processed following SUNY Cobleskill's Academic Integrity Policy (5.50). Any uncredited or improper use of AI-generated content constitutes academic dishonesty.

5.40 **Advisor Consultation** - Students are expected to consult with their advisors about academic matters, and obtain the signatures required on academic forms.

5.60 **Expected Behavior in the Classroom** - Students are expected to respect the educational environment as established by the faculty member. All individuals are expected to demonstrate respect for the rights and responsibilities of the faculty member and of each other.

5.70 **Grade Posting** - Grades are available via Banner Web (see 7.10).

5.90 **Academic Progress** - Students are responsible for being aware of their academic progress/standing in courses.

6.00 The College is committed to the educational and social development of its students.

6.01 As members of the academic community, students are encouraged to develop the capacity for critical thinking and to engage in the pursuit of truth.

6.02 The College will provide positive opportunities and conditions to facilitate those freedoms which are essential to the learning and maturation process.

6.03 The College guarantees students freedom in inquiry, freedom of thought and discussion, and the right to due process in disciplinary proceedings. The student is also guaranteed freedom from College interference and restriction of extramural activities unless placed on probation.

6.04 The responsibility for ensuring these freedoms rests with the entire College community. Students should endeavor to exercise and defend these freedoms with maturity and responsibility.

6.10 **Rights in the Classroom** - Faculty should endeavor to provide an atmosphere in the classroom that facilitates free discussion, inquiry and expression. Students should be evaluated solely on the basis of academic standards, not on the students' opinions or conduct unrelated to academic standards.

6.11 **Protection of Freedom of Expression** - Students are responsible for learning the content of their courses of study, but they should be free to take reasoned exception to the data or views offered and to reserve judgment about matters of opinion.

6.12 **Protection Against Improper Academic Evaluation** - Students are responsible for maintaining standards of academic performance established by their professors, but they should have protection through orderly procedures against prejudiced or capricious academic evaluation.

6.13 **Protection Against Improper Disclosure** - Information about student views, beliefs and political associations which professors acquire in the course of their work as instructors, advisors and counselors should be considered confidential.

6.14 State law requires that any student in an institution of higher education who is unable to attend classes on a particular day or days because of their religious beliefs is to be excused from any examination or any study or work requirements. State law also stipulates that we have the responsibility to make available equivalent opportunities to make up work missed because of these absences and that students have the obligation to make up any work missed.

6.20 **Grade Appeal** - Students may appeal a final grade received in a course by providing written justification for a change of grade to the faculty member responsible for the course and a copy to the school dean responsible for the course. Grade appeals must be filed within forty-five (45) calendar days of the last day of classes for the semester in which the grade was received. Appeals must be submitted by the student not a third party (including family members of the student).

6.21 Appeals must be based on perceived discrepancies in the grading and evaluation system as described in the course outline given to students, computational error or error in data entry.

6.22 Faculty will provide a written response to the student within ten (10) calendar days of receipt of the appeal with a copy to the appropriate dean.

6.23 Students who cannot reach satisfactory resolution of the appeal with the faculty member may appeal to the dean of the school responsible for the course within fourteen (14) calendar days of the date of the faculty member's response.

6.24 In the event that the student feels that a satisfactory resolution has not been reached, they may forward their appeal in writing to the vice president for academic affairs within seven (7) calendar days of receipt of the school dean’s response.

6.25 The vice president for academic affairs will have the chairperson of the Academic Policies Committee convene a three (3) member review panel to make recommendations to the vice president for academic affairs. The decision of the vice president for academic affairs shall be

final and not subject to further appeal. Notice will be sent to the student and the appropriate faculty member in writing.

6.26 Documentation of an appeal will be part of the academic record and therefore will be retained in adherence to SUNY and SUNY Cobleskill record of retention policies.

6.40 **Withdrawal from Courses by Instructor: Appeal** - (See Section 4.26)

6.50 **Academic Student Complaints** - If students have complaints relating to 1) AccessABILITY Resources 2) Bias 3) Discrimination 4) FERPA 5) Grade Appeals 6) Online Course or Online Course Delivery 7) Student Conduct and/or 8) Title IX (Sexual Harassment, Sexual Violence, Gender Discrimination), they should refer to this link. (www.cobleskill.edu/about/leadership/campus-policies/student-complaints/index.aspx

The academic student complaints process is divided into two parts, Conflict Resolution and Administrative Course of Action.

In the conflict resolution stage, students first will seek a resolution that is limited to written or verbal conversations with the personnel, the department chair who oversees the individual about whom the complaint is being filed, and/or the relevant dean.

If students cannot reach a resolution to their satisfaction, students can move on to initiating an Administrative Course of Action. This stage includes a student's written complaint, an investigation into the incident by the relevant dean, and a determination by said dean. If unsatisfied with the decision, students also may appeal to the provost who, after receiving a recommendation from a review panel, makes a final decision on the matter.

The Conflict Resolution and Administrative Course of Action processes are detailed below.

Conflict Resolution

If students have a complaint/concern about personnel such as professors/instructors, advisors, professional advisors, and/or instructional support specialists, or a classroom environment/incident/situation, they are encouraged first to seek a resolution by communicating directly with that individual. If the issue cannot be resolved at that level, students should contact the department chair who oversees the individual about whom the complaint is being filed. If the issue cannot be resolved at the chair level, students should contact the relevant dean. If the student does not know who the chair is, the secretary of the dean's office can assist with that contact information. If students' academic complaints involve

an instructor, and the instructor is also the department chair, the relevant dean may be contacted first.

In cases where students' academic complaints involve an advisor and a resolution cannot be made directly, students should go straight to the department chair. In cases where the advisor is also the department chair, students may consult with the relevant dean first.

Students should expect an acknowledgement from whomever they contact within one week. If they have not heard from an individual within this timeframe, students are encouraged to contact the next individual as outlined above.

When engaging in conflict resolution, students should initiate their complaints immediately following the incident or identification of the problem, but no later than 15 days after the last day of class during the semester in which the incident or problem occurred.

Administrative Course of Action

If a conflict resolution cannot be reached, students should advance to the administrative course of action stage by sending a written complaint that includes their name, contact information, description of the complaint, details of the direct communication with the individual and department chair (if applicable), specifics of the conflict resolution process, and desired outcome to the relevant dean. Subjects of the complaint also will receive a copy of the written complaint. Students who have not yet discussed their complaints through the conflict resolution process will be directed by the dean to do so before proceeding. Each student with a complaint must go through the Conflict Resolution and Administrative Course of Action individually.

Students should expect an acknowledgement from the dean within one week. The dean then will schedule a meeting with the student so the student has the opportunity to discuss the matter in more depth if necessary. Next, the dean will notify all other individuals referenced in the written complaint and schedule separate meetings with all parties involved, including with the subject of the complaint to allow for further discussions.

Following these meetings, the dean will investigate the complaint and reach a determination in writing that will be sent to all parties involved within thirty (30) calendar days from receipt of the written complaint.

If a student or the subject of the complaint is dissatisfied with the outcome, they may send a written appeal to the provost within five business days of receiving the determination from the

dean. The written appeal should include the original written complaint, along with points of disagreement with the dean's decision.

The provost will have the chairperson of the Academic Policies Committee convene a review panel from volunteers across campus. For complaints against teaching faculty, the review panel will be comprised of 3-5 professors or instructors with continuing appointment. For complaints against professional staff, the review panel of 3-5 individuals will be comprised of professionals with permanent appointments and one professor or instructor with continuing appointment. The review panel members cannot be in the same department as the student or the subject of the complaint. The review panel will review all materials, interview all parties involved separately, including the subject of the complaint, and make a recommendation to the provost within two weeks of receipt of the provost's request.

