SUNY
Cobleskill
Real Life. Real Learning.

SUNY Cobleskill College Catalog

2011-12

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ABOUT SUNY COBLESKILL

Mission Statement

SUNY Cobleskill is a public, residential college offering bachelor, associate, and professional educational programs through its Schools of Agriculture and Natural Resources, Business, and Liberal Arts and Sciences. It is located on 782 scenic acres just west of the state capital in New York's tech valley. The College provides a small college experience at an affordable price for a diverse student body seeking a high quality, challenging, hands-on education in a nurturing environment.

The College places emphasis on integrating classroom instruction with strong internships and field experiences. Many experiential learning opportunities are available on campus through avenues such as a working farm, fish hatchery, equestrian center, outdoor recreational area, histotechnology laboratory, broadcast television studio, restaurant, and accredited preschool and child care center. The College has nationally recognized programs and faculty who engage in scholarship, often in collaboration with students, which serves to enhance the teaching-learning process.

SUNY Cobleskill is a significant economic driver, positively impacting the region's quality of life by creating an educated workforce, forming partnerships with corporations and the community, and providing numerous cultural, athletic, and regional events.

The College provides a variety of student-centered activities as well as significant opportunities for leadership development. Students may also participate in a full array of intramural and intercollegiate athletics, successfully competing at the NCAA Division III level. The campus community is committed to helping students to achieve their personal and professional goals and to develop their full potential within a global society.

Accreditation

SUNY Cobleskill is accredited by the Middle States Association of Colleges and Secondary Schools. 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 in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), Associate in Occupational Studies (AOS), Bachelor of Business Administration (BBA), Bachelor of Science (BS), and Bachelor of Technology (BT).

History

SUNY Cobleskill was chartered by an act of the state legislature in 1911 and opened its doors as the Schoharie State School of Agriculture in 1916. It is one of the oldest institutions of its kind in New York State.

In 1917, a home economics division was added to the existing agriculture program. Programs developed in food service and hospitality administration, and in early childhood, to fulfill the rising need for specialized preparation in these fields.

From 1920 to 1931, SUNY Cobleskill offered a rural teacher training program, which was later transferred to the state's teachers colleges. In the early 1950's, the Business division evolved from the Agriculture division. Courses in Liberal Arts and Sciences have been offered since the college's founding in 1916.

Many changes have taken place in name, organization, instruction and academic programs as SUNY Cobleskill has evolved to meet the needs of an ever changing society and some of the world's most dynamic fields of study. When the State University of New York system was organized in 1948, SUNY Cobleskill was one of its original campuses, and, in 1966, was designated a State University Agricultural and Technological College. In 1987, we were renamed the State University of New York College of Agriculture and Technology at Cobleskill.

In 1996, SUNY founded the Technology Colleges sector, linking SUNY Cobleskill with the system's other colleges of agriculture and technology, as well as several special technology colleges.

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. NYS Route 7 runs through the middle of our 750-acre campus at the western edge of the village of Cobleskill, directly off of I-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 lies only a 40-minute drive northeast of the college. 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 5,300 residents, is a typical small college town with convenient access to shopping, dining, houses of worship, recreational facilities and medical services. With a history that dates to 1711, the Cobleskill area is a treasure trove of historic sites and museums.

Residence Halls

The college has ten residence halls designed to accommodate between 150 and 231 students each. They house only full-time students. All student rooms are wired for cable television and Internet access, as well as voice mail. 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.

The 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.

Current College Council Membership

SUNY Cobleskill Foundation

The SUNY Cobleskill Foundation exists to foster private-sector investment in SUNY Cobleskill's students, programs and plant. The foundation seeks and secures gifts, donations, contributions, bequests and other funds, which it invests with the goal of providing interest income to be used for the advancement of the college and its students.

The SUNY Cobleskill Foundation provides financial assistance to students, and funding for faculty development, educational program enhancements and library acquisitions. The foundation also provides leadership and direction for capital fund drives, including the college's current Cultivating Excellence Campaign-a five-year campaign to fund vital renovation and construction of campus buildings and facilities, and significantly increase the endowment funding for scholarships.

SUNY Cobleskill Foundation board membership includes members of the community, as well as college alumni, faculty, staff and students.

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, the bookstore, vending machines, residence hall laundry facilities, and the college's Frederic R. Bennett Recreation Area and Ski Center. Membership of the CAS includes members of the college's administration, faculty, students and 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 of profits from CAS operations.

SUNY Cobleskill Alumni Association

The SUNY Cobleskill Alumni Association is a not-for-profit corporation established in 1977. The association boasts more than 33,000 alumni members.

The purpose of the SUNY Cobleskill Alumni Association is to promote and cultivate communication and fellowship among the alumni, and to maintain and foster the loyalty and support of the college's alumni. The association keeps records of alumni, sponsors and organizes yearly alumni day activities, provides special rate insurance programs, assists in alumni career development and placement, and supports student scholarships and other campus programs.

The Alumni Association is governed by a board of 12 directors (including two current students). Student fees and proceeds from an annual fund drive fund its operations.

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

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

- full name
- home address
- campus or local address
- local telephone number
- major
- department
- dates of attendance
- date(s) of graduation
- degree(s) awarded
- full-time/part-time status
- birth date
- e-mail address

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 who desire to earn a Bachelors of Science (BS) degree must earn 30 credits of general education courses. They must show competency by taking three credits of math and English 101 and must take courses in at least five additional areas listed below.

Bachelor of Technology (BT) and Bachelor of Business Administration (BBA) students must also show competency in the math category, English 101 and at least five additional categories for a total of 24 credit hours of general education. For any additional specific requirements for the BBA and BT, please check with the academic department.

Students who wish to gain an Associate in Arts or an Associate in Science degree must show competency by taking three credits each in seven of the ten areas. Students who wish to gain an Associate in Applied Science degree should follow the requirements as determined by the department.

All SUNY Cobleskill students are required to take ENGL101 (which will fulfill the Communications Competency requirement), a math or science course and one credit of physical education (PHED). Individual programs may have further expectations.

SUNY Cobleskill Trustee General Education Courses as of Fall 2011

American History (GEAH):

GOVT 242 State and Local Politics
HIST 121 History of the United States I
HIST 122 History of the United States II

If a student has a NYS Regents grade of 84 or higher, the following courses will meet the American history requirement:

AAMS 111 Intro to African American Studies
GOVT 141 American Government

The Arts (GEAR):

ARTS 111 Design I
ARTS 114 Drawing I
ARTS 300 History of American Art
COMM 210 Single Camera Video Production
HUMS 160 Stagecraft-Theater
HUMS 210 Cinema and Society
MUSC 111 College Choir
MUSC 113 Men's and Women's Choruses
MUSC 121 Introduction to Music
MUSC 123 20th Century Music: American
MUSC 131 Instrumental Music

Communications (GECM):

ENGL101 Composition I
ENGL102 Composition II
ENGL 111 Fundamentals of Speech Comm

Foreign Language (GEFL):

A score of 85 or higher on a NYS language Regents satisfies the Trustee's foreign language requirement.

CHIN 101 Beginning Chinese I
CHIN 102 Beginning Chinese II
FREN 101 Beginning French I
FREN 102 Beginning French II
FREN 201 Continuing French I
JAPN 101 Beginning Japanese I
SPAN 101 Beginning Spanish I
SPAN 102 Beginning Spanish II
SPAN 201 Continuing Spanish I
AMSL145 American Sign Language I
AMSL146 American Sign Language II

Humanities (GEHU):

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 215 Readings in Women's Literature
ENGL 216 Readings in Native American Lit
ENGL 221 Readings in Literature
ENGL 223 Readings in American Literature
ENGL 241 Short Story
ENGL 320 Writing Nature
HUMS 101 Introduction to Humanities
HUMS 210 Cinema and Society
HUMS 243 Children's Literature
MUSC 121 Introduction to Music
MUSC 123 20th Century Music: American
PHIL 101 Introduction to Philosophy
PHIL 102 Introduction to Asian Philosophy
PHIL 305 Ethics in Science, Medicine, & Tech

Mathematics (GEMA):

A score of 85 or higher on NYS Regents exam in Course III or MATH B satisfies the Trustees' math requirement.

MATH 111 College Algebra
MATH 112 Trigonometry
MATH 125 Statistics
MATH 131 Precalculus
MATH 231 Calculus I

Natural Sciences (GESC):

BIOL 101 Introduction to Biology
BIOL 103 Human Biology
BIOL 104 Prin of Animal Anat & Physiology
BIOL 105 Principles of Genetics
BIOL 106 Environmental Sci for Educators
BIOL 111 Biology I
BIOL 116 Botany I
BIOL 117 Botany II
BIOL 158 Human Anatomy and Physiology I
BIOL 159 Human Anatomy and Physiology II
CHEM 101 Introductory Chemistry
CHEM 110 Forensic Science
CHEM 111 General Chemistry I
NTRN 122 Nutrition Science *(Does not satisfy liberal arts and science, science, or lab science program requirements)*
PHYS 102 Principles of Physics II
PHYS 111 College Physics I
PHYS 211 Calculus Physics I
PSCI 101 Astronomy
PSCI 102 Physical Geology
PSCI 104 Energy and the Environment
PSCI 105 Environmental Science and Tech
PSCI 303 Field Geology

Social Sciences (GESS):

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
GOVT 143 Comparative Politics
PSYC 111 General Psychology
PSYC 250 Research Methods Behavioral Sci
SOSC 111 Introduction to Sociology
SOSC 112 Social Problems
SUST 101 Introduction to Sustainability

Western Civilization (GEWC):

ARTS 124 History of Art I
ARTS 125 History of Art II
HIST 101 History of Western Civilization I
HIST 102 History of Western Civilization II

Other World Civilizations (GEWO):

GOVT 143 Comparative Politics
HIST 103 History of World Civilization I
HIST 104 History of World Civilization II
HIST 205 Latin American Societies & Civ
NAMS 111 Introduction to the Iroquois
NAMS 121 Intro to Native American Studies I
NAMS 122 Intro to Native American Studies II

Key to Course Sequencing

Where a liberal arts and science course is listed, please select from any of the following prefixes after conferring with your academic advisor: AAMS, ANTH, AMSL, ARAB, ARTS, BIOL, CHEM, CHIN, COMM, ECON, EMSC, ENGL, ESOL, FREN, GART, GOVT, HIST, HUMS, JAPN, JOUR, MATH, MUSC, NAMS, PERS, PHED, PHIL, PHYS, PSCI, PSYC, SOSC, SPAN, and SUST. Where General Electives is stated, any course may be utilized.

Where there are two or more courses highlighted, students should choose one.

Bachelor's Degree Programs

School of Agriculture & Natural Resources

- Agriculture Business Management BT
- Agriculture Business Management BS
- Agricultural Equipment Technology
- Animal Science BT
- Animal Science BS
- Environmental & Energy Technologies
- Fisheries & Aquaculture
- Landscape Contracting
- Plant Science
- Turfgrass Management: Golf Turf Management
- Turfgrass Management: Sports Turf Management
- Wildlife Management

School of Business

- Business Administration
- Culinary Arts Management
- Financial Services
- Information Technology

Liberal Arts & Sciences

- Biotechnology
- Communication in Technology
- Early Childhood: Birth to Age 5
- Graphic Design Technology

Associate Degree Programs

School of Agriculture & Natural Resources

- Agricultural Business
- Agricultural Engineering Technology: Agricultural Power Machinery
- Agricultural Science
- Animal Industry
- Animal Science: Beef & Livestock Studies
- Animal Science: Dairy Production & Management
- Animal Science: Equine Studies
- Diesel Technology
- Environmental Studies
- Fisheries & Wildlife Technology
- Landscape Development
- Nursery Management
- Turfgrass Management
- Sustainable Crop Production

School of Business

- Accounting
- Business Administration (AAS)
- Business Administration (AS)
- Computer Information Systems
- Culinary Arts
- Food Service Administration: Restaurant Management

Liberal Arts & Sciences

- Biological Technology
- Child & Family Services
- Communications
- Early Childhood
- Emergency Medical Technician: Paramedic
- Graphic Design Technology
- Health Science Studies
- Histotechnician
- Liberal Arts & Sciences: Humanities
- Liberal Arts & Sciences: Mathematics
- Liberal Arts & Sciences: Social Science
- Liberal Arts & Sciences: Science

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

Associate in Applied Science

Overview

Agricultural Business or "agribusiness" describes the total agricultural industry in the United States. Business activity in agriculture ranges from providing supplies and services to farmers through the actual on-farm production of food and fiber, to the processing and distribution of these products to every person in the United States and many people in foreign countries. Food, which is undoubtedly the most basic necessity, is an extremely important industry, offering a tremendous variety of rewarding careers to qualified agribusiness people.

Student Learning Outcomes

- Acquire a working knowledge of business management principles as they apply in the agricultural arena that will translate directly into vital competencies for careers in agribusiness.
- Recognize the scope of the entire agricultural business system and the function of enterprises within the system.
- Demonstrate basic competencies in written communication, oral communication, computer operation, and problem solving.
- Express capabilities of time management, organization, teamwork, and continuous learning critical for success in the workplace.
- Students will understand the theoretical economic framework and real-world markets in which all agribusinesses operate.

Employment/Transfer Opportunities

Students interested in continuing their education or obtaining employment after receiving their associate degrees are encouraged to visit the Student Success Center website for valuable resources at www.cobleskill.edu/ssc or stop by the Center in Knapp Hall 223.

Major Field Requirements:	**21**
AGBU101- Intro to Ag. Bus.	3
AGBU103- Ag. Economics	3
AGBU107- Ag. Bus. Operations	3
AGBU121- Marketing Ag. Products	3
AGBU208- Ag. Bus. Management	3
AGBU241- Farm Management	3
AGBU242- Ag. Bus. Financial Management	3
Major Technical Electives:	**15**
AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ORHT, ACCT, BADM, CITA	

Liberal Arts & Sciences	**22**
ENGL101-Composition I	3
MATH103 (Mathematics of Finance) or higher	3
PHED	1
Additional Lib Arts/Sciences	12
Lab Science	3
General Electives	**2**
Total Credits	**60**
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU 101	Intro to Agricultural Bus (C)	3
AGBU 103	Agricultural Economics (C)	3
ENGL 101	Composition I	3
MATH 111	College Algebra	3
FFCS199	Foundations for college success	1
Anything from TECHNICAL ELECTIVE		3

Year 1/SPRING		
Code/Name		**Credits**
AGBU 107	Ag Business Operations (C)	3
AGBU 121	Marketing Ag Products (C)	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from TECHNICAL ELECTIVE		3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/FALL		
Code/Name		**Credits**
GENERAL ELECTIVE		1
AGBU 241	Farm Management (C)	3
Anything from LIBERAL ARTS AND SCIENCES		6
Anything from TECHNICAL ELECTIVE		3
Anything from PHED		1

Year 2/SPRING		
Code/Name		**Credits**
AGBU 208	Agricultural Business Mgmt (C)	3
AGBU 242	Ag Bus Financial Mgmt (C)	3
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from TECHNICAL ELECTIVE		6

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

Bachelor of Science

Overview

The bachelor's of science degree is designed for the entering freshman that desires an academically rigorous curriculum. This program offers students an opportunity to intensely focus on agribusiness management and broaden their education through a significant component of liberal arts and sciences. Graduates may pursue graduate study or management positions with corporate agribusinesses.