The subject of the complaint and the student each may choose one advocate who is either a current member of the SUNY Cobleskill faculty or staff. The student has the option of choosing a current SUNY Cobleskill student as their advocate. The advocate's role is to provide support during the review panel interview.

After receiving the review panel's recommendation, the provost may investigate the matter further if necessary. The provost will inform all parties involved in writing regarding the outcome of the appeal within two weeks. The decision of the provost is final and not subject to further appeal.

If it is discovered that a student knowingly makes false complaints, accusations, or allegations during the Conflict Resolution or Administrative Course of Action processes, they will be in violation of Student Conduct Code #13 "Deliberate issuance of a false statement either orally or in writing to College officials." According to the Student Conduct Codes site, "Any violation of the Student Conduct Codes is strictly prohibited and may result in disciplinary action ranging from a warning letter to probation, suspension, or dismissal from the college."

SECTION G - RESPONSIBILITIES OF TEACHING FACULTY

7.00 **Insuring an Appropriate Educational Environment -** Faculty members have the responsibility of ensuring an educational environment that promotes academic excellence. All individuals have the right to a positive secure environment, one in which persons can realize their potential as intellectual, social, political, economic and creative beings.

Each faculty member will provide for students a statement of expectations and standards for

ensuring an educational environment. This may be accomplished in a discussion format during the first class period and/or in writing as part of the course outline.

Students who do not comply with the faculty members' stated expectations of classroom behavior may have their registration in the course canceled by the faculty member, through the process outlined in section 4.25 of the Academic Code.

7.00a **State University of New York – Credit/Contact Hour Policy**

SUNY Cobleskill calculations of credit hour follow the State University of New York (SUNY) policy which is applicable to its Community Colleges and State-Operated Campuses. The policy is below:

Summary

The State University of New York (University), like most American higher education, has adopted a variant of the traditional "Carnegie Unit" as a measure of academic credit. This unit is known in the University by the familiar term, "semester credit hour," and is the primary academic measure by which progress toward a degree is gauged. It is recognized that such a unit measures only a part, albeit a major part, of a composite learning experience, based upon formally structured and informal interactions among faculty and students.

Policy

Over the past several years, for academic purposes, some faculties have allowed modifications of the classical Carnegie definition of a semester credit hour, which has stipulated that one semester credit hour be awarded for fifteen sessions of 50-minutes duration in classroom lecture-recitation each requiring two hours of outside preparation by the student. Today there are many types of educational experiences with which credit hour assignment may properly be associated.

In the interest of accurate academic measurement and cross-campus comparability, the following definitions and practices apply in controlling the relationship between contact and credit hours. These definitions constitute a formalization of current and historic policy in order to ensure consistency throughout the College. Courses may be composed of any combination of elements described, such as a lecture course which also has required laboratory periods or a lecture course having an additional requirement for supervised independent study or tutorial activity.

A semester credit hour is normally granted for satisfactory completion of one 50-minute session of classroom instruction per week for a semester of not less than fifteen weeks. This basic measure may be adjusted proportionately to reflect modified academic calendars and formats of study.

New York State Education Department

All credit-bearing degree and certificate programs at SUNY Cobleskill are approved by the New York State Education Department (NYSED). Calculation of credit hours for these programs follow NYSED guidelines, which are consistent with the State University of New York's adoption of the Carnegie definition of a credit hour.

Codes, Rules and Regulations of the State of New York, Title 8 – Education Department, Chapter II – Regulations of the Commissioner, Subchapter A – Higher and Professional Regulations, Part 50 – General, Section 50.1 (o) stipulates the following: Semester hour means a credit, point, or other unit granted for the satisfactory completion of a course which requires a total of at least 45 hours for one semester credit. (in conventional classroom education this breaks down into at least 15 hours (of 50 minutes each) of instruction and at least 30 hours of supplementary assignments), except as otherwise provided pursuant to section 52.2(c)(4) of this Subchapter. This basic measure shall be adjusted proportionately to translate the value of other academic calendars and formats of study in relation to the credit granted for study during the two semesters that comprise an academic year.

Section 52.2(c)(4) stipulates: A semester hour of credit may be granted by an institution for fewer hours of instruction and study than those specified in subdivision (o) of section 50.1 of this Subchapter only: (i) when approved by the commissioner as part of a registered curriculum; (ii) when the commissioner has granted prior approval for the institution to maintain a statement of academic standards that defines the considerations which establish equivalency of instruction and study and such statement has been adopted by the institution; or (iii) in the event of a temporary closure of an institution by the State or local government as a result of a disaster, as defined in section 50.1(w) of this Title, when the commissioner has granted approval for the institution to maintain a statement of academic standards that defines the considerations which establish equivalency of instruction and study and such statement has been adopted by the institution.

New York State Education Department's Policies Regarding Time on Task in Online Education

The College adheres to the New York State Education Department's Office of College and University Evaluation policies on "Determining Time on Task in Online Education," which is excerpted below.

Time on task is the total learning time spent by a student in a college course, including instructional time as well as time spent studying and completing course assignments (e.g., reading, research, writing, individual and group projects.) Regardless of the delivery method or the particular learning activities employed, the amount of learning time in any college course should meet the requirements of Commissioner's Regulation Section 50.1 (o), a total of 45 hours for one semester credit (in conventional classroom education this breaks down into 15 hours of instruction plus 30 hours of student work/study out of class.)

"Instruction" is provided differently in online courses than in classroom-based courses. Despite the difference in methodology and activities, however, the total "learning time" online can usually be counted. Rather than try to distinguish between "in-class" and "outside-class" time for students, the faculty member developing and/or teaching the online course should calculate how much time a student doing satisfactory work would take to complete the work of the course, including:

1. Reading course presentations/ "lectures"
2. Reading other materials
3. Participation in online discussions
4. Doing research
5. Writing papers or other assignments
6. Completing all other assignments (e.g., projects)

The total time spent on these tasks should be roughly equal to that spent on comparable tasks in a classroom-based course. Time spent downloading or uploading documents, troubleshooting technical problems, or in chat rooms (unless on course assignments such as group projects) should not be counted.

In determining the time on task for an online course, useful information includes

1. The course objectives and expected learning outcomes
2. The list of topics in the course outline or syllabus; the textbooks, additional readings, and related education materials (such as software) required
3. Statements in course materials informing students of the time and/or effort they are expected to devote to the course or individual parts of it.
4. A listing of the pedagogical tools to be used in the online course, how each will be used, and the expectations for participation (e.g., in an online discussion, how many substantive postings will be required of a student for each week or unit?)

Theoretically, one should be able to measure any course, regardless of delivery method, by the description of content covered. However, this is difficult for anyone other than the course developer or instructor to determine accurately, since the same statement of content (in a course outline or syllabus) can represent many different levels of breadth and depth in the treatment of that content, and require widely varying amounts of time.

SUNY Cobleskill Guidelines and Procedures

All semester/credit hours awarded by SUNY Cobleskill will conform to the definitions listed above. Therefore, all units of credit awarded will conform to the SUNY and NYSED definitions.

These guidelines are also in compliance with policies set forth by the Middle States Commission on Higher Education.

SUNY Cobleskill generally follows a semester system with fall and spring semesters consisting of a minimum of 15 weeks. Summer terms are typically less than 15 weeks but adhere to the policy in terms of meeting time and the amount of work required. Terms for certain academic programs (for example, compressed summer schedules) have been adjusted but nonetheless adhere to the policy in terms of the amount of work required. The winter session occurs over a 28-day period of instruction. Time on task and instructional activities are designed to replicate the summer. Only select courses are approved for offering in the winter session.

Faculty and program administrators are responsible for developing, maintaining, and evaluating the curriculum within an academic program, although the SUNY Board of Trustees or its representative retains final control and approval of the curriculum. Assignment of credit hours for courses is determined within the program based on faculty expertise and student learning outcomes. New courses are, upon review and approval at the program level, reviewed by the College Curriculum Committee and the Provost/Vice President for Academic Affairs.
In their review and approval of new courses and major revisions of existing courses, the College Curriculum Committee is charged with following the policy on credit hours and certifying that the expected student learning for the course meets the credit-hour standard.

Approved courses are sent to the Registrar's Office for inclusion in the College Catalog. The Registrar reviews the class schedules prior to the start of each semester to ensure that all classes are scheduled for the minimum number of minutes corresponding to the credits assigned. Any discrepancies are brought to the attention of the appropriate department for correction or explanation. The following tables summarize how the credit hour translates to the particular instruction method.

Lecture and Seminar: Courses with multiple students which meet to engage in various forms of group instruction under the direct supervision of a faculty member.

Table 1 - **Lectures and Seminars: Classroom/Faculty Instruction and Outside Student Work**

Credits awarded	Minimum contact time per week	Minimum contact time per semester (15 weeks) (contact time x 15)	Minimum out-of-class student work per week (contact time per week x 2)	Minimum out-of-class student work per semester (15 weeks) (out-of-class work x 15)	Total instructional time per semester (contact time per semester + out-of-class student work per semester)
1	50 contact minutes	750 contact minutes	100 minutes	1500 minutes	2250 minutes (37.5 hours)

2	100 contact minutes	1500 contact minutes	200 minutes	3000 minutes	4500 minutes (75.0 hours)
3	150 contact minutes	2250 contact minutes	300 minutes	4500 minutes	6750 minutes (112.5 hours)
4	200 contact minutes	3000 contact minutes	400 minutes	6000 minutes	9000 minutes (150 hours)

Laboratory: Courses with a focus on experiential learning under the direct supervision of a faculty member wherein the student performs substantive work in a laboratory setting. The minimum contact time per credit is typically twice that of a lecture (2:1 ratio), assuming "substantial outside preparation."

Table 2 - **Laboratory: Classroom/Faculty Instruction and Outside Student Work**					
Credits awarded	Minimum contact time per week	Minimum contact time per semester (15 weeks) (contact time x 15)	Minimum out-of-class student work per week (contact time per week ÷ 2)	Minimum out-of-class student work per semester (15 weeks) (out-of-class work x 15)	Total instructional time per semester (contact time per semester + out-of-class student work per semester)
1	100 contact minutes	1500 contact minutes	50 minutes	750 minutes	2250 minutes (37.5 hours)
2	200 contact minutes	3000 contact minutes	100 minutes	1500 minutes	4500 minutes (75.0 hours)
3	300 contact minutes	4500 contact minutes	150 minutes	2250 minutes	6750 minutes (112.5 hours)
4	400 contact minutes	6000 contact minutes	200 minutes	3000 minutes	9000 minutes (150 hours)

Clinicals: Courses with a focus on experiential learning under the direct supervision of a faculty member wherein the student performs substantive work in a clinical setting. The minimum contact time per credit is typically three times that of a lecture (3:1 ratio), depending upon the amount of outside work assigned.

Table 3 - **Clinicals: Classroom/Faculty Instruction and Outside Student Work**					
Credits awarded	Minimum contact time per week	Minimum contact time per semester (15 weeks) (contact time x 15)	Minimum out-of-class student work per week	Minimum out-of-class student work per semester (15 weeks) (out-of-class work x 15)	Total instructional time per semester (contact time per semester + out-of-class student work per semester)
1	150 contact minutes	2250 contact minutes	0 minutes	0 minutes	2250 minutes (37.5 hours)
2	300 contact minutes	4500 contact minutes	0 minutes	0 minutes	4500 minutes (75.0 hours)
3	450 contact minutes	6750 contact minutes	0 minutes	0 minutes	6750 minutes (112.5 hours)
4	600 contact minutes	9000 contact minutes	0 minutes	0 minutes	9000 minutes (150 hours)

Independent Study: Courses of study in which a faculty member regularly interacts and directs student outcomes with periodic contact (e.g., Special Projects, Topics in Current Research). Minimum credit hours are determined based on faculty instructional contact minutes and student outside work time. In all such instances, such courses must match the total amount of work using the examples listed in table 1 above, and the faculty member is required to keep records of the meeting times and student work assigned so that contact hours can be calculated.

Internship/Practicum/Field Experience: Courses of study in which a faculty member regularly interacts and directs student outcomes with periodic contact, but where the actual learning environment takes place on or off campus at an approved site. The learning experience will typically involve a site supervisor or preceptor, and directed activity/learning will occur outside of a lecture setting. Contact time and outside student work requirements must be established and documented and must match the total amount of work using the examples in table 1 above. Number of credits and hours will be determined by each department.

Accelerated Courses: Courses offered outside of a standard 15-week semester in which the credit hours offered are the same as standard semester courses and the content and substantive learning outcomes are the same as those in the standard semester. These courses must meet the total amount of instructional and student work time as the examples in table 1 above, even if delivered within an accelerated time frame.

Online Courses: Courses offered entirely online without any on-site face-to-face meetings required. These courses have the same learning outcomes and follow the same syllabus of a lecture course, but with online delivery methods. Contact time is satisfied by various means as outlined in each courses syllabus. These methods can include, but are not limited to, online group discussions and projects, papers and exams, and singular faculty engagement to name a few. In all cases the courses meet instructional time and projected student engagement time. In all such instances, these courses must meet the total amount of instructional and student work time as charted in table 1, even if delivered online or asynchronously.

- Blogs, Journals, Logs: Students' opportunity to apply learned concepts (including research of scholarly articles and professional journals) or for reflection on learning experiences; to be shared with instructor and/or classmates for thoughtful analysis, feedback and assessment.

- Case Studies, Problem Solving Scenarios, and Virtual Labs: In-depth analysis requiring utilization of higher order analytical skills which relate to course objectives and is shared with instructor and/or classmates for feedback and assessment.

- Conference Calls/Web-Conferencing: Instructor led opportunities for collaborative, synchronous learning with specific expectations for participation & feedback. (When possible, calls to be recorded for review.). 1 hour call = 1 hour instruction.

- Group Project: Instructor mediated culminating activity with specific learning objectives; students collaborate via e-mail, chat rooms, discussion boards, and/or face-to-face contact to research, analyze, synthesize, and prepare project with instructor receiving periodic updates and providing guidance to group.

- Guided Project: Instructor mediated culminating individual project with specific learning objectives; student and facilitator collaborate via email, chat, discussion boards, and/or face-to-face to research, analyze, synthesize and prepare project with instructor receiving periodic updates and providing guidance and feedback.

- Instructional CDs, Power Points, Videos: Instructor mediated to expand upon and clarify course concepts and objectives. 1 hour = 1 hour instruction.

- Online Quizzes and Tests: Opportunity for instructor to assess students' subject knowledge and provide feedback on students' progress. 1 hour test = 1 hour instruction.