Student Learning Outcomes

- A well-rounded, interdisciplinary approach to problem solving and situational analysis in the agribusiness arena.
- Develop and utilize skills and techniques to allow for successful communication of ideas and concepts to a variety of audiences.
- Develop and apply skills in entrepreneurial and managerial thought processes and decision making.
- Acquire a working knowledge of business management principles as they apply in the agricultural arena that will translate directly into vital competencies for careers in agribusiness.
- Understand the theoretical economic framework and real-world markets in which all agribusinesses operate.
- Achieve a level of academic ability and intellectual curiosity to facilitate successful transition to managerial positions or graduate school.

Employment/Internship Opportunities:

Baccalaureate students use internships as opportunities to apply their academic knowledge in a hands-on, real world setting therefore gaining the critical skills employers require. Students seeking fulltime employment are encouraged to utilize the resources available on the Student Success Center website at www.cobleskill.edu/ssc including resume writing software, job listing systems, interview preparation and job searching advice.

Major Field Requirements:	**36**
15 credits chosen from: AGBU 101- Intro to Ag. Bus	15
AGBU 103- Ag. Economics AGBU 107- Ag. Bus. Operations AGBU 121- Marketing Ag. Products	
AGBU 208- Ag. Bus. Management AGBU 240- Equine Farm Management. **OR** AGBU 241- Farm Management. AGBU 242- Ag. Bus. Financial Management.	
ACCT101- Financial Accounting	3
AGBU/AGED 300/400 (no subs, exps, no 390, 450)	18
Technical Electives:	**18**
AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT, RECM ****NO 450, no more than 6 credits 290, 390 and experimental courses**	

Liberal Arts & Sciences	**60**
Upper Level (300/400 level)- COMM 301 recommended	9
ENGL101- Composition I	3
ENGL	3
MATH111 or higher (strongly suggest 125 or 231)	6
Lab Science	6
PHED	1
Additional LAS	32
General Electives	**6**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGBU	101 recommended	3
AGBU	103 recommended	3
ENGL 101	Composition I	3
MATH 111	College Algebra	3
FFCS199	Foundations for college success	1
Technical elective		3

Year 1/SPRING		
Code/Name		**Credits**
AGBU	107 recommended	3
AGBU	121 recommended	3
ACCT 101	Financial Accounting (C)	3
LAS General Education Core		3
MATH 125	Statistics	3
MATH 131	Pre-Calculus	4

Year 2/FALL		
Code/Name		**Credits**
AGBU	241 recommended	3
LAS General Education Core		3
Anything from BIOL, CHEM, PHYS, PSCI		3
Technical Elective		3
Anything from PHED		1

Year 2/SPRING		
Code/Name		**Credits**
AGBU	208 recommended	3
AGBU	242 recommended	3
LAS General Education Core		6
Anything from BIOL, CHEM, PHYS, PSCI		3

Year 3/FALL		
Code/Name		**Credits**
Anything from AGBU, AGED. 300 level or higher		9
Liberal Arts and Sciences		3
COMM 301 or higher	Technical Communication (or higher)	3

Year 3/SPRING	
Code/Name	**Credits**
Liberal Arts and Sciences	3
Anything from AGBU, AGED. 300 level	6
Liberal Arts and Sciences 300 level or higher	3
Technical Elective	3

Year 4/FALL	
Code/Name	**Credits**
Liberal Arts and Sciences	6
Liberal Arts and Sciences 300 level or higher	3
Technical Elective	3
Anything from AGBU, AGED. 300 level or higher	3

Year 4/SPRING	
Code/Name	**Credits**
Liberal Arts and Sciences	9
Technical Elective	6

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

Bachelor of Technology

Overview

Agricultural business or "agribusiness" describes the total agricultural industry in the United States. Business activity in agriculture ranges from providing supplies and services to farmers through the actual on-farm production of food and fiber, to the processing and distribution of those products. This broad-based program provides enough flexibility to allow each student to custom design a truly unique educational experience, yet retains the essential knowledge base which ensures successful attainment of long-term goals. These goals may include graduate study, employment in an agribusiness or self-employment.

Student Learning Outcomes

- Apply business, economic and production theories using real-world examples and experiential learning opportunities.
- Develop and utilize skills and techniques to allow for successful communication of ideas and concepts to a variety of audiences.
- Develop and apply skills in entrepreneurial and managerial thought processes and decision making.
- Acquire a working knowledge of business management principles as they apply in the agricultural arena that will translate directly into vital competencies for careers in agribusiness.
- Demonstrate work place applicable and entrepreneurial competencies in written communication, oral communication, computer operation, and problem solving.
- Express consistent capabilities of arriving on time, meeting deadlines, capacity for learning, and professional conduct.
- Understand the theoretical economic framework and real-world markets in which all agribusinesses operate.

Major Field Requirements:	**49**
AGBU 380- Internship Orientation	1
AGBU 450- Internship	12
AGBU Upper-level Courses (300/400)	9
AGBU, AGEN, AGRN, AGSC, ANSC, BADM, CITA Upper-level 300/400 (no 390/490s or exps)	9
ACCT 101- Financial Accounting	3
15 credits chosen from:	15
AGBU 101- Intro to Ag. Bus AGBU 103- Ag. Economics AGBU 107- Ag. Bus. Operations AGBU 121- Marketing Ag. Products AGBU 208- Ag. Bus. Management AGBU 240- Equine Farm Management **OR** AGBU 241- Farm Management AGBU 242- Ag. Bus. Financial Management	

Liberal Arts & Sciences	**36**
ENGL 101- Composition I	3
MATH 111- College Algebra or higher	3
Lab Science	3
PHED	1
Lower Level (100/200)	20
Upper Level (300/400)	6

Advisement Track (choose one):	**26**
Ag Education Track:	
ANSC 100-400 level	6
AGRN, AGSC, or ORHT 100-400 level	6
AGEN 100-400 level	3
AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ACCT, BADM, CITA, FWLD, ENHT, ORHT, RECM (no 450, no more than 6cr of 290, 390, and exp courses)	11
Equine Business Mgmt Track:	
ANSC 116- Equine Science Techniques I	1
ANSC 161- Light Horse Management	3
ANSC 164- Intro to Equine Training **OR** ANSC 264- Tackless Training	3
ANSC 221- Equine/Companion Animal Nutrition	3
ANSC 240- Equine Breeding & Breeding Farm Mgmt	3
ANSC 254- Equine Health	3
AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ACCT, BADM, CITA, FWLD, ENHT, ORHT, RECM (no 450, no more than 6cr of 290, 390, and exp courses)	10
Agri-Enterprise Track: AGBU, AGED, AGEN, AGRN, AGSC, ANSC, ACCT, BADM, CITA, FWLD, ENHT, ORHT, RECM (no 450, no more than 6cr of 290, 390, and exp courses)	26

General Electives	**9**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
Anything from MAJOR FIELD (AGBU 101)		3
Anything from MAJOR FIELD (AGBU 103)		3
ENGL 101	Composition I	3
Anything from MATH BY PLACEMENT		3
Anything from ADVISEMENT TRACK		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
Anything from MAJOR FIELD (AGBU 107)		3
Anything from MAJOR FIELD (AGBU 121)		3
Anything from LAB SCIENCE		3
Anything from LIBERAL ARTS AND SCIENCES		3
ACCT 101	Financial Accounting (C)	3

Year 2/FALL	
Code/Name	**Credits**
Anything from LIBERAL ARTS AND SCIENCES	6
Anything from ADVISEMENT TRACK	6
Anything from PHED	1

Year 2/SPRING	
Code/Name	**Credits**
Anything from MAJOR FIELD (AGBU 208)	3
Anything from ADVISEMENT TRACK	6
GENERAL ELECTIVE	4
Anything from LIBERAL ARTS AND SCIENCES	3

Year 3/FALL	
Code/Name	**Credits**
Anything from AGBU UPPER LEVEL	9
Anything from LIBERAL ARTS AND SCIENCES	5
Anything from ADVISEMENT TRACK	3

Year 3/SPRING	
Code/Name	**Credits**
Anything from MAJOR ELECTIVE UPPER LEVEL	9
Anything from ADVISEMENT TRACK	5
Anything from LIBERAL ARTS AND SCIENCES UPPER LEVEL	3

Year 4/FALL		
Code/Name		**Credits**
AGBU 380	Internship Orientation Ag Bus	1
Anything from LIBERAL ARTS AND SCIENCES UPPER LEVEL		3
Anything from ADVISEMENT TRACK		3
GENERAL ELECTIVE		4
Anything from LIBERAL ARTS AND SCIENCES		3

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

NOTE: AGBU courses in parentheses are strongly suggested for first and second year students. Transfer students will be advised on an individual basis about which courses to select.

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 Associates 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 on a term.

Major Field Requirements:	**13**
ANSC 111- Intro to Animal Science	3
ANSC 122-Feeds & Feeding **OR** ANSC 123- Intro to Dairy Nutrition	4
ANSC 100-499	3
ANSC 200-level Course	3
Agricultural Electives:	**12**
AGBU, AGEN, AGRN, ANSC, AGSC	

Liberal Arts & Sciences	**32**
BIOL 111- Biology I	4
BIOL 112- Biology II	4
CHEM 111- General Chemistry I	4
CHEM 112- General Chemistry II	4
ENGL 101- Composition I	3
ENGL 102 – Composition II	3
MATH 111- College Algebra (or higher)	3
PHED	1
Additional LAS	6
General Electives	**9**
Total Credits	**66**
Math 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 (C)	3
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 PHED		1
Anything from AGBU, AGEN, AGRN, AGSC, ANSC		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 122	Feeds and Feeding (C)	4
ANSC 123	Intro to Dairy Nutrition (C)	4
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

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
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/SPRING	
Code/Name	**Credits**
ANSC 200 or higher	3
Anything from AGBU, AGEN, AGRN, AGSC, ANSC	3
Anything from LIBERAL ARTS AND SCIENCES	3
GENERAL ELECTIVES	8

Animal Industry (A.A.S.) (Curriculum Code – 5402/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

In addition to other listed requirements for graduation Animal Industry majors must consult with their advisor to design a demonstration of competence in their chosen field. Students will be required to demonstrate competence in each of the learning outcomes by using at least 3 of the following instruments:

- Oral examination before a panel of at least 3 faculty
- Written portfolio of materials from at least 4 courses
- Practical demonstration of skills taught in at least 3 courses
- 3 credit Special project course designed specifically as a capstone course
- 3 credit Special project course for independent research designed for presentation and publication

Major Field Requirements:	**30**
ANSC 111 – Intro to Animal Science	3
ANSC 122 Feeds and Feeding	3
Or ANSC 221 Equine & Companion Animal Nutri	
ANSC 200 level course	6
AGBU Course	3
Ag Electives by Advisement from following prefixes:	15
ANSC, AGBU, AGEN, AGRN, AGSC	

Liberal Arts & Sciences	**22**
ENGL 101- Composition	3
PHED	1
BIOL	3
MATH	3
Additional Liberal Arts and Sciences	12
General Electives	**8**
Total Credits	**60**
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 111	Intro to Animal Science (C)	3
Anything from BIOL		3
ENGL 101	Composition I	3
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from AGBU, AGED, AGEN, AGRN, AGSC, ANSC		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 122	Feeds and Feeding (C)	4
ANSC 221	Equine & Companion Animal Nutr	3
MATH 111 or higher	College Algebra (or higher)	3
Anything from AGBU, AGED, AGEN, AGRN, AGSC, ANSC		3
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from PHED		1

Year 2/FALL	
Code/Name	**Credits**
ANSC 200 or higher	3
Anything from AGBU, AGED, AGEN, AGRN, AGSC, ANSC	3
Anything from LIBERAL ARTS AND SCIENCES	3
GENERAL ELECTIVES	3
Anything from AGBU	3

Year 2/SPRING	
Code/Name	**Credits**
ANSC 200 or higher	3
Anything from AGBU, AGEN, AGRN, AGSC, ANSC	6
Anything from LIBERAL ARTS AND SCIENCES	3
GENERAL ELECTIVES	5

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

Bachelor of Science

Overview

The B.S. degree in Animal Science is designed to offer students advanced skills in the area of general livestock production. The program focuses upon meat animal production, management and marketing. Coursework can be selected that focuses upon goals and interests that build greater competence in the scientific elements of meat animal production, such as physiology, nutrition, and environment management. Students completing this program will build upon coursework from their associate degree program and previous applied experiences. Advanced course offerings will allow for improvement of skills in the care and management of beef, sheep, meat goats, and swine, as well as focusing upon the production, processing and marketing of meat animal products. This degree offers an internship opportunity to further specialize skills in a work environment to enhance a graduate's abilities to secure a career in the dynamic area of livestock production, processing and/or marketing.

The Animal Science bachelor's of science degree program is designed to offer students the opportunity to study animal sciences without having to specify a concentration. The program allows students the flexibility in tailoring a program to meet their career goals while giving them a solid base in the animal sciences. Students may enter the program as freshmen or transfer into the program. The program prepares students for careers in the animal industry including animal production, animal nutrition and research.

Student Learning Outcomes

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

Major Field Requirements:	**51**
ANSC 111- Introduction to Animal Science	3
ANSC 220- Animal Reproduction	3
ANSC 252- Animal Health	3
BIOL 111- Biology I	4
BIOL 112- Biology II	4
BIOL 219- Microbiology	4
CHEM 231- Organic Chemistry I	5
CHEM 232- Organic Chemistry II	5
BIOL 104- Prin Animal Anatomy and Physiology	3
Or BIOL 258- Anatomy and Physiology I	
BIOL 105- Principles of Genetics	3
Or BIOL 259- Anatomy and Physiology II	
ANSC 122- Feeds and Feeding	3
Or ANSC 123- Introduction to Dairy Nutrition	
Or ANSC 221- Equine/Companion Animal Nutrit	
PHYS 111- College Physics I	4
Or PHYS 211- Calculus Physics	
PHYS 112- College Physics II	4
Or PHYS 212- Calculus Physics II	
MATH 125- Statistics	3

Technical Electives	**15**
AGBU, AGED, ANSC, BIOL	3
Upper-Level AGBU, AGED, ANSC, BIOL	12
Liberal Arts & Sciences	**60**
CHEM 111- General Chemistry I	4
CHEM 112- General Chemistry II	4
PHED	1
ENGL 101- Composition I	3
ENGL 102- Composition II	3
Or ENGL 111- Fund of Speech Communications	
MATH 111- College Algebra (or higher)	3
Upper-Level Liberal Arts and Sciences	12
Additional Liberal Arts and Sciences	30
Total Credits	**126**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ENGL 101	Composition I	3
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 (C)	3
MATH 111 or higher	College Algebra (or higher)	3
FFCS 199	Foundations 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	Feeds and Feeding (C)	4
ANSC 123	Intro to Dairy Nutrition (C)	4
ANSC 221	Equine/Companion Animal Nutrit	3
Anything from AGBU, AGED, ANSC, BIOL		3
ENGL 102	Composition II	3
ENGL 111	Fund of Speech Communications	3

Year 2/FALL		
Code/Name		**Credits**
CHEM 231	Organic Chemistry I	3
CHEM 231X	Organic Chemistry I Lab	2
BIOL 104	Prin Animal Anatomy/Physiology	3
BIOL 258	Anatomy & Physiology I	3
BIOL 219	Microbiology	3
BIOL 219X	Microbiology Lab	1
Liberal Arts and Sciences		3
Anything from PHED		1

Year 2/SPRING		
Code/Name		**Credits**
CHEM 232	Organic Chemistry II	3
CHEM 232X	Organic Chemistry II Lab	2
BIOL 105	Principles of Genetics	2
BIOL 105X	Principles of Genetics Lab	1
BIOL 259	Anatomy & Physiology II	3
BIOL 259X	Anatomy & Physiology II Lab	1
Liberal Arts and Sciences		3
MATH 125	Statistics	3

Year 3/FALL		
Code/Name		**Credits**
PHYS 111	College Physics I	3
PHYS 111X	College Physics I Lab	1
Technical Electives Upper-Level		3
Liberal Arts and Sciences		6

Year 3/SPRING		
Code/Name		**Credits**
PHYS 112	College Physics II	3
PHYS 112X	College Physics II Lab	1
Technical Electives Upper-Level		3
ANSC 220	Animal Reproduction	3
Liberal Arts and Sciences		6

Year 4/FALL	
Code/Name	**Credits**
Liberal Arts and Sciences	9
Liberal Arts and Sciences Upper-Level	6
Technical Electives Upper-Level	3

Year 4/SPRING	
Code/Name	**Credits**
Liberal Arts and Sciences Upper-Level	6
Liberal Arts and Sciences	6
Technical Electives Upper-Level	3

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

Bachelor of Technology

Overview

The B.T. degree in Animal Science is designed to offer students advanced skills in the area of general livestock production. The program focuses upon meat animal production, management and marketing. Coursework can be selected that focuses upon goals and interests that build greater competence in the scientific elements of meat animal production, such as physiology, nutrition, and environment management. Students completing this program will build upon coursework from their associate degree program and previous applied experiences. Advanced course offerings will allow for improvement of skills in the care and management of beef, sheep, meat goats, and swine, as well as focusing upon the production, processing and marketing of meat animal products. This degree offers an internship opportunity to further specialize skills in a work environment to enhance a graduate's abilities to secure a career in the dynamic area of livestock production, processing and/or marketing.

The Animal Science bachelor's of technology degree program is designed to offer students the opportunity to study animal sciences without having to specify a concentration. The program allows students the flexibility in tailoring a program to meet their career goals while giving them a solid base in the animal sciences. Students may enter the program as freshmen or transfer into the program. The program prepares students for careers in the animal industry including animal production, animal nutrition and research.

Student Learning Outcomes

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

Major Field Requirements:	**49**
ANSC 111- Intro to Animal Science	3
CITA 110- Microcomputer Applications I	3
ANSC 450- Internship	12
Three credits from the following: AGBU 240- Equine Farm Management AGBU 241- Farm Management AGBU 242- Ag Business Financial Management	3
Three credits from the following: ANSC 252- Animal Health ANSC 254- Equine Health	3
Three credits from the following: ANSC 117- Intro to Livestock Production ANSC 140- Small Animal Management ANSC 150- Intro to Dairy Cattle Management ANSC 161- Light Horse Management	3
Three credits from the following: AGRN 240- Equine Forage Mgmt Practice AGRN 242- Forage and Seed Crops	3
Three credits from the following: ANSC 122- Feeds and Feeding ANSC 123- Intro to Dairy Nutrition ANSC 221- Equine/Companion Animal Nutrition	3
Upper Level Coursework: ANSC/BIOL/AGBU/AGED/AGSC 300-499	15
ANSC 380- Internship Orientation	1

Technical Electives:	**18**
ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, FWLD, ORHT (students will select from these prefixes in consultation with their academic advisor)	
Students working with their advisor may choose to focus on the following areas: Equine Dairy Production Livestock Animal Industry Canine Animal Nutrition	
Liberal Arts & Sciences	**33**
ENGL 101- Composition I	3
PHED	1
Upper Level (300-499)	6
Additional Liberal Arts and Sciences	20
MATH 111 College Algebra (or higher)	3
General Electives	**20**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 111	Intro to Animal Science (C)	3
ANSC 150	Intro to Dairy Cattle Mgmt (C)	3
ANSC 117	Intro to Livestock Prodctn (C)	3
ANSC 140	Small Animal Mgmt (C)	3
ANSC 161	Light Horse Management	2
ENGL 101	Composition I	3
LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVES		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 122	Feeds and Feeding (C)	4
ANSC 123	Intro to Dairy Nutrition (C)	4
ANSC 221	Equine/Companion Animal Nutrit	3
CITA 110	Microcomputer Applications I	3
Technical Electives		6
LIBERAL ARTS AND SCIENCES		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
AGBU 240	Equine Farm Management	3
AGBU 241	Farm Management (C)	3
AGBU 242	Ag Bus Financial Mgmt (C)	3
Technical Electives		6
LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVES		3

Year 2/SPRING		
Code/Name		**Credits**
ANSC 252	Animal Health	3
ANSC 254	Equine Health	3
Technical Electives		6
GENERAL ELECTIVES		3
LIBERAL ARTS AND SCIENCES		3

Year 3/FALL		
Code/Name		**Credits**
AGRN 240	Equine Forage Mgmt Practices	3
AGRN 242	Forage & Seed Crops	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**
Anything from AGED, ANSC, BIOL, AGBU, FWLD. 300 level or higher	6
LIBERAL ARTS AND SCIENCES	5
GENERAL ELECTIVES	3

Year 4/FALL		
Code/Name		**Credits**
ANSC 380	Internship Orient An Science	1
Major Field Electives 300 level or higher		6
LIBERAL ARTS AND SCIENCES		3
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

Beef and 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 individuals animals for selection decisions on the enterprise.

Major Field Requirements:	**34**
AGBU 241- Farm Management	3
AGEN course	3
AGRN 242- Forage and Seed Crops	3
AGSC 111- Intro to Soil Science	3
ANSC 107- Meat Products	3
ANSC 111- Intro to Animal Science	3
ANSC 115- Animal Science Techniques I	2
ANSC 117- Intro to Livestock Production	3
ANSC 122- Feeds and Feeding	4
ANSC 215- Animal Science Techniques II	1
ANSC 218- Livestock Production, Eval, and Mktg	3
ANSC 252- Animal Health	3

Liberal Arts & Sciences	**22**
ENGL 101- Composition	3
PHED	1
Science	3
Additional Liberal Arts and Sciences	15
General Electives	**10**
Total Credits	**66**
Math Competency	
FFCS Competency	

Beef and Livestock Studies (A.A.S.) (Curriculum Code – 0561/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 117	Intro to Livestock Prodctn (C)	3
ANSC 111	Intro to Animal Science (C)	3
ENGL 101	Composition I	3
Anything from LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVE		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 115	Animal Science Techniques I	2
ANSC 122	Feeds and Feeding (C)	4
AGSC 111	Intro to Soil Science (C)	3
ANSC 107	Meat Products	3
Anything from BIOL, CHEM, PHYS, PSCI		3
GENERAL ELECTIVE		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 241	Farm Management (C)	3
Anything from AGEN		3
ANSC 252	Animal Health	3
Anything from PHED		1
Anything from LIBERAL ARTS AND SCIENCES		6

Year 2/SPRING		
Code/Name		**Credits**
ANSC 215	Animal Science Techniques II	1
ANSC 218	Livestock Prdtn, Eval & Mktg	3
AGRN 242	Forage & Seed Crops (C)	3
Anything from LIBERAL ARTS AND SCIENCES		6
GENERAL ELECTIVE		4

Dairy Production and 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:	**33**
AGBU 241- Farm Management	3
AGBU 242- Ag Bus Financial Management	3
AGRN 242- Forage & Seed Crops	3
AGSC 111- Intro to Soil Science	3
ANSC 112- Dairy Science Techniques I	2
ANSC 123- Intro to Dairy Nutrition	4
ANSC 150- Intro to Dairy Cattle Management	3
ANSC 155- Dairy Record Management	3
ANSC 212- Dairy Cattle Management	3
ANSC 241- Dairy Cattle Breeding	3
ANSC 252- Animal Health	3

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
PHED	1
BIOL 104- Prin of Animal Anatomy & Physiology	3
Additional Liberal Arts and Sciences	15
General Electives	**11**
Total Credits	**66**
Math Competency	
FFCS Competency	

Dairy Production and Management (A.A.S.) (Curriculum Code – 0507/HEGIS – 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ANSC 150	Intro to Dairy Cattle Mgmt I	3
BIOL 104	Prin Animal Anatomy/Physiology	3
AGSC 111	Intro to Soil Science I	3
ENGL 101	Composition I	3
GENERAL ELECTIVE		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ANSC 112	Dairy Science Techniques I	2
ANSC 123	Intro to Dairy Nutrition I	4
ANSC 155	Dairy Record Management I	3
Anything from LIBERAL ARTS AND SCIENCES		6
GENERAL ELECTIVE		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 241	Farm Management I	3
ANSC 241	Dairy Cattle Breeding	3
ASNC 252	Animal Health	3
Anything from PHED		1
Anything from LIBERAL ARTS AND SCIENCES		6

Year 2/SPRING		
Code/Name		**Credits**
ANSC 212	Dairy Cattle Management	3
AGBU 242	Ag Bus Financial Mgmt I	3
AGRN 242	Forage & Seed Crops I	3
Anything from LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVE		4

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 240- Equine Farm Management	3
AGEN 105- Farm Equipment Operation/Safety	1
AGRN 240- Equine Forage Management Prac	3
ANSC 111- Intro to Animal Science	3
ANSC 116- Equine Science Techniques	1,1
ANSC 161- Light Horse Management	3
ANSC 164- Intro to Equine Training	3
ANSC 216- Equine Science Techniques II	1
ANSC 221- Equine/Companion Animal Nutrition	3
ANSC 240- Equine Breeding & Breeding Farm Mgmt	3
ANSC 254- Equine Health	3
ANSC 264- Tackless Training	3
Ag electives	5

Liberal Arts & Sciences	**20**
ENGL 101- Composition I	3
PHED	1
BIOL (recommended BIOL 104 and BIOL 105)	6
Additional Liberal Arts and Sciences	10
General Electives	**4**
Total Credits	**60**
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGEN 105	Farm Equip Operatn/Saftey I	1
ANSC 116	Equine Science Techniques I	1
ANSC 161	Light Horse Management	2
ANSC 161X	Light Horse Management Lab	1
Anything from BIOL		3
ENGL 101	Composition I	3
ENGL 102	Composition II	3
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from PHED		1
FFCS 199	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	3
ANSC 221	Equine/Companion Animal Nutrit	3
ANSC 164	Intro to Equine Training	1
ANSC 164X	Intro to Equine Training Lab	2
Anything from BIOL		3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/FALL		
Code/Name		**Credits**
AGBU 240	Equine Farm Management	3
AGRN 240	Equine Forage Mgmt Prac I	3
ANSC 254	Equine Health	3
ANSC 264	Tackless Training	2
ANSC 264X	Tackless Training Lab	1
Anything from AG ELECTIVE		3

Year 2/SPRING		
Code/Name		**Credits**
Anything from AG ELECTIVE		2
Anything from LIBERAL ARTS AND SCIENCES		4
GENERAL ELECTIVE		3
ANSC 216	Equine Science Techniques II	1
ANSC 240	Equine Breedg & Brdg Farm Mgmt	2
ANSC 240X	Equine Brdg/Brdg Farm Mgt Lab	1

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

Bachelor of Technology

Overview

Agricultural Equipment Technology graduates achieve excellent career placement and command significant salaries. Technology coursework, especially in the diagnostics of electrical and hydraulic systems, people management skills and communication skill development are emphasized. Classes and internships provide students a solid grounding and prepare them for a wide range of technical careers, often at a middle management level. SUNY Cobleskill students obtain positions in many industries, including agriculture, manufacturing, engineering, equipment retailing and energy. The internship program provides an ideal opportunity for matching a student with his/her interests in industry. Real world experiences supplement and enhance the student's technical background and expand career opportunities. Students develop an individual program of study with their advisor and 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:	**49**
ACCT, AGBU, AGEN, BADM 300/400	3
ACCT, AGBU, BADM	15
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- Internship Orientation Ag Eng	1
AGEN 450- Internship	9
AGEN 451- Internship Reporting	6
AGEN 480- Ag Equip Tech Seminar	3
Major Technical Electives:	**18**
AGBU, AGEN, AGRN, ANSC, AGSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT	

Liberal Arts & Sciences	**33**
ENGL 101- Composition I	3
Lower Level 100/200	20
PHED	1
Upper Level 300/400	3
COMM 301- Technical Communications	3
MATH 111- College Algebra (or higher)	3
General Electives	**20**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
Anything from ACCT, AGBU, BADM		3
Anything from AGBU, AGEN, AGRN, ANSC, AGSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT		6
ENGL 101	Composition I	3
Liberal Arts and Sciences Course		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING	
Code/Name	**Credits**
Anything from ACCT, AGBU, BADM	3
Anything from AGBU, AGEN, AGRN, ANSC, AGSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT	3
Liberal Arts and Sciences Course	6
Anything from PHED	1
General Elective	1