- Discussion Board: Instructor guided or mediated threaded discussion that directly relates to course objectives and which has specified timeframes, expectations for participation, and thoughtful analysis.

Hybrid Courses: Courses offered in a blended format with one or more on-site face-to-face class sessions and at least one or more online sessions, both containing direct interaction with a faculty member. Contact time is assessed using both on-site definitions (for the on-site portion) and online definitions as above (for the online portion). In all such instances, these courses must meet the total amount of instructional and student work time as charted in table 1, even if delivered online or asynchronously.

Procedures

- All courses offered at the college will be reviewed periodically by the program faculty and program director for evidence of compliance with the semester/credit hour definitions as set forth by New York State and the U.S. Department of Education

- Courses which appear to be out of compliance will be evaluated with immediate measures taken to rectify the discrepancies. New courses or changes to existing courses and curriculum will normally be evaluated as part of the work of the College Curriculum Committee.

- The College Catalog shall serve as the official college publication providing information on credits assigned to each college course.

- Records of credits assigned for each course will be maintained in the college's administrative database.

7.01 **Course Outlines -** During the first week of classes, a course outline is to be given to each student enrolled in a course.

7.02 **Content of Course Outlines -** Outlines must specify:

(a) Course title, prefix designation (e.g. CAHT 140), credit hours of course prerequisites, date (which semester) and class hours.
(b) Name of instructor, office location and hours, phone number and e-mail address.
(c) Required books or subscriptions.
(d) General objectives of course, and when possible, exit skills (learning outcomes) and other specific objectives.
(e) Grading and evaluation system (including weighting of each component, e.g. 20 percent quizzes, 30 percent tests, etc.), list of term assignments such as papers, survey or research.

(f) Course attendance policy and reference to Academic Policies numbers 5.20 – 5.25.
(g) Required and/or suggested course materials (e.g., equipment, uniforms, etc.).
(h) Estimated expenses for required field trips.
(i) Reference to Academic policies numbers 5.50 and 5.60 regarding an appropriate educational environment.
(j) All students with a documented disability who are requesting special accommodations must be registered with the Office of DisAbility Support Services and notify the faculty of their learning needs.
(k) Tutorial support can be obtained in the Center for Academic Support located in the VanWagnen Library.

When appropriate, inclusion of the following should be considered:
(a) A lecture schedule to include:
- Course topics
- Exam schedules
- Assignments

(b) The course outline is a significant document in your educational process. It is the student's responsibility to be aware of and be compliant with the course information and requirements.

7.09 State law requires that any student in an institution of higher education who is unable to attend classes on a particular day or days because of his/her religious beliefs is to be excused from any examination or any study or work requirements. State law also stipulates that we have the responsibility to make available equivalent opportunities to make up work missed because of these absences and that students have the obligation to make up any work missed work.

7.10 **Course Grades -** Each student enrolled in a course shall receive a grade. These grades are posted by the faculty in Banner Web within deadlines established by the registrar.

7.11 **Assignment and Test Grades** - grades for assignments and tests can only be posted via the secure on-line course management system.

7.20 **Final Examinations -** Faculty members ***are*** expected to state their final examination policies in their course outlines. Final examinations are to be administered during the period so designated.

7.21 **Final Exam Policy**

- Each member of the faculty shall have the right and the responsibility to determine the form and content of end-of-the-semester examinations (whether of the comprehensive "final" type or of the "last unit" type). Specifically, it may be determined that some other form of evaluation is more appropriate. As "finals week" is part of the regular semester, it is expected that all faculty members will use this time period to conduct scheduled examinations or other appropriate evaluative activities to verify that stated learning objectives have been met by the students in their respective courses.

- With the exception of lab practicums and Saturday College, final examinations in semester-

long courses are to be given only according to the official exam schedule published by the Registrar. All evening courses will hold the final examination during final exam week at the day and hour of the regular class meeting.

- The instructor in any course retains the freedom to reschedule a final examination for an individual student who presents a clear case of hardship in examination scheduling. If possible such an exam should be rescheduled during the final examination period.

- The administration will ensure that faculty have a minimum of 72 hours after the administration of the final examination in a course to submit their final grades to the Registrar.

7.30 **Safety -** Students and employees, under the direction of a faculty member, must be informed of safety hazards. Faculty must ensure that appropriate safeguards are in effect, that proper medical attention is sought in case of accident or injury, and that accident report forms are filed within 24 hours if the circumstances so warrant.

7.40 **Field Trips -** A request to conduct a field trip must be approved by the school dean eighteen (18) days prior to the trip.

7.41 Whenever a trip removes students from other courses or scheduled activities, faculty in charge will place a notice on SharePoint seven (7) days prior to the trip giving date and time of trip and names of participating students.

7.42 Field trips will not be scheduled during the last week of classes unless approved in writing by the vice president for academic affairs.

7.43 Field trips that affect student attendance in any other class shall be taken during non-class periods, on weekends, or during vacation periods whenever possible. No field trips should exceed two days of classes. Every effort should be made to avoid taking field trips during the first week of each semester, thus permitting each instructor to get his/her course started in an appropriate manner. (See Section E, 5.24)

7.44 **Faculty Academic Advisement Guidelines for Exchange/Study Abroad Programs** - The guidelines listed below are designed to help faculty effectively advise students who wish to study at an institution abroad and receive credit at SUNY Cobleskill for the experience. These guidelines have been developed so students' overseas studies will complement their programs of study at SUNY Cobleskill.

1. A student interested in studying abroad should apply to a College-approved program early in the spring semester of the freshman year if the student is in an associate's degree program. A student in a bachelor's degree program may apply during the sophomore year. To be eligible to study abroad, a student should have completed the freshman year at SUNY Cobleskill and must have a minimum GPA or 2.5.

2. Before a student applies for a particular exchange/study abroad program, the student should consult his/her academic advisor to determine the educational appropriateness of the chosen institution overseas. An overseas institution will be appropriate for study if courses offered there satisfy the requirements of academic programs and or general education studies at SUNY Cobleskill. Students and advisors should be aware that academic calendars might not always coincide.

3. The academic advisor should then refer the student to the Director of International Programs.

4. The Director of International Programs will contact the registrar's office for a pre-evaluation of courses that the student wishes to enroll in abroad. This will ensure that the course credit earned overseas can be transferred back to SUNY Cobleskill. Note that transferability must initially be determined by the appropriate academic department(s). The Director of International Programs should check with academic departments when issues of transferability arise.

5. The complement of courses taken at a host institution abroad should ordinarily carry a total value of 12 to 15 credits for a semester-long program, three to 12 credits for a summer program and up to three credits for an intersession program.

6. Students should be aware that if they do not follow the stated recommendations, the College cannot guarantee that courses taken at an institution abroad will have their credits transferred back to SUNY Cobleskill.

SECTION H - GRADES

8.00 **Grades -** The following list of grades are recommended ranges which are associated with grades for graduation or transfer credit purposes. Each faculty member will list specific grading policies for their courses in the course outline for each course. Letter grades and their grade points are as follows:

Letter Grade	Grade Points	Grade Mode	Percentages
A	4.00	Normal	92.1 or higher
A-	3.67	Normal	89.5 - 92.0
B+	3.33	Normal	86.9 - 89.4
B	3.00	Normal	82.1 - 86.8
B-	2.67	Normal	79.5 - 82.0
C+	2.33	Normal	76.9 - 79.4
C	2.00	Normal	72.1 - 76.8
C-	1.67	Normal	69.5 - 72.0
D+	1.33	Normal	66.9 - 69.4
D	1.00	Normal	59.5 - 66.8
F	0	Normal	Less than 59.5 (Fail)
I	0	ALL	Incomplete
S	0	S/U	Satisfactory
U	0	S/U	Unsatisfactory
W	0	All	Withdrawal

A student may repeat a course, in which s/he earned a "C-" or below, ONE time only, unless special permission is granted by the vice president for academic affairs. The last grade earned becomes the grade of record.