Year 2/FALL	
Code/Name	**Credits**
Anything from ACCT, BADM, AGBU	3
Anything from AGBU, AGEN, AGRN, ANSC, AGSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT	6
Liberal Arts and Sciences Course	6

Year 2/SPRING	
Code/Name	**Credits**
Anything from ACCT, AGBU, BADM	6
Anything from AGBU, AGEN, AGRN, ANSC, AGSC, ACCT, BADM, CITA, ENHT, FWLD, ORHT	3
Liberal Arts and Sciences Course	5

Year 3/FALL		
Code/Name		**Credits**
Liberal Arts and Sciences Upper level		3
AGEN 331	Ag Eq Elec Hydrlc Ctrl Sys I	2
AGEN 331X	Ag Eq Elec Hydrlc Ctrl Sys Lab	2
General Elective		6

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
General Elective		6

Year 4/FALL		
Code/Name		**Credits**
AGEN 480	Ag Equip Tech Seminar	3
Anything from ACCT, AGBU, AGEN, BADM. 300 level or higher		3
AGEN 380	Internship Orientation Ag Eng	1
MATH 111 or higher	College Algebra or higher	3
General Elective		6

Year 4/SPRING		
Code/Name		**Credits**
AGEN 450	Intern Ag Equip Technology	9
AGEN 451	Ag Eng Internship Reporting	6

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 surrounding 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
AGEN231/231X- Electrical/onic System Diag	3
AGEN232/232X- Power Train Theory Diag/Repair	4
AGEN241/241X- Agricultural Machinery	4
AGEN245/245X- Air Conditioning	2
AGEN 273/273X- Ag Hydraulics Troubleshooting	3
AGEN 285- Equipment Retaining Management	3
AGEN 292/292X- Fuel Systems	3
Advisement Track (choose one)	**4**
Power Machinery:	
AGEN 115- Supervised Work Experience	1
AGEN (excluding 105 & 261)	3
John Deere:	
AGEN 116- Industry Work Experience Orientation	1
AGEN 117- Industry Work Experience	1
AGEN 118- Industry Work Experience	1
AGEN 119- Industry Work Experience	1

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
ENGL	3
PHED	1
Math/Science	6
Additional Liberal Arts and Sciences	9
Total Credits	**60**
Math 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 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
ENGL 102	Composition II	3
Liberal Arts and Sciences		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 132	Fund Diesel Engine Tech I	2
AGEN 132X	Fund Diesel Engine Tech Lab	1
Anything from PHED		1
Liberal Arts and Sciences		3
Anything from BIOL, PHYS, CHEM, PSCI		3
Anything from ENGL		3

Year 2/FALL		
Code/Name		**Credits**
AGEN 231	Electrical/onic Sys Diag I	2
AGEN 231X	Electrical/onic Sys Diag Lab	1
AGEN 241	Agricultural Machinery	3
AGEN 241X	Agricultural Machinery Lab	1
AGEN 285	Equipment Retailing Mgmt I	3
AGEN 292	Fuel Systems I	2
AGEN 292X	Fuel Systems Lab	1

Year 2/SPRING		
Code/Name		**Credits**
AGEN 115 ***	Supervised Work Experience	4
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	Ag Hydraulics Troubleshtg I	2
AGEN 273X	Ag Hydraulics Troubleshoot Lab	1
MATH 103 or higher	Mathematics of Finance (or higher)	3
Anything from BIOL, CHEM, PHYS, PSCI		
Liberal Arts and Sciences		3

** Depending on advisement track – supervised work experience will appear differently in suggested course sequencing.

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 u sing 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 273/273X- Ag Hydraulics Troubleshooting	3
AGEN 245/245X- Air Conditioning	2
AGEN 274/274X- Construction Equipment Systems	3
AGEN 285- Equipment Retailing Management	3
AGEN 292/292X- Fuel Systems	3
Advisement Track (choose one):	5
Diesel Track:	
AGEN 115 or 115A- Supervised Work Experience	1
AGEN (not 105 and 261) include AGBU 107	4
John Deere Track:	
AGEN 116- Industry Work Experience Orientation	1
AGEN 117- Industry Work Experience	1
AGEN 118- Industry Work Experience	1
AGEN 119- Industry Work Experience	1
AGEN prefix course	1

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
ENGL	3
PHED	1
Math/Science	6
Additional LAS	9
Total Credits	**60**
Math 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 151	Basic Welding (C)	1
AGEN 151X	Basic Welding Lab	1
AGEN 166	Agricultural Mechanics (C)	1
AGEN 166X	Agricultural Mechanics Lab	1
AGEN 170	Basic Hydraulics (C)	2
AGEN 170X	Basic Hydraulics	1
ENGL 101	Composition I	3
Liberal Arts and Sciences		3
Anything from PHED		1
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 132	Fund Diesel Engine Tech (C)	2
AGEN 132X	Fund Diesel Engine Tech Lab	1
PHYS 101	Principles of Physics I	2
PHYS 101X	Principles of Physics I Lab	1
ENGL 102 or higher	Composition II (or higher)	3
Liberal Arts and Sciences		3
Anything from AGEN		2

Year 2/FALL		
Code/Name		**Credits**
AGEN 231	Electrical/onic Sys Diag (C)	2
AGEN 231X	Electrical/onic Sys Diag Lab	1
AGEN 274	Construction Equipment Sys (C)	2
AGEN 274X	Construction Equip Systems Lab	1
AGEN 285	Equipment Retailing Mgmt (C)	3
AGEN 292	Fuel Systems (C)	2
AGEN 292X	Fuel Systems Lab	1
MATH 103 or higher	Mathematics of Finance (or higher)	3
Anything from BIOL, CHEM, PHYS, PSCI		3

Year 2/SPRING		
Code/Name		**Credits**
AGEN 115	Supervised Work Experience	1
AGEN 232	Pwr Trn Theory Diag/Repair (C)	2
AGEN 232X	Pwr Train Theory Diag&Rep Lab	2
AGEN 245	Air Conditioning (C)	1
AGEN 245X	Air Conditioning Lab	1
AGEN 273	Ag Hydraulics Troubleshtg (C)	2
AGEN 273X	Ag Hydraulics Troubleshoot Lab	1
Advisement Track		4

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

Bachelor of Technology

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.

Major Field Requirements:	**61**
AGBU 107- Ag Business Operations	3
Or BADM 315- Entrepreneurship	
BIOL 215- Aquatic Ecology	3
BIOL 415- Marine Ecology	3
CITA 112- Spreadsheet & Database Applications	3
ENVR 350- Environmental Law & Regulation	3
FWLD 101- Intro to Fish Wildlife Cons	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/Merriculture	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	3
FWLD 451- Aquatic & Marine Resource Mgmt	3
GIST 130- Geographic Information Systems	3
ORHT 121- Woody Plant Materials	3

Liberal Arts & Sciences	**53**
ENGL 101- Composition I	3
PHED	1
COMM 301- Technical Communications	3
BIOL 111- Biology I	4
BIOL 131- Natural History of Vertebrates	3
BIOL 307- Invertebrate Zoology	3
BIOL 318- Fish Biology	3
Additional Liberal Arts and Sciences	12
MATH 125- Statistics	3
MATH 225- Statistical Methods	3
Or MATH 231- Calculus I	
CHEM 111/111X- General Chemistry	4
CHEM 216/216X- Water Chemistry	3
PHYS, PSCI, CHEM, and/or AGSC 111	8
General Electives	**6**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
FFCS 199	Foundation for College Success	1
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
ENGL 101	Composition I	3
FWLD 101	Intro Fish Wildlife Cons	3
FWLD 112	Aquaculture Techniques	1
MATH 125	Statistics	3

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

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
Anything from 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
FWLD 217	Hatchery Techniques	1
Anything from LIBERAL ARTS AND SCIENCES		6

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

Year 3/SPRING		
Code/Name		**Credits**
AGBU 107	Ag Business Operations (C)	3
BADM 315	Entrepreneurship	3
FWLD 330	Production Aqua/Merriculture	3
FWLD 440	Fisheries Research	3
Anything from GENERAL ELECTIVES		3
CHEM 216	Water Chemistry	2
CHEM 216X	Water Chemistry Lab	1

Year 4/FALL		
Code/Name		**Credits**
FWLD 430	Fish Hatchery Management	3
FWLD 350	Wetlands Assess & Delineation	3
BIOL 415	Marine Ecology	3
FWLD 351	Wildlife Policy & Reg Comply	1
FWLD 400	Pond Management	1
Anything from PHYSICAL SCIENCES ELECTIVE		4

Year 4/SPRING		
Code/Name		**Credits**
GENERAL ELECTIVE		2
FWLD 451	Aquatic & Marine Resource Mgmt	3
FWLD 421	Fisheries Management	3
Anything from PHYSICAL SCIENCES ELECTIVE		4
ENVR 350	Environmental Law & Regulation	3

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.

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 Fish & Wildlife Cons	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	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**
Seven of ten Gen Ed Categories	
Math 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 Fish Wildlife Cons	3
MATH 111	College Algebra	3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
BIOL 131	Natural History of Vertebrates	3
FWLD 115	Fisheries Techniques	3
FWLD 125	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		1

Year 2/FALL		
Code/Name		**Credits**
BIOL 211	Terrestrial Ecology	3
BIOL 215	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

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 obtain all the coursework necessary to satisfy the educational requirements to become appointed as Certified Wildlife Biologist by The Wildlife Society, and the required 15-credit internship provides students with a unique opportunity to acquire professional experience in the field of wildlife management.

Major Field Requirements:	**69**
AGSC 111- Intro to Soil Science	3
BIOL 131- Natural History of Vertebrates	3
BIOL 316- Ornithology	3
BIOL 317- Herpetology	3
BIOL 400- Evolutionary Biology	3
CITA 112- Spreadsheet & Database Applications	3
ENVR 350- Environmental Law & Regulation	3
FWLD 101- Intro Fish Wildlife Cons	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
GIST 130/130X- Geographic Info Systems	3
ORHT 121- Woody Plant Materials	3
PSCI 102- Physical Geology	3
BIOL 211- Terrestrial Ecology	3
Or BIOL 215- Aquatic Ecology	
Internship:	**15**
FWLD 450- Internship	15
or Courses selected from the following: BIOL 300-306, 308-315, 318-399, 401-499 CHEM 101-110, 112-499 ENGL 103-110, 112-499 FWLD 300-499 MATH 112, 131, 231 Any PHYS course	15

Liberal Arts & Sciences	**51**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
CHEM 111/111X- General Chemistry I	4
PHED	1
BIOL 307- Invertebrate Zoology	3
Or BIOL 318- Fish Biology	
COMM 301- Technical Communications	3
BIOL 111/111X- Biology I	4
BIOL 116- Botany I	3
BIOL 117- Botany II	3
ENGL 111- Fund of Speech Communications	3
MATH 111- College Algebra (or higher)	3
MATH 125- Statistics	3
MATH 225- Statistical Methods	3
Additional Liberal Arts and Sciences	12
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
ENGL 101	Composition I	3
FWLD 101	Intro Fish Wildlife Cons	3
MATH 111 or higher	College Algebra (or higher)	3
FFCS 199	Foundation for College Success	1
PHED 151	Wellness	1

Year 1/SPRING		
Code/Name		**Credits**
Anything from GENERAL EDUCATION CORE		3
BIOL 131	Natural History of Vertebrates	3
FWLD 125	Wildlife Techniques	3
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
FWLD 211	Wildlife Law Enforce & PR	2

Year 2/FALL		
Code/Name		**Credits**
CITA 112	Spreadsheet & Database Applic	3
BIOL 211	Terrestrial Ecology	3
BIOL 215	Aquatic Ecology	3
FWLD 220	Wildlife Management	3
ORHT 121	Woody Plant Materials	3
Anything from GENERAL EDUCATION CORE		3

Year 2/SPRING		
Code/Name		**Credits**
MATH 125	Statistics	3
FWLD 221	Fisheries Science	3
GIST 130	Geographic Info Systems	2
GIST 130X	Geographic Info Systems Lab	1
Anything from GENERAL EDUCATION CORE		6

Year 3/FALL		
Code/Name		**Credits**
FWLD 350	Wetlands Assess & Delineation	3
BIOL 116	Botany I	3
COMM 301	Technical Communication	3
FWLD 351	Wildlife Policy & Reg Comply	1
AGSC 111	Intro to Soil Science (C)	3
MATH 225	Statistical Methods	3

Year 3/SPRING		
Code/Name		**Credits**
ENGL 111	Fund of Speech Communications	3
BIOL 117	Botany II	3
BIOL 316	Ornithology	3
BIOL 317	Herpetology	3
BIOL 400	Evolutionary Biology	3

Year 4/FALL		
Code/Name		**Credits**
BIOL 307	Invertebrate Zoology	3
BIOL 318	Fish Biology	3
ENVR 350	Environmental Law & Regulation	3
FWLD 320	Ecology & Management Waterfowl	3
ENGL 102	Composition II	3
PSCI 102	Physical Geology	3

Year 4/SPRING		
Code/Name		**Credits**
FWLD 450	Internship in Fish/Wildlife	15

Environmental and Energy Technologies (B.T.) (Curriculum Code – 2242/HEGIS - 0115)

Bachelor of Technology

Overview

The Environmental and Energy Technologies program provides students a diverse and balanced blend of scientific, technological, and applied practice and research learning experiences. The first two years of study focus on development of students' analytical and critical thinking skills in science, mathematics and technology. This preparation provides a foundation for study during the third and fourth years focused on specific technologies in one of three program concentrations: Water Resources Management, Waste Management Technologies, and Renewable Energy Technologies. The emphasis of the program on application of scientific knowledge to management of key resources and their relevant technologies is consistent with the mission of SUNY Cobleskill that is centered on technical education.

Student Learning Outcomes

- Understand apply the basic principles of biology and chemistry and their relevant applications to study of water resources, waste management, or renewable energy technologies.
- Understand and identify the key principles supporting physical, chemical and biological treatment processes and operations.
- Understand and describe the operational principles of water pollution control, waste management, or renewable energy production.
- Identify the key laws, regulations and policies related to water, waste or renewable energy supplies, as well as the public agencies involved in regulating and managing these natural resources.
- Understand and apply scientific techniques, skills and tools to define, formulate and solve problems related to management and utilization of water, waste or renewable energy.
- Communicate effectively with public and private sector stakeholders and function effectively on multi-disciplinary teams.

Environmental and Energy Technologies (B.T.) (Curriculum Code – 2242/HEGIS - 0115)

Major Field Requirements:	**46**
BIOL 111- Biology I	4
BIOL 219- Microbiology	4
CHEM 111- General Chemistry I	4
CHEM 112- General Chemistry II	4
ENVR 301- Unit Operations and Processes	4
ENVR 350- Environmental Law and Regulation	3
MATH 231- Calculus I	4
PHYS 111- College Physics I	4
Or PHYS 211- Calculus Physics I	
PSCI 105- Environmental Science and Technology	3
ENVR 450- Internship in EET	12
Or 12 cr general elective (6 cr must be 300-499)	
Advisement Track: (choose one)	**18**
See below for advisement tracks and courses	
Major Technical Electives:	**12**
Six credits chosen from:	
AGRN, AGSC, AGEN, BIOL, CHEM, ENVR, FWLD, GIST, PSCI, PHYS	
Six credits of upper level chosen from:	
AGRN, AGSC, AGEN, BIOL, CHEM, ENVR, FWLD, GIST, PSCI, PHYS	

Additional Major Electives: (chosen from)	**9**
AGEN 205- Ag Safety and Health Management	
AGRN 232- Plant Ecology	
BADM 249- Management	
BIOL 112- Biology II	
BIOL 215- Aquatic Ecology	
CHEM 231- Organic Chemistry I	
CHEM 244- Instrumental Analysis	
MATH 125- Statistics	
PSCI 102- Physical Geology	
Liberal Arts & Sciences	**31**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
PHED	1
Additional Liberal Arts and Sciences	24
General Electives	**4**
Total Credits	**120**
Math Competency	
FFCS Competency	

Environmental and Energy Technologies Advisement Tracks (choose one)

Water Resources Management
AGRN 121- Soil and Water Conservation
AGRN 324- Applied Hydrology
AGRN 425- Watershed Management
AGSC 111- Introduction to Soil Science
CHEM 216- Water Chemistry
ENVR 411- Environmental Pollution

Renewable Energies
AGEN 340- Biomass/Biowaste Energy Technologies
ENVR 200 - Energy Industry Instrumentation
ENVR 401- Alternative Energy Production Technologies
PHYS 112- College Physics II
Or PHYS 212- Calculus Physics II
PHYS 303- Applied Thermodynamics
Additional 2 credits (in consultation with advisor)

Waste Management
AGEN 310- Waste Management and Technology
AGEN 340- Biomass/Biowaste Energy Technologies
AGSC 111- Introduction to Soil Science
PHYS 303- Applied Thermodynamics
ENVR 411- Environmental Pollution
Additional 3 credits (in consultation with advisor)

Environmental and Energy Technologies (B.T.) (Curriculum Code – 2242/HEGIS - 0115)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	4
CHEM 111	General Chemistry I	4
PSCI 105	Environmental Sci and Tech	3
ENGL 101	Composition	3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
CHEM 112	General Chemistry II	4
MATH 231	Calculus I	4
Liberal Arts and Sciences		3
Anything from PHED		1
ECON 123	Micro-Economics	3

Year 2/FALL		
Code/Name		**Credits**
Advisement Track		3
BIOL 219	Microbiology	4
PHYS 111	College Physics I	4
Group II Major Field Requirement		3
Liberal Arts and Sciences		3

Year 2/SPRING	
Code/Name	**Credits**
Advisement Track	6
Group II Major Field Requirement	3
Liberal Arts and Science	3
Technical Elective	3

Year 3/FALL		
Code/Name		**Credits**
ENVR 350	Environmental Law and Regulation	3
ENVR 301	Unit Operations and Processes	4
Advisement Track		3
Group II Major Field Requirement		3
Technical Elective		3

Year 3/SPRING	
Code/Name	**Credits**
Advisement Track	3
Liberal Arts and Sciences Elective	6
Technical elective	3
General elective	3-4

Year 4/FALL	
Code/Name	**Credits**
Advisement Track	3
Technical elective	3
Liberal Arts and Science elective	9

Year 4/SPRING		
Code/Name		**Credits**
ENVR 450	Internship	12
General Electives		12

Environmental Studies (A.A.S.) (Curriculum Code – 1016/HEGIS - 5499)

Associate in Applied Science

Overview

The significant concern in society about environmental quality has generated a need for technically-trained environmental specialists and natural resource managers. An A.A.S. in Environmental Studies at SUNY Cobleskill prepares students for beginning an exciting career in environmental protection in the public or private sectors. The study of soil erosion, water pollution, natural resources protection, ecology, and the world of plants, with a strong foundation in the natural sciences provides a diverse program which prepares students for job entry or bachelor's programs. The Environmental Studies program involves significant learning experiences through laboratory activities, exciting field trips and interaction with natural resource and environmental professionals. Excellent laboratory facilities are utilized for extensive hands-on learning in chemistry, biology, botany, soil science, water resources, geology, ecology and computer applications. Extensive land provides numerous opportunities for investigating forests, cropland and stream system environments, all within a short walking distance of the Plant Science classrooms and laboratories.

Student Learning Outcomes

- Identify key properties of soils and explain their effects on plant growth and environmental health.
- Recognize predominant woody plant species and describe their growth requirements in temperate region ecosystems.
- Recognize and describe the relationships between organisms and the environment.
- Identify and describe the principal threats to land, water, soil and air quality, and recommend plausible solutions to such threats.
- Demonstrate competence in the use of geographic information tools and systems.

Major Field Requirements:	**29**
AGRN 121- Soil & Water Conservation	3
AGRN 232- Plant Ecology	3
Or BIOL 211- Terrestrial Ecology	
Or BIOL 215- Aquatic Ecology	
AGRN 313- Soil Fertility	3
AGSC 111- Intro to Soil Science	3
CITA 110- Microcomputer Applications I	3
ENHT 101- Intro to Environmental Health	3
FWLD 101- Intro to Fish & Wildlife Conservation	3
GIST 130/130X- Geographic Info Systems	3
ORHT 121- Woody Plant Materials	3
RECM 115- Intro to Recreational Services	2
Or FWLD 211- Wildlife Law Enforcement & PR	

Liberal Arts & Sciences	**29**
ENGL 101- Composition I	3
ENGL	3
Science/MATH 111-College Algebra (or higher)	13
Social Science	6
PHED	1
Additional Liberal Arts and Sciences	3
General Electives	**8**
Total Credits	**66**
Math Competency	
FFCS Competency	

Environmental Studies (A.A.S.) (Curriculum Code – 1016/HEGIS - 5499)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
BIOL 116	Botany I	3
CITA 110	Microcomputer Applications I	3
ENGL 101	Composition I	3
FWLD 101	Intro Fish Wildlife Cons	3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGRN 121	Soil & Water Conservation (C)	3
ENHT 101	Intro Environmental Health	3
Anything from ENGL		3
GIST 130	Geographic Info Systems	2
GIST 130X	Geographic Info Systems Lab	1
MATH 111 or higher		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
AGRN 232	Plant Ecology (C)	3
BIOL 211	Terrestrial Ecology	3
BIOL 215	Aquatic Ecology	3
Anything from MATH 111 or higher, BIOL, CHEM, PHYS, PSCI		4
ORHT 121	Woody Plant Materials	3
RECM 115	Intro to Recreational Service	2
FWLD 211	Wildlife Law Enforce & PR	2
AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
GENERAL ELECTIVE		3

Year 2/SPRING		
Code/Name		**Credits**
AGRN 313	Soil Fertility (C)	3
Anything from MATH111 or higher, BIOL, CHEM, PHYS, PSCI		3
AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
LIBERAL ARTS AND SCIENCE		3
GENERAL ELECTIVE		4

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

Bachelor of Technology

Overview

Landscape contractors engage in the design, installation and follow-up care of the nation's outdoor areas. From residential backyards to corporate headquarters, the professional landscape contractor is both artist and the craftsman of the land. Guided by a great sense of service and a strong environmental ethic, the landscape contractor improves the places where people live, work and play.

Student Learning Outcomes

- Identify approximately 200 species of trees, shrubs, vines and groundcovers common to the Northeastern United States. Know their common and botanical names.
- Select and arrange together plants that share common cultural requirements and environmental tolerances.
- Select and demonstrate the safe use of hand and power tools common to the installation and/or maintenance of landscapes.
- Select the motorized vehicles appropriate to specific landscape construction and/or maintenance tasks. Demonstrate their safe operation.
- Use traditional design and drafting tools to create scaled illustrations of landscape plans.
- Develop salable landscape plans that meet customer needs by application of design principles.
- Develop cost estimates for plans as and after they are developed.
- Interpret plans using varied graphic and model techniques.
- Install trees, shrubs, groundcovers, flowers, and turf in a manner that assures their successful transplant in the Northeastern United States.
- Install materials such as concrete, pavers, wood, bricks, stonework, and fencing correctly.
- Demonstrate the ability to identify soil structure, nutrient content, pH, and water retention.
- Prepare a soil sample for testing and perform the test.
- Recognize, identify and classify the major insect pests of ornamental plants.
- Recognize, identify and classify the major pathogens of plant disease.
- Recognize the symptoms of plant injuries and ascertain their probable causes.
- Demonstrate the ability to create landscape plans and related graphic illustrations using computer driven drawing programs.
- Demonstrate ability to print the products of the programs.

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

Major Field Requirements:	**74**
AGEN 112/112X- Surveying & Land Management	2
AGRN 335- Agricultural Chemicals	3
Or AGRN 350- Plant Nutrition	
Or AGRN 362- Applied Plant Physiology	
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
BADM 134- Principles of Marketing	3
BADM 137- Professional Selling	3
BIOL 101- Intro to Biology	3
Or BIOL 116- Botany	
CITA 110- Microcomputer Applications I	3
Or CITA 112- Spreadsheet & Database Appl	
ORHT 121- Woody Plant Materials	3
ORHT 122- Environmental Design I	3
ORHT 160- Landscape Contracts	1
ORHT 161- Landscape Graphics	2
ORHT 221- 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- Internship	12
ORHT 451- Internship Reporting	3
Liberal Arts & Sciences	**31**
Am Hist/West/ Civ/Wrld Cult Gen Ed	6
Arts/Humanities	3
Chemistry	3
ECON 123/124- Micro-/Macro-Economics	3
ENGL	3
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
PHED	1
Additional Liberal Arts and Sciences	6

Upper Level Technical Electives	**6**
AGRN 313- Soil Fertility	
AGRN 338- Weed Identification & Control	
AGRN 494- Plant & Soil Diagnostics	
BADM 310- Human Resources Management	
BADM 315- Entrepreneurship	
BADM 349- Strategic Management for Quality	
ORHT 321- Herbaceous Plant Materials	
ORHT 322- Herbaceous Plants: Garden Design	
ORHT 325- Environmental Design II	
ORHT 356- Plant Propagation	
ORHT 421- Landscape Plants Assoc & Use	
Lower Level Plant Science Electives	**6**
AGRN 121-Soil & Water Conservation	
ORHT 113- Horticulture Field Experience	
ORHT 114- Horticulture Field Experience	
ORHT 141- Nursery Management	
ORHT 172- Mgmt of Horticulture Business	
ORHT 200-210	
ORHT 215- Interior Plantscapes & Maintenance	
ORHT 242- Nursery Management II	
RECM 222- Turfgrass Management	
Lower Level Technical Electives	**3**
ACCT 101- Financial Accounting	
AGBU 103- Managerial Accounting	
AGBU 107- Ag Business Operations	
AGEN 121/121X- Turf & Grounds Care Equipment	
AGEN 122/122X- Basic Small Engine Repair	
AGEN 151/151X- Basic Welding	
BADM 223- Business Law I	
BADM 224- Business Law II	
ORHT 200-210	
Total Credits	**120**
Seven or ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
ENGL 101	Composition I	3
ORHT 121	Woody Plant Materials	3
ORHT 122	Environmental Design I	3
BIOL 101	Intro to Biology	3
BIOL 116	Botany I	
Anything from PHED		1
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 112	Surveying & Land Measurement	1
AGEN 112X	Surveying & Land Measure Lab	1
ENGL 102 or higher		3
ORHT 160	Landscape Contracts	1
ORHT 161	Landscape Graphics	2
MATH 111 or higher		3
BADM 134	Principles of Marketing	3
Plant Science Elective		3

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology (C)	3
ORHT 221	Landscape Construction	3
ORHT 223	Environmental Design II	3
Anything from CHEM		3
ECON 123	Micro-Economics	3
ECON 124	Macro-Economics	3
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3

Year 2/SPRING		
Code/Name		**Credits**
AGSC 186	Entomology (C)	3
CITA 110	Microcomputer Applications I	3
CITA 112	Spreadsheet & Database Applic	3
ORHT 282	Arboriculture	3
Technical Elective		3

Year 3/FALL		
Code/Name		**Credits**
ORHT 444	Landcadd	3
AGRN 335	Agricultural Chemicals (C)	3
AGRN 350	Plant Nutrition (C)	3
AGRN 362	Applied Plant Physiology (C)	3
ORHT 377	Integrated Pest Mgt Ornamentls	3
Plant Science Elective		3
BADM 137	Professional Selling	3

Year 3/SPRING		
Code/Name		**Credits**
ORHT 335	Irrigation	3
ORHT 360	Advanced Landscape Contracts	3
Upper Level Technical Elective		3
CHOOSE TWO COURSES FROM THE FOLLOWING: GOVT 242, HIST 121, HIST 122, ARTS 124, ARTS 125, HIST 101, HIST 102, GOVT 143, HIST 103, HIST 104, NAMS 111, NAMS 121 AND NAMS 122		6

Year 4/FALL		
Code/Name		**Credits**
ORHT 433	Landscape Firm Management	3
Upper Level Technical Elective		3
Anything from LIBERAL ARTS AND SCIENCES		6

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

Landscape Development (A.A.S.) (Curriculum Code – 0611/HEGIS - 5402)

Associate in Applied Science

Overview

SUNY Cobleskill's program in Landscape Development is a nationally recognized and lauded center for the training of landscape professionals. Whether enrolled in the associate degree program or customized bachelor's degree program, students are on a career track that can take them directly to successful entry positions within any one of three branches of the profession. Companies from throughout New York State, the Northeast, and the nation come to the campus annually to recruit SUNY Cobleskill graduates of our two degree programs in landscaping. Starting salaries are competitive with and surpass the average starting salaries of nearly every other degree-granting technical training program in the region. Opportunities for placement or transfer have been consistently strong, presenting graduates with a wide range of options and career paths.