Grade Descriptors:
- A Excellent
- B Good
- C Satisfactory
- D Passing but Unsatisfactory
- F Failure

8.10 **Grades in Developmental Courses -** Grades on transcripts and posted in Banner Web/Self-Service Banner with an asterisk (*) beside them designate developmental courses. These grades are not counted in the semester credits earned on the grade point average. These grades and the courses they represent may not be used to fulfill degree requirements. No developmental courses may count toward graduation requirements.

8.20 **C- and D Grades -** Students may elect to repeat courses in which "C-" and "D" grades were earned; the last grade earned becomes the grade of record (see Section K for special program

requirements). Students should inquire with Student Financial Services Office concerning the aid eligibility of repeated courses.

8.30 **F Grades -** "F" grades are assigned when student performance is below minimal standards, the student has stopped attending and has not withdrawn from course, or incomplete work is not completed by the deadline. Students may be assigned an "F" when dismissed from a course for violation of academic integrity. When an "F" in a required course is received, the student must repeat the course. Courses with an "F" grade will be counted as "credits attempted" when calculating the GPA.

8.31 Course substitutions cannot be made for major field requirements or LAS specific program requirements if the previous grade earned was “F”.

8.40 **Incomplete** “**I” Grades** - Incomplete “I” grades indicate the student did not complete course work during the regular semester due to extenuating circumstances. “I” grades are to be given only when an arrangement has been made between the instructor and the student. "I" grades must be completed by the deadline established by the registrar. These deadlines may be extended by the faculty with an approval by the dean if circumstances warrant. Students who fail to complete the course work within the required time, as specified above, will have "I" grades automatically converted to "F" grades.

8.41 Students with “I” grades are not eligible for graduation until the “I” grade is resolved either with a grade of “F” or other grade as submitted by the instructor of record allowing the final GPA to be computed and comply with academic policies 11.01 and 11.02 which requires a final GPA of 2.0 for graduation.

8.50 **S/U Grades -** Grades indicate satisfactory (pass) or unsatisfactory (fail) in pass/fail courses, which may include "290" courses. When a "U" in a required course is received, the student must repeat the course. The last grade earned becomes the grade of record. Only "S" grades are assigned credit. Neither grade nor credits are used in the computation of a GPA. “S” reflects a grade of “C” or better.

8.60 **W Grades -** Grades of "W" are assigned when a student withdraws from a course or from the College on or before the course "W" deadline for semester/module courses, or when the instructor for the course files an academic deficiency withdrawal on or before these deadlines. A faculty member may assign a grade of “W” on or before the last day of classes.

8.61 **NP Grades** – A grade of “NP”, Not Posted, is issued if the instructor for the course was unable to issue a grade. A grade of “NP” is a grade of record and requires the instructor to submit a change of grade for it to be modified. An “NP” grade prevents students from being reviewed for degree completion. The grade cannot be used in calculating the overall or term GPA and impedes accurate calculation of academic standing. NP grades are required to be resolved within 48 hours of the grade submission deadline for the term.

8.80 **Appealing Grades (See Section 6.20)**

8.90 **Grade Point Average (GPA) -** The GPA indicates the level of academic standing. To calculate it, the course credits are multiplied by the grade points (A=4.00, A-=3.67, B+=3.33, B=3.00, B-=2.67, C+=2.33, C=2.00, C-=1.67, D+=1.33, D=1.00, F=0).

The total points are divided by the total credits attempted (including all courses where grades of A, A-, B+, B, B-, C+, C, C-, D+, D, or F are assigned). Grades of F, I, U, W receive neither credit nor points. Grades of S receive credits which count in the total attempted credit but does not impact the term of overall GPA.

SECTION I - GRADE TRANSACTIONS

9.00 **Final Grades** - All students will receive grades for all courses in which they are enrolled. Final grades are submitted by the instructor of record for the course. Only the instructor of record has the authority to submit a final grade unless extenuating circumstances prevent them from providing a grade. If extenuating circumstances exist the Vice President for Academic Affairs will appoint a member of the faculty to review course materials and submit grades on behalf of the instructor. Final grades are available on-line.

9.10 **Transcripts (Students' Academic Records) -** Students must request official transcripts through the transcript ordering process as designated on the Registrar's office web page.

9.20 **Mid-Term Grade Report -** Students will have access to mid-term grades via Banner Web/Self Service Banner. "S" reflects a grade of "C" or better; "I" indicates the faculty member did not have sufficient evaluative information to submit a grade.

9.30 **Change of Grade -** Faculty has the right to correct a student grade that the faculty member has determined to be inaccurate based on a data entry error or a computational error. Reason for a Change of Grade Submission are limited to 1) Course grade calculations were incorrect 2) Data entry error when grades were submitted 3) Coursework submitted electronically was not

received 4) Coursework has been submitted to remove an incomplete(I) grade or 5) Original grade was not posted on time by the instructor. No changes can be made for extra credit or late work after grades have been submitted with the exception of incomplete grades. No changes can be made to ensure financial aid eligibility is retained. No change of grade can be made so a student may avoid a punitive academic standing or to meet athletic eligibility. No change can be made to improve GPA or to meet an institutional graduation requirement. No change can be made due to a personal issue unrelated to the course. No change can be made in order to maintain enrollment, revenue or to maintain retention rates which would challenge the integrity of Cobleskill degree programs.

9.31 **Change of Grade Authority** - Change of grade by someone other than the instructor of record should be in response to exceptional circumstances such as temporary or permanent incapacity of the instructor, unavailability or unwillingness of the instructor to review submitted materials for reasons such as but not limited to sabbatical or other leave, termination of employment or death. The instructor of record shall be notified and copied on change of grade transactions associated with the grade/s concerned including grade appeals (see also Grade Appeal 6.20).

9.32 **Change of Grade Timeline** - No final grades may be changed more than one calendar year after it was posted.

9.33 **Change of Grade Documentation** - All changes of grades should be documented to include reasons for the change and personnel involved in the change.

9.40 **Course Rebate Policy and Definition -** Students who have changed majors, and who have a 2.00 or better semester average at the end of the first semester in the new major, may have "F" grades waived in courses required solely in the previous major. Students may appeal to the vice president for academic affairs for a waiver of "C-" and "D" grades in those courses which were required solely in the original major. The original grade will no longer be used in the calculation of the GPA but will remain on the transcript. **Please note, this policy does not change the GPA for the purposes of financial aid eligibility.**

9.50 **Course Repeat Policy -** Students may repeat a course in which they earned a "C-" or below. Some majors require a minimum grade of "C" in order to meet certain degree requirements. Students should inquire with Student Financial Services Office concerning the aid eligibility of repeated courses.

When a course is repeated, the last grade (A-F) will replace the previously earned grade(s) and count in the grade point average, even if the last grade is lower than the grade(s) earned on the previous attempt(s). In addition, the credit(s) from the first attempt will not be used in any

calculations and will no longer count towards fulfillment of degree requirements. No repeated courses or their grades will be removed from the student's transcript.

While a student may repeat a course at another college, only a course taken at SUNY Cobleskill will be used in computing the SUNY Cobleskill GPA.

Students repeating a course in which they have received a grade of "D" or better should be aware that they may not be able to use that course as part of their calculation for full-time status for certification under the New York State TAP Program. Students should contact the Student Financial Services Office.

SECTION J - ACADEMIC STANDING

10.00 **Retention Standards -** A student who meets the following standards is retained. All retained students may receive financial aid if eligible. Any student whose average falls below the retention standards may be reviewed for probationary retention.

Semester	GPA
Semester 1	1.50
Semester 2	1.75
Semester 3	1.90
Semester 4	2.00
Remaining Semesters	2.00

10.05 **Progress Toward Degree -** A student who has successfully completed:
19 or fewer credits is considered a first semester student;
20-35 credits is considered a second semester student;
36-48 credits is considered a third semester student;
49-60 credits is considered a fourth semester student;
61-75 credits is considered a fifth semester student;
76-90 credits is considered a sixth semester student;
91-105 credits is considered a seventh semester student;
106-124 credits is considered an eighth semester student;
125-140 credits is considered a ninth semester student;
141-156 credits is considered a tenth semester student.

10.10 **Academic Standing Needed for Practica -** Early Childhood majors must possess a 2.00 cumulative average and a 2.00 major average in order to be assigned to practica.

10.20 **Academic Probation -** A student whose cumulative GPA is less than 2.00 is on academic probation and remains so until the cumulative GPA is at or above 2.00.

10.30 **Notification of Academic Probation -** Students on academic probation are so notified, in writing, by the vice president for academic affairs.

10.40 **Guidelines for Students on Academic Probation -** A student whose cumulative average is below a 2.00 is on academic probation. The maximum permissible credit load for a student on probation will be 15 credit hours. (This is to include courses which are being repeated to raise a C-, D, D+ or F grade.) Any exceptions to this regulation must be approved by using the change of status form.

When repetition of a grade is required, a student on probation is encouraged to repeat any C-, D, D+ and F grades at the first available opportunity.

Faculty will be able to view student mid-term grades on-line after the seventh week of the semester.

A student on probation is expected to schedule regular conferences with their advisor and course instructors. The student should also take full advantage of other services available such as the Center for Academic Support and Excellence, Career Development Center and math tutoring.

10.50 **Academic Suspension -** A student is subject to suspension if the cumulative GPA does not meet the standards in 10.00.

10.52 **Definition of Suspension -** Suspension is separation from active student status (applies to both full-time and part-time status) at the College and may include terms which must be met before the student can apply for readmission.

10.53 **Notification of Suspension -** The vice president for academic affairs will notify the student in writing.

10.54 **Appeal of Suspension -** A student may appeal a decision of suspension in writing to the dean of their school within the time limits stated in their notification.

10.59 **President's List** - Matriculated students achieving a semester average of 4.0 with no failing grades, incomplete or "U" grades will be named to the President's List.

10.60 **Dean's List -** Matriculated students achieving a semester average of 3.50 to 3.99, with no “F”, incomplete or "U" grades will be named to the Dean's List. Matriculated students achieving an average of 3.00 to 3.49 with no “F”, incomplete or "U" grades will be named to the Dean's Honorable Mention List.

10.70 **Honors -** Students who earn the necessary cumulative GPA and who meet the requirements stated in 10.80/10.81/10.82 are Honors Students. Graduation honors are awarded upon completion of the final semester and include Cum Laude, Magna Cum Laude and Summa Cum Laude are honors designations. For purposes of the Commencement Ceremony a preliminary determination is made for graduation honors based on student performance in the semester preceding the ceremony.

10.80 **Cum Laude -** A student whose GPA is 3.25 - 3.49 at the time of graduation.

10.81 **Magna Cum Laude -** A student whose GPA is 3.50 - 3.89 at the time of graduation.

10.82 **Summa Cum Laude** - A student whose GPA is a 3.9 or above at the time of graduation.

SECTION K - GRADUATION REQUIREMENTS

11.00 Students must meet the degree requirements of the catalog for which they are matriculated.

Major and minor degree requirements must be within the same catalog year.

A student may move into a later catalog year if it is advantageous for the student’s degree completion to do so.

A lapse of attendance requires readmission and can result in a change in the student’s catalog.

Students must seek guidance from their academic advisor before considering changing their catalog year. An approved Change of Status must be submitted to the Registrar’s office.

11.00a **Dual Degrees**

A student may earn two bachelor degrees (BT, BS, BBA) or two associate degrees (AAS, AS, AA, AOS) simultaneously[1]. A student whose primary degree is a bachelor degree may also earn one associate degree on their way to completing the bachelor degree (form required). The following restrictions apply:

1. For two associate degrees, at least 30 credits of the major in the first degree must not be contained in the program plan of the major in the second degree (this includes both major courses and required cognate courses). For an associate degree and a bachelor degree or two bachelor degrees, at least 30 credits of the major in the primary degree must not be contained in the program plan of the major in the secondary degree (this includes both major courses and required cognate courses). Beyond 30 major credits not in common, all other courses applied to the primary degree may be applied to the secondary degree. Simply stated, there must be, at minimum, a 30-credit difference between the requirements of the two majors/degrees.

2. For two different degrees, the student must complete the college-wide requirements associated with each degree. For two majors with the same degree type, the student must **complete all degree requirements for the primary major as well as the major field/advisement** track requirements of the secondary major.

3. To apply for a secondary degree, students must meet the minimum grade requirements required by each degree.

   For example, a student is enrolled in a BS in Early Childhood Studies along with a BT in Therapeutic Horsemanship. If they were taking the course PSYC 300, it would fulfill the requirements for Therapeutic Horsemanship with a D or better. If the student wanted to use this course towards their degree in Early Childhood Studies, it would not fulfill as a major field requirement since a minimum grade of C is needed. If they received a D in the course and wanted it to count towards their Early Childhood degree, they would need to retake the course and earn with a C or better.

4. Students earning two associate degrees or two bachelor degrees must apply to graduate for both degrees in the same semester even if one degree is completed before the other. Students earning an associate degree on their way to completing a bachelor degree may apply for the associate degree upon completion or at the same time as the bachelor degree.

[1]Students should be fully aware of any financial aid implications and program/credentialing restrictions before selecting a second degree.

11.00b 1) Students may drop their secondary degree or major prior to graduation application with no financial aid implications.

2) Students may change the secondary degree or major prior to graduation application with no financial aid implications.

3) Students may change their primary degree prior to graduation application. If a student changes their primary degree, it will automatically drop their secondary degree or major, and they will have to reapply for a secondary degree or major. Students should be fully aware of any financial aid implications and program/credentialing restrictions before changing their primary degree.

11.01 **Associate Degree Requirements -** To qualify for the A.A., A.S., A.A.S. or A.O.S. degree, the candidate must complete the minimum credits, must meet the course and distributive requirements of their program, must earn a minimum cumulative GPA of 2.00, and must satisfy the SUNY General Education requirements. No developmental courses may be applied toward the credits needed for graduation. All students must have successfully completed a minimum of 3 credits of coursework designated as “applied learning” to meet their degree requirements. Specific program/degree requirements should be obtained through the Registrar’s Office. One bachelor degree and one associate degree or two associate degrees can be earned in the same semester.