Student Learning Outcomes

- Identify approximately 200 species of trees, shrubs, vines and groundcovers common to the Northeastern United States. Know their common and botanical names.
- Select and arrange together plants that share common cultural requirements and environmental tolerances.
- Select and demonstrate the safe use of hand and power tools common to the installation and/or maintenance of landscapes.
- Select the motorized vehicles appropriate to specific landscape construction and/or maintenance tasks. Demonstrate their safe operation.
- Use traditional design and drafting tools to create scaled illustrations of landscape plans.
- Develop salable landscape plans that meet customer needs by application of design principles.
- Develop cost estimates for plans as and after they are developed.
- Interpret plans using varied graphic and model techniques.
- Install trees, shrubs, groundcovers, flowers, and turf in a manner that assures their successful transplant in the Northeastern United States.
- Install materials such as concrete, pavers, wood, bricks, stonework, and fencing correctly.
- Demonstrate the ability to identify soil structure, nutrient content, pH, and water retention.
- Prepare a soil sample for testing and perform the test.
- Recognize, identify and classify the major insect pests of ornamental plants.
- Recognize, identify and classify the major pathogens of plant disease.
- Recognize the symptoms of plant injuries and ascertain their probable causes.

Major Field Requirements:	**32**
AGEN 112/112X Surveying & Land Management	2
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 113- Horticulture Field Experience	1
ORHT 114- Horticulture Field Experience	1
ORHT 121- Woody Plant Material	3
ORHT 122- Environmental Design	3
ORHT 160- Landscape Contracts	1
ORHT 161- Landscape Graphics	2
ORHT 200-210	1
ORHT 221- Landscape Construction	3
ORHT 223- Environmental Design II	3
ORHT 282- Arboriculture	3

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
ENGL	3
Science/Math	6
Social Science	6
PHED	1
Additional Liberal Arts and Sciences	3
General Electives	**6**
Total Credits	**60**
Math Competency	
FFCS Competency	

Landscape Development (A.A.S.) (Curriculum Code – 0611/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
ENGL 101	Composition I	3
ORHT 121	Woody Plant Materials	3
ORHT 113	Horticultural Field Experience	1
ORHT 122	Environmental Design I	3
BIOL 116	Botany I	3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
AGEN 112	Surveying & Land Measurement	1
AGEN 112X	Surveying & Land Measure Lab	1
ENGL 102 or higher	Composition II (or higher)	3
ORHT 114	Horticultural Field Experience	1
ORHT 160	Landscape Contracts	1
ORHT 161	Landscape Graphics	2
Anything from MATH, BIOL, CHEM, PHYS. PSCI (suggest Math 111)		3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology (C)	3
ORHT 221	Landscape Construction	3
ORHT 223	Environmental Design II	3
Anything from ORHT 200-210		1
Anything from AAMS, ANTH, ECON, GOVT, NAMS, PSYC, SOSC		3
GENERAL ELECTIVE		2
Anything from PHED		1

Year 2/SPRING		
Code/Name		**Credits**
ORHT 282	Arboriculture	3
AGSC 186	Entomology (C)	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, GOVT, NAMS, PSYC, SOSC		3
GENERAL ELECTIVE		3

Nursery Management (A.A.S.) (Curriculum Code – 0646/HEGIS - 5402)

Associate in Applied Science

Overview

SUNY Cobleskill offers an A.A.S. program in Nursery Management. Upon completion of this program, students can continue their focus on nursery management by pursing a B.T. in Plant Science. The Nursery Management program specializes in training individuals interested in careers in the areas of production nursery, crops, retail garden center sales, and landscape management. At SUNY Cobleskill, an extensive greenhouse range, nursery growing area, arboretum, landscaped campus, landscape design studio, floral design lab, model flower shop, science laboratories and the most modern equipment available provide a job-like training environment for students. The nursery industry is a multi-billion dollar industry that is active in every state. It employs thousands of individuals throughout the world providing opportunities for careers in the production, care and sale of products for home garden and the natural environment.

Student Learning Outcomes

- Identify by common name, genus and species the primary plants utilized for gardening in the region.
- Demonstrate the ability to produce quality crops utilizing currently accepted production methods.
- Ability to describe each segment of the nursery industry and be able to discuss current opportunities in those areas.
- Identify and describe environmentally-sound practices in pest control and soil management.
- Compose and draft suggestions for customer needs.

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
ORHT 141- Nursery Management I	3
ORHT 172- Mgmt of Horticulture Business	3
ORHT 242- Nursery Management	3
ORHT 282- Arboriculture	3
Select 9 credits from:	9
ORHT 122- Environmental Design I	
ORHT 215- Interior Plantscapes & Maintenance	
ORHT 251- Greenhouse Management	
RECM 222- Greenhouse Management	
BADM 137 Professional Selling	

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
ENGL	3
Science/Math	6
Social Science	6
PHED	1
Additional Liberal Arts and Sciences	3
General Electives	**4**
Total Credits	**60**
Math Competency	
FFCS Competency	

Nursery Management (A.A.S.) (Curriculum Code – 0646/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
ORHT 113	Horticultural Field Experience	1
ORHT 114	Horticultural Field Experience	1
ORHT 121	Woody Plant Materials	3
ORHT 141	Nursery Management I	3
ENGL 101	Composition I	3
MATH 103 or higher	Mathematics of Finance (or higher)	3
Anything from BIOL, CHEM, PHYS, PSCI (suggested BIOL 116 or Math 111)		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
Anything from PHED		1
AGSC 186	Entomology (C)	3
ORHT 172	Mgmt of Horticulture Business	3
ORHT 242	Nursery Management II	3
Anything from ENGL		3
ORHT 122	Environmental Design I	3
ORHT 215	Interior Plantscapes & Maint	3
ORHT 251	Greenhouse Management	3
RECM 222	Turfgrass Management	3
BADM 137	Professional Selling	3
Anything from BIOL, CHEM, PHYS, PSCI (suggested BIOL 116 or MATH 111)		3

Year 2/FALL		
Code/Name		**Credits**
ORHT 122	Environmental Design I	3
ORHT 215	Interior Plantscapes & Maint	3
ORHT 251	Greenhouse Management	3
RECM 222	Turfgrass Management	3
BADM 137	Professional Selling	3
AGSC 281	Plant Pathology (C)	3
ORHT 122	Environmental Design I	3
ORHT 215	Interior Plantscapes & Maint	3
ORHT 251	Greenhouse Management	3
RECM 222	Turfgrass Management	3
BADM 137	Professional Selling	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3
Anything from LIBERAL ARTS AND SCIENCEES		3

Year 2/SPRING		
Code/Name		**Credits**
GENERAL ELECTIVE		3
ORHT 172	Mgmt of Horticulture Business	3
ORHT 242	Nursery Management II	3
ORHT 282	Arboriculture	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		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

- Accurately interpret soil tests and make proper recommendations.
- Explain plant physiological systems such as photosynthesis, respiration, nutrient uptake, and nitrogen fixation.
- Recommend controls for insect, disease, and weeds; find sources of information regarding other pests.
- Recommend nutrient deficiency correction in plants.
- Develop farm biowaste procedures.

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
Upper or Lower Level	20
ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM	

Liberal Arts & Sciences	**33**
ENGL 101- Composition I	3
PHED	1
Upper Level	6
Upper or Lower Level	20
MATH 111- College Algebra (or higher)	3
General Electives	**17**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math 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
Anything from LIBERAL ARTS AND SCIENCES		3
FFCS 199	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
GENERAL ELECTIVE		3
Anything from LIBERAL ARTS AND SCIENCES		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
Anything from LIBERAL ARTS AND SCIENCES	3
GENERAL ELECTIVE	3

Year 2/SPRING	
Code/Name	**Credits**
Anything from LIBERAL ARTS AND SCIENCES	3
GENERAL ELECTIVE	7
Anything from AGRN, AGSC, ORHT, RECM	5

Year 3/FALL		
Code/Name		**Credits**
AGRN 335	Agricultural Chemicals (C)	3
AGRN 350	Plant Nutrition (C)	3
AGRN 362	Applied Plant Physiology (C)	3
ORHT 377	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 LIBERAL ARTS AND SCIENCES		3
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, ANSC, BADM, BIOL, CITA, ENHT, FWLD, ORHT, RECM		6

Year 3/SPRING		
Code/Name		**Credits**
AGRN 335	Agricultural Chemicals (C)	3
AGRN 335	Agricultural Chemicals (C)	3
AGRN 362	Applied Plant Physiology (C)	3
ORHT 377	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
Anything from LIBERAL ARTS AND SCIENCES		5

Year 4/FALL	
Code/Name	**Credits**
Anything from AGRN, AGSC, ORHT, RECM. 300 level or higher	3
Anything from LIBERAL ARTS AND SCIENCES	6
GENERAL ELECTIVE	3

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

Sustainable Crop Production (A.A.S.) (Curriculum Code – 2206/HEGIS - 5402)

Associate in Applied Science

Overview

Students who choose to major in Sustainable Crop Production at SUNY Cobleskill take a two-year course of study that prepares them for employment in private industry or public service. They are exposed to up-to-date information presented by faculty who are highly trained and well-educated. A student may find themselves in a well-equipped laboratory studying soil science one day and out on the College's 650-acre farm studying crops. The campus is used extensively for laboratory experiences and the student is typically involved in activities such as collecting insects for a course in Entomology, gathering weeds for Weed Identification, or surveying a field for the Surveying and Land Measurement curriculum. The SUNY Cobleskill mission is to produce graduates with "hands-on" experience who are competent and successful in the field of agriculture. More than 98 percent of Sustainable Crop Production graduates find employment in their chosen area or continue their education.

Student Learning Outcomes

- Conduct soil tests.
- Explain photosynthesis and respiration in relation to plant growth and yield.
- Name the major anatomical parts of food and forage plants grown in the Northeast.
- Identify at least 10 common insect, disease, and weed pests common to the Northeast.
- Identify plant macronutrient deficiency symptoms.

Major Field Requirements:	**27**
AGRN 121- Soil & Water Conservation	3
AGRN 232- Plant Ecology	3
AGRN 313- Soil Fertility	3
AGRN 338- Weed Identification & Control	3
AGSC 111- Intro to Soil Science	3
AGSC 131- Intro to Sustainable Agriculture	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 377- Integrated Pest Mgmt Ornamentals	3
Major Technical Electives:	**9**
AGBU 103- Agricultural Economics	
AGRN 242- Forage & Seed Crops	
AGRN 251- Fruit Science	
AGRN 252- Vegetable Production	
AGEN 261/261X- Intro to Ag Machinery	
ORHT 329- Hydroponics	

Liberal Arts & Sciences	**20**
ENGL 101- Composition I	3
ENGL	3
Science/MATH 111- College Algebra (or higher)	7
PHED	1
Additional Liberal Arts and Sciences	6
General Electives	**4**
Total Credits	**60**
Math Competency	
FFCS Competency	

Sustainable Crop Production (A.A.S.) (Curriculum Code – 2206/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
Anything from MATH 111 OR HIGHER OR BIOL, CHEM, PHYS, PSCI COURSE (3-4 CREDITS)		3
AGRN 232	Plant Ecology (C)	3
LIBERAL ARTS AND SCIENCE COURSE		3
ENGL 101	Composition I	3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ENGL 102 or higher	Composition II (or higher)	3
AGRN 121	Soil & Water Conservation (C)	3
AGSC 131	Intro to Sustainable Agric	3
AGSC 186	Entomology (C)	3
AGBU 103	Agricultural Economics (C)	3
AGRN 242	Forage & Seed Crops	3
AGRN 251	Fruit Science (C)	3
AGRN 252	Vegetable Production (C)	3
AGEN 261 w/Lab	Intro Agric Machinery (C)	3
ORHT 329	Hydroponics	3

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology (C)	3
AGRN 338	Weed Ident & Control (C)	3
ORHT 377	Integrated Pest Mgt Ornamentls	3
AGBU 103	Agricultural Economics (C)	3
AGRN 242	Forage & Seed Crops (C)	3
AGRN 251	Fruit Science (C)	3
AGRN 252	Vegetable Production (C)	3
AGEN 261 w/Lab	Intro Agric Machinery (C)	3
ORHT 329	Hydroponics	3

Year 2/SPRING		
Code/Name		**Credits**
AGRN 313	Soil Fertility (C)	3
Anything from PHED		1
AGBU 103	Agricultural Economics (C)	3
AGRN 242	Forage & Seed Crops (C)	3
AGRN 251	Fruit Science (C)	3
AGRN 252	Vegetable Production (C)	3
AGEN 261 w/Lab	Intro Agric Machinery (C)	3
ORHT 329	Hydroponics	3
Anything from MATH111 OR HIGHER AND/OR BIOL, CHEM, PHYS, PSCI PREFIX 3-4 CREDITS		4
LIBERAL ARTS AND SCIENCE		3
GENERAL ELECTIVE		3

Turfgrass Management (A.A.S.) (Curriculum Code – 0613/HEGIS - 5402)

Associate in Applied Science

Overview

SUNY Cobleskill has an A.A.S. program in Turfgrass Management. The majority of students pursuing the two-year degree specialize in golf course management. The Plant Science department offers more than 75 courses enabling students to gain knowledge in many areas of horticulture. The SUNY Cobleskill Turfgrass Management program is highly respected by industry employers. The College has excellent turfgrass facilities including fairway turf plots composed of creeping bentgrass and of low mow Kentucky bluegrass that are used for research and student projects. There are also two USGA greens adjacent to the Plant Science building that are used extensively for turfgrass management labs. Students also gain additional experience on the athletic fields and lawn areas and at the Cobleskill Golf and Country Club, which is located only a few miles from campus. Low student-to-faculty ratios and a campus mission that focuses on teaching create a student friendly-environment at SUNY Cobleskill.

Student Learning Outcomes

- Identify major diseases, insects and weed species associated with turfgrass and develop programs to manage these pests.
- Explain and apply practices for successful establishment and renovation of turfgrasses.
- Comprehend and apply the principles of cool season turfgrass fertilization including: selection of fertilizer materials, fertilizer rate calculation and timing of fertilizer applications.
- Successfully manage turfgrass and landscape pests with minimal impact to non-target organisms.