11.02 **Bachelor Degree Requirements** - To qualify for the BBA, BT, BS degree, the candidate must complete the minimum number of credits, must meet the course and distributive requirements of their program, must earn a minimum cumulative GPA of 2.00 and must satisfy the SUNY General Education requirements. No developmental courses may be applied toward the credits needed for graduation. All students must have successfully completed a minimum of 3 credits of coursework designated as “applied learning” to meet their degree requirements. Specific program/degree requirements should be obtained through the Registrar’s office. Two bachelor degrees or one bachelor degree and one associate degree can be awarded in the same semester.

11.03 **Bachelor Degree Internship** - The Internship is intended to advance student competence in their chosen field of study through practical application of academic knowledge in a relevant real-world setting. The internship involves performing the duties of a faculty supervisor approved internship location in their field in order to enhance the educational experience by providing students an opportunity to explore a specific career path. The Bachelor degree internship procedure and timeline is available through the Student Success Center or in the office of the school of study.

11.04 **Mathematics Competency -** Mathematics competency is required of all A.A., A.S., A.A.S. and Bachelor degree candidates. The requirement can be satisfied by any one of the following:

1. The student having been placed into MATH 101 and passing the course with a C- (at least 69.5% average) or higher. ***Note***: Passing MATH 101 with at least a C- ***SATISFIES*** the Mathematics Competency requirement, but ***DOES NOT SATISFY*** a mathematics requirement which may be necessary in the student's degree program.

2. The student achieving at least a 75 on the New York State Course III or MATH B Regents.

3. The student passing college-level mathematics course (a MATH course having at least 3 credits and a number of 103 or higher).

4. The Registrar granting three or more transfer credits in mathematics.

5. The Registrar accepting Advanced Placement credit in mathematics (a score of 3 or higher).

11.05 **Business Administration and Information Technologies Program Academic Policy** To qualify for the A.S., A.A.S., or Bachelors degree in the Business Administration or Information Technologies program, candidates must complete, with a minimum cumulative GPA of 2.00, all required and elective courses bearing the major field course prefixes.

11.06 **Early Childhood Programs Academic Policy -** To qualify for the A.A.S., A.S. or BS degree in Early Childhood, candidates must earn a grade of "C" or better in all major field requirements. Courses with "C-," "D", "D+" or "F" grades must be repeated at the first available opportunity.

11.07 **Agriculture and Food Management Department Policy -** To qualify for the A.A.S or A.O.S. degree in any culinary program, candidates must complete all required and elective courses with prefixes of CAHT, and MKHT with a minimum GPA of 2.00.

11.12 **Financial Obligations -** All financial obligations must be met before a diploma is issued to the student.

11.13 **Courses with 290 Suffix -** No more than a total of four (4) credits in 290/390 courses will be accepted toward Associate degree requirements.

11.14 **Courses with 390 Suffix -** No more than a total of six (6) credits in 290/390 courses will be accepted toward a Bachelors degree.

11.15 **Refusal of Credits (See 2.06)**

11.16 **Time Limit to Meet Full-time Degree Requirements** - Degree requirements are determined by the catalog under which the student is initially matriculated and remain in force if the student maintains continuous matriculation. A student who discontinues enrollment for one year or more without being granted an official leave of absence, may apply for readmission and then fulfill the degree requirements in effect at that time. If the student does not apply for readmission, there is a time limit of two years in which to complete the remaining requirements from initial matriculation.

11.17 **Liberal Arts and Sciences Requirements: A.A.S. Degree -** Candidates for the A.A.S. degree must earn 22 credits in liberal arts and sciences and should follow the requirements as determined by the department or school.

11.19 **Participation in Graduation Ceremony -** All candidates who apply and are certified as enrolled in course work to meet all degree requirements identified for graduation by the registrar may participate in the graduation ceremony. A candidate for May graduation is an associate degree student who will have completed all course requirements in their area or a Bachelor degree student who will have completed all course requirements. The only exceptions will be for Bachelor's degree students missing a summer degree internship or for students in an associate degree program which, by design, requires a summer internship.

Students who have met all degree requirements the previous summer or fall semesters prior to May graduation must also apply for graduation and indicate their intention to participate in the May graduation ceremony. Disclaimers will be printed in the graduation program, indicating names listed are of candidates for the degree, subject to certification of having met all degree requirements. Certification of those degree requirements will be completed by June 1. Diplomas will be mailed to all successful graduates who have applied for graduation. (Effective Fall 2011 - approved 3/11)

11.20 Students are required to apply for graduation in the semester prior to the anticipated degree completion. Students must apply no later than April 15th for December or August degree completion and November 15th for May degree completion. Students who do not apply will not be allowed to participate in the graduation ceremony (see 1.19) (Effective Fall 2011 - approved 3/11)

SECTION L - AWARDING OF DEGREES

12.02 **Degrees Awarded Posthumously** - Under certain circumstances, when a student enrolled in the final year of study has completed 75% or more of his or her degree requirements before passing, a degree may be awarded posthumously. The request to award a degree posthumously may be made to a member of the President's Cabinet who puts forward a recommendation to the President. The President will notify both the family of the student and the Registrar's Office of the decision to award a degree posthumously.

The student's family will be invited to receive the degree at the Graduation Ceremony held in May, or the degree will be mailed to the family once awarded, depending on the family's wishes. The student will be honored in memoriam in the commencement program.

Documents commemorating conferral of the degree will be inclusive of the statement "Graduated in Memoriam" with the degree and the date of conferral on the transcript. A diploma will include the language "Degree Awarded in Memoriam".

SECTION M - Family Educational Rights and Privacy Act of 1974 (FERPA)

13.00 **FERPA** – The Act protects the privacy of student records by requiring institutions limit disclosure of student academic information to third parties.

13.10 **Right to Review** – Students have the right under FERPA to request inspection of records, and if warranted, request any portion of the record be corrected if found to be incorrectly reported. Requests should be submitted in writing to the Office of the Registrar by the student. While FERPA provides students with the right to challenge the accuracy of their educational records, it does not permit students to challenge grades or other evaluations of academic performance (see also Grade Appeal 6.20).

13.20 **Initiation of FERPA** – A student is protected under FERPA when an academic record begins for the student. At Cobleskill when a student sits in their first class, FERPA protections begin. Protection is provided regardless of age.

13.30 **Consent for Release of Records** – Cobleskill requires students give consent for release of academic record to any third person. A student provides this release in one of two ways 1) by completing a records request form so the academic transcript can be sent to a third person or 2) by completing the FERPA Student Records Access Authorization Form specifying a third person who may access the student record. Either form should be submitted to the Office of the Registrar.

13.50 **Directory Information** – Institutions may designate certain student information as 'directory information' which is allowable under FERPA to be released to a third party without prior

consent of the student. At Cobleskill directory information is limited to the following: Full Name, Campus or Local Address, Local Telephone Number, Home Address, Major, Department, Dates of Attendance, Dates of Graduation, Degree Awarded, Awards, Full-time/Part-time Status, Date of Birth, Email Address and Photos or Video Footage. Students may object to release of Directory Information and have the information withheld by filing a FERPA Confidentiality Directory Exclusion Request and submit the document to the Office of the Registrar. The form must be submitted within the first 14 days of the term to ensure exclusion of directory information can be met. It is the student's responsibility to revoke exclusion whether a current or former student of Cobleskill.

13.60 **Annual FERPA Announcement Inclusive of Directory Information** – Each year, as required under the protections of FERPA, annual notice is provided to every student in attendance at Cobleskill. The official notification is published via the web, in the academic planner referred to as 'On the Hill' and during informational sessions students and prospective students are invited to attend.

13.70 **Emergencies** – If a health or safety emergency exists specific personally identifiable information on students may be disclosed to appropriate parties by a SUNY Cobleskill officials. FERPA empowers school officials to act quickly and decisively when emergencies and natural or man-made disasters exist. FERPA is not an obstacle to a swift response when emergencies are present.

13.80 **Violations of FERPA** – Students who feel the institution is in violation of FERPA should contact the Registrar directly for assistance in resolution of any perceived violation or clarification of FERPA policy. It is the right of the student to file a complaint with the U.S. Department of Education concerning alleged failures by the State University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-5920.

ACADEMIC REQUIREMENTS FOR FEDERAL FUNDED AWARDS

All students who receive Title IV financial aid must be making Satisfactory Academic Progress. Title IV Aid refers to federally funded aid programs which include: Supplemental Educational Opportunity Grants (SEOG), Direct Stafford Loans (includes PLUS loans), College Work-Study, Perkins Loans and PELL Grants.

Satisfactory Academic Progress requires a student to be in **GOOD ACADEMIC STANDING** as defined in the College Catalog (Section J 10.00 or 10.01) **AND** the student must be making progress toward a degree. Degree Progress is measured as follows:

Credits Attempted	From	0	23	36	52	84	99	>180
	To	22.5	35.5	51.5	83.5	98.5	179.5	
Degree Progress (Minimum Credits Earned After First Semester of Attendance at Cobleskill)		33% of Attempted Credits		66.67% of Attempted Credits		66.67% or Associates Degree	66.67% of Attempted Credits	66.67% or Bachelors Degree
Minimum QPA		1.5	1.75	1.9	2.0	2.0	2.0	2.0

Example – Student has attempted 36 credits – 36 x 66.67% - Student must earn 24 credits

Associate Degree Program students have a maximum eligibility of the equivalence of **SIX (6)** full time semesters at Cobleskill.

Bachelor Degree Program students have a maximum eligibility of the equivalence of **TWELVE (12)** full time semesters at Cobleskill.

Transfer Bachelor Degree Program students have a maximum eligibility of the equivalence of **SIX (6)** full time semesters at Cobleskill.

Repeated courses will not be counted toward the total credits earned if the course had previously been completed with a passing grade but will count toward credits attempted. Withdrawn courses after the 4th week of the term will count toward credits attempted.

Rebated courses will count in both the credits attempted and overall GPA.

NOTE: Transfer credits accepted by SUNY Cobleskill will be taken into account in determining if you are making Satisfactory Academic Progress.

ACADEMIC REQUIREMENTS FOR NEW YORK STATE FUNDED AWARDS (TAP)
New Standards as of the 2010-2011 Academic Year

ASSOCIATE DEGREE PROGRAMS

Before being certified for this payment	1	2	3	4	5	6*
A student must have earned this many credits	0	6	15	27	39	51
With at least this Quality Point Average (Q.P.A.)	0	1.3	1.5	1.8	2.0	2.0
Credits to be completed in preceding semester	0	6	6	9	9	12

*EOP students are evaluated based on the 2006 Standard.

BACHELOR DEGREE PROGRAMS

Before being certified for this payment	1	2	3	4	5	6	7	8	9**	10**
A student must have earned this many credits	0	6	15	27	39	51	66	81	96	111
With at least this Quality Point Average (Q.P.A.)	0	1.5	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0
Credits to be completed in preceding semester	0	6	6	9	9	12	12	12	12	12

** EOP students are evaluated based on the 2006 Standards.

These requirements are the minimum standards of the State Education Department. Students who do not meet SUNY Cobleskill's definition of Good Academic Standing will not be eligible for TAP and other State funded grants.

REPEATED COURSES: Repeated courses for which a student has already received a passing grade cannot be counted as part of the full-time certification for TAP purposes. For example, a student enrolled for 12 credit hours will not be eligible for TAP if the student has previously completed one of these courses with a passing grade.

VA Pending Payment Compliance

In accordance with Title 38 US Code 3679 subsection (e), this school adopts the following additional provisions for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA. This school will not:

- Prevent nor delay the student's enrollment;
- Assess a late penalty fee to the student;
- Require the student to secure alternative or additional funding;
- Deny the student access to any resources available to other students who have satisfied their tuition and fee bills to the institution, including but not limited to access to classes, libraries, or other institutional facilities.

However, to qualify for this provision, such students may be required to:

- Produce the Certificate of Eligibility by the first day of class;
- Provide written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies.
- Make acceptable payment arrangements for charges not covered by VA benefits (i.e. housing, meal plans, any percentage of fees and tuition that are not covered)

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at https://www.benefits.va.gov/gibill.

Refund Policy

The tuition refund schedule below has been established by the State University Board of Trustees.

In order to obtain a refund, a student must officially withdraw from college through the Registrar's Office and specifically request a refund of room, fees, meal plan and tuition.

Students withdrawing or thinking of withdrawing are advised to consult with an advisor in the Student Financial Services Office. Due to strict federal regulations governing the use and distribution of Title IV financial aid, aid recipients will jeopardize their current eligibility if withdrawal from college takes place before completing 60% of the semester.

Withdrawal During

Part of Term	1st week	2nd week	3rd week	4th week	5th week
Full Term	100%	70%	50%	30%	0%
10 week	100%	50%	30%	0%	
8 week	100%	40%	20%	0%	
6 week	100%	30%	0%		
5 week	100%	25%	0%		

	Second day of classes	Remainder of first week	After
4 week	100%	50%	0%
2 week	100%	80%	0%

Room Rent
Room refunds after occupancy are based on the date occupancy is acceptably terminated (determined by Residential Life). After a student has registered and occupied a space beyond the first day of classes in any semester, there will be no refund for the balance of that quarter of the academic year for room charges.

Meal Plan
Refunds are based on the number of weeks remaining in the semester. There shall be no refund for less than a week of participation remaining in a meal plan.

Fees
Fees are generally not refundable after the first seven days of classes.

Un-Cashed Refund Checks
Funds, for refund checks that are un-cashed after one year, are turned over to the State of New York as unclaimed funds. Once turned over, an owner would need to contact the Office of the State Comptroller, Office of Unclaimed Funds 110 State Street Albany, NY 12236; the phone number is 800-221-9311. The college notifies students of un-cashed checks before the year is up, so it is important to keep your address and contact information current with the college's Registrar, 518-255-5521.

Filing a Complaint with NC SARA

State University of New York College of Agriculture and Technology at Cobleskill is a member of the National Council for State Authorization Reciprocity Agreements (NC-SARA) and follows the complaint resolution policies and procedures outlined within the **SARA Policy Manual***. Consumer protection complaints resulting from distance education courses, activities, and operations may be submitted to the Dean's Office via e-mail to deansoffice@cobleskill.edu, for investigation and resolution.

If a student is dissatisfied with the campus-based resolution, **a concern may be submitted**** to System Administration of the State University of New York. And, if still not satisfied, **a complaint may be submitted***** , within two years of the incident about which the complaint is made, to the New York State Education Department. Please note, this does not include complaints related to grades or student conduct violations, both of which are to be fully addressed via campus processes, not through the NC-SARA complaint resolution procedures.

Links:

***SARA Policy Manual**

- Full Manual: https://nc-sara.org/sara-policy-manual
- Summary: https://nc-sara.org/sara-student-complaints-0

****Student Life Concern Submission Form**

- https://system.suny.edu/university-life/student-concerns/

*****NYSED Student Complaint Process**

- https://www.nysed.gov/college-university-evaluation/sara-student-complaint-process