Major Field Requirements:	**32**
AGEN 121- Horticultural Machinery	3
Or ORHT 335- Irrigation	
AGRN 338- Weed Identification and Control	3
Or AGEN 122- Outdoor Power Equipment	
AGSC 111- Introduction to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 121- Woody Plant Materials	3
ORHT 282- Arboriculture	3
RECM 115- Introduction to Recreational Services	2
RECM 222- Turfgrass Management I	3
RECM 225- Recreational Land Management	3
RECM 245- Introduction to Golf Course Mgmt	2
RECM 256- Sports Field Management	2-3
Or RECM 378- Golf Course Management	

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
ENGL	3
PHED	1
BIOL (BIOL 116/116X strongly recommended)	3
MATH	3
Social Science	6
Additional Liberal Arts and Sciences	3
General Electives	**6**
Total Credits	**60**
Math Competency	
FFCS Competency	

Turfgrass Management (A.A.S.) (Curriculum Code – 0613/HEGIS - 5402)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro Soil Science	3
RECM 115	Intro Recreational Services	2
RECM 222	Turfgrass Management I	3
ENGL 101	Composition I	3
	Science (BIOL 116)	3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
RECM 245	Intro Golf Course Management	2
AGSC 186	Entomology	3
	ENGL	3
	MATH	3
Social Science		3
PHED		1

Year 2/FALL		
Code/Name		**Credits**
AGRN 338	Weed Identification and Control	3
AGEN 122/122X	Outdoor Power Equipment	3
AGSC 281	Plant Pathology	3
ORHT 121	Woody Plant Materials	3
ORHT 335	Irrigation	3
General Elective		3

Year 2/SPRING		
Code/Name		**Credits**
AGEN 121/121X	Horticultural Machinery	3
ORHT 282	Arboriculture	3
RECM 225	Recreational Land Management	3
RECM 256	Sports Field Management	2
RECM 290	Spec Projects, Sports Turf Mgmt	1
RECM 378	Golf Course Management	3
Social Science		3
General Elective		3

Turfgrass Management – Golf Turf Management (B.T.) (Curriculum Code – 2024/HEGIS - 0103)

Bachelor of Technology

Overview

SUNY Cobleskill offers two B.T. degrees in Turfgrass Management, one in Golf Turf Management and the other in Sports Turf Management. The program is highly respected by industry employers with graduates working as golf course superintendents at many top courses throughout the United States. The College has excellent turfgrass facilities including fairway turf plots composed of creeping bentgrass and of low mow Kentucky bluegrass that are used for research and student projects. There are also two USGA greens adjacent to the Plant Science building that are used extensively for turfgrass management labs. Students also gain additional experience on the athletic fields and lawn areas and at the Cobleskill Golf and Country Club, which is located only a few miles from campus. Low student-to-faculty ratios and a campus mission that focuses on teaching creates a student friendly-environment at SUNY Cobleskill.

Student Learning Outcomes

- Identify major diseases, insects, weed species associated with turfgrass and develop programs to manage these pests.
- Explain and apply practices for successful establishment, and renovation of turfgrasses.
- Comprehend and apply the principles of cool season turfgrass fertilization including: selection of fertilizer materials, fertilizer rate calculation and timing of fertilizer applications. Explain effects of fertilization and correctly apply fertilizers.
- Explain how cultural, biological and chemical methods can be combined to successfully manage turfgrass and landscape pests with minimal impact to non-target organisms.

Major Field Requirements:	**46**
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
AGRN 362- Applied Plant Pathology	3
ORHT 335- Irrigation	3
ORHT 377- Integrated Pest Mgmt Ornamentals	3
RECM 115- Intro to Recreational Service	2
RECM 222- Turfgrass Management	3
RECM 245- Intro to Golf Course Management	2
RECM 378- Golf Course Management	3
RECM 413- Advanced Golf Course Management	3
RECM 450- Internship	12
RECM 451- Internship Reporting	3

Additional Upper Level Major Field Requirements:	**12**
Twelve credits from:	
AGRN 324- Applied Hydrology	
AGRN 335- Agricultural Chemicals	
AGRN 338- Weed Identification and Control	
AGRN 350- Plant Nutrition	
AGRN 494- Plant and Soil Diagnostics	
ORHT 321- Herbaceous Plant Materials	
ORHT 356- Plant Propagation	
ORHT 421- Landscape Plants Assoc and Use	
ORHT 444- Landcadd	

Technical Electives:	**8**
Eight credits from:	
ACCT, AGBU, AGEN, AGRN, AGSC, BADM, BIOL, CHEM, CITA, FWLD, ORHT, RECM	

Technical Electives Upper Level Requirements:	**9**
Nine credits from:	
AGRN 313- Soil Fertility	
AGRN 324- Applied Hydrology	
AGRN 335- Agricultural Chemicals	
AGRN 338- Weed Identification and Control	
AGRN 350- Plant Nutrition	
AGRN 494- Plant and Soil Diagnostics	
BADM 310- Human Resource Management	
BADM 349- Strategic Mgmt for Quality	
ENGL 304- Writing in the Disciplines	
FWLD 350- Wetlands Assess and Delineation	
ORHT 317- Wildflower Culture/Propagation	
ORHT 321- Herbaceous Plant Materials	
ORHT 322- Herbaceous Plts: Garden Design	
ORHT 329- Hydroponics	
ORHT 356- Plant Propagation	
ORHT 421- Landscape Plants Assoc & Use	
ORHT 444- Landcadd	

Liberal Arts and Sciences	**36**
ENGL 101- Composition	3
MATH 111- College Algebra (or higher)	3
PHED	1
Upper Level	6
Lower Level	23

General Electives	**9**

Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Turfgrass Management – Golf Turf Management (B.T.) (Curriculum Code – 2024/HEGIS - 0103)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
RECM 115	Intro to Recreational Service	2
Anything from LIBERAL ARTS AND SCIENCES		3
BIOL 116	Botany I	3
RECM 222	Turfgrass Management	3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
MATH 111 or higher	College Algebra (or higher)	3
AGSC 186	Entomology (C)	3
Technical Elective		3
Anything from LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVE		3

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology (C)	3
ORHT 335	Irrigation	3
Anything from LIBERAL ARTS AND SCIENCES		6
Technical Elective		2
Anything from PHED		1

Year 2/SPRING		
Code/Name		**Credits**
RECM 245	Intro Golf Course Management	2
Major Field Elective		3
Technical Elective		3
Anything from LIBERAL ARTS AND SCIENCES		6
GENERAL ELECTIVE		1

Year 3/FALL		
Code/Name		**Credits**
AGRN 362	Applied Plant Physiology (C)	3
Major Field Elective		3
ORHT 377	Integrated Pest Mgt Ornamentls	3
Upper Level Technical Elective		3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 3/SPRING		
Code/Name		**Credits**
RECM 378	Golf Course Management	3
Major Field Elective		3
RECM 413	Advanced Golf Course Mgmt	3
Upper Level Technical Elective		3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 4/FALL		
Code/Name		**Credits**
RECM 450	Internship In Rec and Sport	12
RECM 451	Rec Land Mgmt Intern Reporting	3

Year 4/SPRING	
Code/Name	**Credits**
Major Field Elective	3
Upper Level Technical Elective	3
Anything from LIBERAL ARTS AND SCIENCES UPPER LEVEL	3
Anything from LIBERAL ARTS AND SCIENCES	3
GENERAL ELECTIVE	3

Turfgrass Management – Sports Turf Management (B.T.)(Curriculum Code – 2025/HEGIS - 0103)

Bachelor of Technology

Overview

Students enrolled in SUNY Cobleskill's Turfgrass Management program primarily specialize in golf course management, though some students are interested in maintaining athletic fields or operating a lawn care service. Sports Turf students are prepared to manage recreational facilities in both the private and public sectors. The professional opportunities are in ski areas, parks, private campsites, nature centers, athletic complexes, public grounds and similar facilities. The College has excellent turfgrass facilities including fairway turf plots composed of creeping bentgrass and of low mow Kentucky bluegrass that are used for research and student projects. There are also two USGA greens adjacent to the Plant Science building that are used extensively for turfgrass management labs. Students also gain additional experience on the athletic fields and lawn areas and at the Cobleskill Golf and Country Club, which is located only a few miles from campus. Low student-to-faculty ratios and a campus mission that focuses on teaching create a student friendly-environment at SUNY Cobleskill.

Student Learning Outcomes

- Correctly explain sand based field construction process for United States Golf Association (USGA) and California type construction.
- Enumerate design features that enhance field playability and safety.
- Learn to identify major diseases, insects, weed species associated with turfgrass and develop programs to manage these pests.
- Explain and apply practices for successful establishment, and renovation of turfgrasses.
- Identify major diseases, insects, weed species associated with turfgrass and develop programs to manage these pests.
- Comprehend and apply the principles of cool season turfgrass fertilization including: selection of fertilizer materials, fertilizer rate calculation and timing of fertilizer applications. Explain effects of fertilization and correctly apply fertilizers
- Explain how cultural, biological and chemical methods can be combined to successfully manage turfgrass and landscape pests with minimal impact to non-target organisms.

Major Field Requirements:	**46**
AGRN 338- Weed Identification and Control	3
AGRN 362- Applied Plant Pathology	3
AGSC 111- Intro to Soil Science	3
AGSC 186- Entomology	3
AGSC 281- Plant Pathology	3
ORHT 335- Irrigation	3
ORHT 377- Integrated Pest Mgmt Ornamentals	3
RECM 115- Intro to Recreational Service	2
RECM 222- Turfgrass Management	3
RECM 256- Sports Field Management	2
RECM 390C- Special Projects	3
RECM 450- Internship	12
RECM 451- Internship Reporting	3

Additional Upper Level Major Field Requirements:	**12**
Twelve credits from:	
AGRN 324- Applied Hydrology	
AGRN 335- Agricultural Chemicals	
AGRN 350- Plant Nutrition	
AGRN 494- Plant and Soil Diagnostics	
ORHT 321- Herbaceous Plant Materials	
ORHT 356- Plant Propagation	
ORHT 421- Landscape Plants Assoc and Use	
ORHT 444- Landcadd	

Technical Electives:	**8**
*Eight credits from:*ACCT, AGBU, AGEN, AGRN, AGSC, BADM, BIOL, CHEM, CITA, FWLD, ORHT, RECM	

Technical Electives Upper Level Requirements:	**9**
Nine credits from:	
AGRN 313- Soil Fertility	
AGRN 324- Applied Hydrology	
AGRN 335- Agricultural Chemicals	
AGRN 350- Plant Nutrition	
AGRN 494- Plant and Soil Diagnostics	
BADM 310- Human Resource Management	
BADM 349- Strategic Mgmt for Quality	
ENGL 304- Writing in the Disciplines	
FWLD 350- Wetlands Assess and Delineation	
ORHT 317- Wildflower Culture/Propagation	
ORHT 321- Herbaceous Plant Materials	
ORHT 322- Herbaceous Plts: Garden Design	
ORHT 329- Hydroponics	
ORHT 356- Plant Propagation	
ORHT 421- Landscape Plants Assoc and Use	
ORHT 444- Landcadd	

Liberal Arts and Sciences	**36**
ENGL 101- Composition I	3
PHED	1
MATH 111- College Algebra (or higher)	3
Upper Level	6
Lower Level	23

General Electives	**9**

Total Credits	**120**

Seven of ten Gen Ed Categories
Math Competency
FFCS Competency

Turfgrass Management – Sports Turf Management (B.T.)(Curriculum Code – 2025/HEGIS - 0103)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
AGSC 111	Intro to Soil Science (C)	3
RECM 115	Intro to Recreational Service	2
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, BADM, BIOL, CHEM, CITA, FWLD, ORHT, RECM		3
Anything from LIBERAL ARTS AND SCIENCES		3
ENGL 101	Composition I	3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
MATH 111 or higher	College Algebra (or higher)	3
Anything from PHED		1
AGSC 186	Entomology (C)	3
Anything from ACCT, AGBU, AGEN, AGRN, AGSC, BADM, BIOL, CHEM, CITA, FWLD, ORHT, RECM		5
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/FALL		
Code/Name		**Credits**
AGSC 281	Plant Pathology (C)	3
RECM 222	Turfgrass Management	3
Additional Upper Level Major Field Requirement		3
Anything from LIBERAL ARTS AND SCIENCES		6

Year 2/SPRING		
Code/Name		**Credits**
RECM 256	Sports Field Management	2
ORHT 335	Irrigation	3
Additional Upper Level Major Field Requirement		3
Anything from LIBERAL ARTS AND SCIENCES		5
GENERAL ELECTIVE		3

Year 3/FALL		
Code/Name		**Credits**
AGRN 338	Weed Ident & Control (C)	3
AGRN 362	Applied Plant Physiology (C)	3
ORHT 377	Integrated Pest Mgt Ornamentls	3
Technical Electives Upper Level		3
Anything from LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVE		2

Year 3/SPRING		
Code/Name		**Credits**
Additional Upper Level Major Field Requirements		3
RECM 390C	Spec Projects Rec Land Mgt	3
Technical Electives Upper Level		3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 4/FALL		
Code/Name		**Credits**
Additional Upper Level Major Field Requirements		3
Anything from LIBERAL ARTS AND SCIENCES 300 or higher		6
Technical Electives Upper Level		3
GENERAL ELECTIVE		3

Year 4/SPRING		
Code/Name		**Credits**
RECM 450	Internship In Rec and Sport	12
RECM 451	Rec Land Mgmt Intern Reporting	3

Accounting (A.A.S.) (Curriculum Code – 0630/HEGIS - 5002)

Associate in Applied Science

Overview

Accounting majors at SUNY Cobleskill will find their experience both challenging and rewarding. In addition to specialized coursework, students will take courses in computer science and business law, as well as selected coursework to meet their individual needs. The A.A.S. program focuses on preparing students for entry level accounting jobs. It also transfers into bachelor's degree programs in accounting or into SUNY Cobleskill's B.B.A. in Financial Planning. Students who take this path are qualified to transfer in Master's of Accountancy programs and take both the Certified Public Accountant (CPA) Exam and the Certified Financial Planners (CFP®) Exam.

Student Learning Outcomes

- Obtain a fundamental knowledge of the accounting profession.
- Demonstrate the ability to perform basic accounting functions.
- Utilize financial statements for decision making in a business environment.
- Have acquired a broad based background relevant to the business environment including the legal and ethical environment of business.
- Understand and be able to use computers to process accounting information.

Major Field Requirements:	**33**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
ACCT 303- Intermediate Accounting I	3
BADM 223- Business Law I	3
CITA 110- Microcomputer Applications I	3
or CITA 112- Spreadsheet & Database Appl	
FSMA 201- Fundamentals of Financial Planning	3
Choose 9 credits from:	9
ACCT 235- Principles of Financial Management	
ACCT 304- Intermediate Accounting	
ACCT 311- Cost Accounting	
ACCT 370- Not-for-Profit Accounting	
FSMA 310- Income Tax Planning	
FSMA 330- Computer Apps in Financial Services	
Choose 6 credits from:	6
ACCT, BADM, CITA, FSMA, MATH 125- Statistics, MATH 231- Calculus, ECON 123- Micro-Economics, ECON 124- Macro-Economics	

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
MATH	3
PHED	1
Additional Liberal Arts and Sciences	15
General Electives	**6**
Total Credits	**61**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Accounting (A.A.S.) (Curriculum Code – 0630/HEGIS - 5002)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting (C)	3
CITA 110	Microcomputer Applications I	3
CITA 112	Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
Anything from PHED		1
Liberal Arts and Sciences		6
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting (C)	3
MATH 103	Mathematics of Finance (or higher)	3
Anything from ACCT, BADM, CITA, FSMA		3
MATH 125	Statistics	3
MATH 231	Calculus I	4
ECON 123	Micro-Economics	3
ECON 124	Macro-Economics	3
BADM223	Business Law I	3
Anything from ACCT, BADM, CITA, FSMA		3
MATH 125	Statistics	3
MATH 231	Calculus I	4
ECON 123	Micro-Economics	3
ECON 124	Macro-Economics	3

Year 2/FALL		
Code/Name		**Credits**
ACCT 303	Intermediate Accounting I	3
ACCT 235	Prin of Financial Mgmt (C)	3
ACCT 304	Intermediate Accounting II	3
ACCT 311	Cost Accounting	3
ACCT 370	Not-for-Profit Accounting	3
FSMA 310	Income Tax Planning	3
FSMA 330	Computer App in Financial Svcs	3
General Elective		3
ACCT 235	Prin of Financial Mgmt (C)	3
ACCT 304	Intermediate Accounting II	3
ACCT 311	Cost Accounting	3
ACCT 370	Not-for-Profit Accounting	3
FSMA 310	Income Tax Planning	3
FSMA 330	Computer App in Financial Svcs	3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
ACCT 235	Prin of Financial Mgmt (C)	3
ACCT 304	Intermediate Accounting II	3
ACCT 311	Cost Accounting	3
ACCT 370	Not-for-Profit Accounting	3
FSMA 310	Income Tax Planning	3
FSMA 330	Computer App in Financial Svcs	3
FSMA 201	Fundamentals of Financial Plng	3
Liberal Arts and Sciences		6
General Elective		2

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.

Student Learning Outcomes

- Understanding the basic business functions and operations of management and the interpersonal relations needed for effective human behavior.
- Understanding and using information systems and quantitative methods required in marketing and accounting.
- Understanding the economic, global, social, and legal environments in which a business operates.
- Having the skills and abilities to communicate effectively with designated audiences by verbal, written, and interpersonal means.
- Exposure to techniques of critical analysis, problem-solving & decision-making, teamwork, and diversity in the workplace.
- Awareness of the ethical behavior necessary to function successfully in the economic, global, social, and legal environments.
- Successful entrance into business careers.
- Smooth transition into a four-year college or university.
- Fulfillment of individual goals, needs, interests through a knowledge of strategic planning.
- Evolvement of productive, ethical citizens and employees.

Major Field Requirements:	**33**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
BADM 134- Principles of Marketing	3
BADM 145- Business Communications	3
BADM 223- Business Law I	3
BADM 249- Management	3
CITA 110- Microcomputer Applications I	3
or CITA 112- Spreadsheet & Database Appl	
ECON 123- Micro-Economics	3
BADM course	3
ACCT, BADM, CITA, FSMA, or ECON 124	6

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
MATH or Science	3
PHED	1
Additional Liberal Arts and Sciences	15
General Electives	**5**
Total Credits	**60**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting	3
BADM 134	Principles of Marketing	3
CITA 110	Microcomputer Applications I	3
CITA 112	Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
Anything from PHED		1
Liberal Arts and Sciences Course		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting (C)	3
BADM 145	Business Communications	3
Liberal Arts and Sciences Course		3
ECON 123	Micro-Economics	3
MATH111 or Science		3

Year 2/FALL		
Code/Name		**Credits**
BADM 223	Business Law I	3
Anything from BADM		3
General Elective		3
Liberal Arts and Sciences		6

Year 2/SPRING		
Code/Name		**Credits**
BADM 249	Management	3
Anything from ACCT, BADM, CITA, FSMA or ECON 124		6
General Elective		1
Liberal Arts and Sciences		3

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.

Student Learning Outcomes

- Understanding the basic business functions and operations of management and the interpersonal relations needed for effective human behavior.
- Understanding and using information systems and quantitative methods required in marketing and accounting.
- Understanding the economic, global, social, and legal environments in which a business operates.
- Having the skills and abilities to communicate effectively with designated audiences by verbal, written, and interpersonal means.
- Exposure to techniques of critical analysis, problem-solving & decision-making, teamwork, and diversity in the workplace.
- Awareness of the ethical behavior necessary to function successfully in the economic, global, social, and legal environments.
- Successful entrance into business careers.
- Smooth transition into a four-year college or university.
- Fulfillment of individual goals, needs, interests through a knowledge of strategic planning.
- Evolvement of productive, ethical citizens and employees.

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- Microcomputer Applications I	3
or CITA 112- Spreadsheet & Database Appl	
Concentration (choose 1):	**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	1
PSYC 111- General Psychology	3
Additional Liberal Arts and Sciences	9
Total Credits	**62**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting (C)	3
BADM 134	Principles of Marketing	3
CITA 110	Microcomputer Applications I	3
CITA 112	Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
Anything from PHED		1
HIST 121	History of United States I	3
HIST 122	History of United States II	3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting (C)	3
Concentration Course		3
Concentration Course		3
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

Business Administration (B.B.A.) (Curriculum Code – 1318/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 credit, and also prepares students to seek further education in appropriate master's degree programs.

Student Learning Outcomes

- Keep abreast of technological changes in their field.
- Understand and integrate the functional areas of an organization.
- Communicate effectively about technology and innovation across functional areas.
- Plan and implement strategic and tactical organizational strategies.
- Organize and manage in a rapidly changing technical environment.
- Effectively manage personnel and budgets.

Major Field Requirements:	**43**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
ACCT 235- Principles of Financial Management	3
BADM 134- Principles of Marketing	3
BADM 145- Business Communications	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- Microcomputer Applications I	3
or CITA 112- Spreadsheet and Database Appl	
Management Elective (300-499):	6
ACCT, BADM, CITA, CAHT, ECON, FSMA, GOVT, MKHT, PSYC, TRAV	
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:	**21**
Courses in consultation with advisor	
Liberal Arts & Sciences	**34**
ENGL 101- Composition	3
ECON 124- Macro-Economics	3
MATH 125- Statistics or MATH 231- Calculus I	3
PHED	1
Additional Liberal Arts and Sciences	18
Upper Level (300-499)	6
General Electives	**12**
Total Credits	**122**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Business Administration (B.B.A.) (Curriculum Code – 1318/HEGIS - 0599)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting (C)	3
BADM 134	Principles of Marketing	3
CITA 110	Microcomputer Applications I	3
CITA 112	Spreadsheet & Database Applic	3
MATH 125	Statistics	3
ENGL 101	Composition I	3
Anything from PHED		1
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting (C)	3
BADM 145	Business Communications	3
Liberal Arts and Sciences		9

Year 2/FALL		
Code/Name		**Credits**
ACCT 235	Prin of Financial Mgmt (C)	3
BADM 223	Business Law I	3
Liberal Arts and Sciences		9

Year 2/SPRING		
Code/Name		**Credits**
BADM 249	Management	3
ECON 124	Macro-Economics	3
General Elective		6
Professional Requirements		3

Year 3/FALL		
Code/Name		**Credits**
BADM 305	International Business	3
BADM 380	Internship Orientation Bus Adm	1
Professional Requirements		9
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		3
Professional Requirements		3
Liberal Arts and Sciences 300/400 level		3

Year 4/FALL		
Code/Name		**Credits**
BADM 449	Management Policy & Issues	3
Management Elective 300/400 level		3
General Elective		5
Professional Requirements		6

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

Financial Services (B.B.A.) (Curriculum Code – 2229/HEGIS - 0599)

Bachelor of Business Administration

Overview

The Financial Services program is designed to provide students with the necessary applied knowledge and skills in the areas of management, communications and financial services.

Student Learning Outcomes

- To train professionals who are proficient, and have a solid grounding in the workings of financial institutions, brokerage houses, insurance companies, estate agencies, financial planning firms, and tax accounts.
- To provide specialized, in-depth training in key areas of application.
- To provide professional training for students who wish to combine financial planning with other disciplines, such as management, marketing or accounting.
- To prepare students for graduate study and research in appropriate areas.

Major Field Requirements:	**46**
ACCT 101- Financial Accounting	3
ACCT 103- Managerial Accounting	3
ACCT 235- Principles of Financial Management	3
BADM 134- Principles of Marketing	3
BADM 223- Business Law I	3
BADM 249- Management	3
BADM 310- Human Resources Management	3
BADM 449- Management Policies and Issues	3
CITA 405- Project Management	3
FSMA 380- Internship Orientation	1
FSMA 480- Internship	9
FSMA 485- Internship Reporting	3
Management Elective (300-400 level)	6
Liberal Arts & Sciences	**34**
ENGL 101- Composition I	3
ECON 123- Micro-Economics	3
MATH 125- Statistics	3
PHED	1
Science	3
Additional Liberal Arts and Sciences	15
Upper Level (300-499)	6

Professional Requirements:	**36**
BADM 137- Professional Selling	3
BADM 145- Business Communications	3
CITA 110- Microcomputer Applications I	3
FSMA 201- Fundamentals of Financial Planning	3
FSMA 300- Investments	3
FSMA 310- Income Tax Planning	3
FSMA 325- Insurance and Risk Management	3
FSMA 340- Employee Benefits & Retirement Plan	3
FSMA 410- Estate Planning	3
Professional Electives	9
General Electives	6
Total Credits	**122**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Financial Services (B.B.A.) (Curriculum Code – 2229/HEGIS - 0599)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ACCT 101	Financial Accounting (C)	3
BADM 134	Principles of Marketing	3
CITA 110	Microcomputer Applications I	3
CITA 112	Spreadsheet & Database Applic	3
ENGL 101	Composition I	3
MATH 125	Statistics	3
Anything from PHED		1
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting (C)	3
BADM 145	Business Communications	3
FSMA201	Fund of Fin Planning	3
Liberal Arts and Sciences		3
ECON 123	Micro-Economics	3

Year 2/FALL		
Code/Name		**Credits**
ACCT 235	Prin of Financial Mgmt (C)	3
BADM 223	Business Law I	3
Liberal Arts and Sciences		3
Anything from BIOL, CHEM, PHYS, PSCI		3
BADM 137	Professional Selling	3

Year 2/SPRING		
Code/Name		**Credits**
Professional Elective		3
General Elective		3
BADM 249	Management	3
FSMA 300	Investments	3
Liberal Arts and Sciences		3

Year 3/FALL		
Code/Name		**Credits**
FSMA 325	Insurance & Risk Management	3
FSMA 380	Internship Orientation Fin Svc	1
BADM 310	Human Resources Management	3
Anything from ACCT, BADM, CITA, CAHT, ECON, FSMA, GOVT, MKHT, PSYC, TRAV. 300 level or higher		3
Liberal Arts and Sciences – upper level		2
General Elective		3

Year 3/SPRING		
Code/Name		**Credits**
Anything from ACCT, BADM, CITA, CAHT, ECON, FSMA, GOVT, MKHT, PSYC, TRAV. 300 level or higher		3
FSMA 310	Income Tax Planning	3
Liberal Arts and Sciences		6
Professional Elective		3
Liberal Arts and Sciences – upper level		3

Year 4/FALL		
Code/Name		**Credits**
BADM 449	Management Policy & Issues	3
CITA 405	Project Management	3
Professional Elective		3
FSMA 340	Emp Benefit/Retirement Plan	3
FSMA 410	Estate Planning	3

Year 4/SPRING		
Code/Name		**Credits**
FSMA 480	Internship	9
FSMA 485	Internship Financial Svcs Rptg	3

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. The curriculum is accredited by the Accrediting Commission of the American Culinary Federation (ACF). The A.O.S. degree fulfills the education and experience requirement for membership in the ACF at the certified culinarian (CC) level. Students interested in earning the CC credential will be advised to join the ACF in January of the second year of the program. With this action and successful completion of the degree, students earn the certified chef credential.

Student Learning Outcomes

- Demonstrate proficiency in classic and contemporary culinary techniques and cooking methods described in the competencies of the American Culinary Federation.
- Recognize the different culinary techniques and foods served in American and international cuisines.
- Understands nutrition, food safety, and cost control techniques and their importance in menu planning and successful food services.
- Understands dining room service options and fundamentals of wine and beverage management.
- Explain how to keep a business profitable 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- Sel/Cut Meat for Restaurant Use	
CAHT 103- Food Service Sanitation	2
CAHT 104- Service for Restaurant Professionals	1
CAHT 111- Basic Food Prep	3
CAHT 132- Fund of Restaurant Operations	3
CAHT 140- Mathematics Hospitality Operations	3
CAHT 145- Food Service Purchasing	3
CAHT 160- Baking and Pastry	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 270- Restaurant Practicum	3
NTRN 122- Nutrition	3

Liberal Arts & Sciences	**7**
ENGL 101- Composition I	3
ENGL	3
PHED	1
General Electives	**2**
Total Credits	**60**
FFCS Competency	

Culinary Arts (A.O.S.) (Curriculum Code – 0578/HEGIS - 5404)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ENGL 101	Composition I	3
CAHT 103	Food Service Sanitation	2
CAHT 140	Mathematics Hospitality Operat	3
CAHT 160	Baking & Pastry I	3
FFCS 199	Foundation for College Success	1
CAHT 111	Basic Food Preparation	3

Year 1/SPRING		
Code/Name		**Credits**
Anything from PHED		1
GENERAL ELECTIVE		1
NTRN 122	Nutrition	3
CAHT 104	Service for Restaurant Profess	1
CAHT 132	Fund of Restaurant Operation	3
CAHT 145	Food Service Purchasing	3
CAHT 247	Menu Planning/Merchandising	3

Year 2/FALL		
Code/Name		**Credits**
ANSC 108	Sel/Cut Meat Restaurant Use	3
AGBU 112	Select & Cutting Meat Rest Use	3
CAHT 262	Garde Manger	3
BADM 249	Management	3
CAHT 255	Prin Mgmt for Service Business	3
CAHT 266	American Cuisine	3
CAHT 235	Catering	3
CAHT 270	Restaurant Practicum	3

Year 2/SPRING		
Code/Name		**Credits**
CAHT 235	Catering	3
CAHT 270	Restaurant Practicum	3
CAHT 260	Baking and Pastry II	3
CAHT 264	International Cuisine	3
CAHT 215	Beverage Management	3
ENGL 102 or higher	Composition II (or higher)	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 foodservices, hotels and resorts. The program is for students that have earned Associate degrees in restaurant management, foodservice management, institutional foods, or culinary arts and are interested in pursuing additional study of management to enhance their career opportunities.

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 the menu matching 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 235- Principles of Financial Management	3
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 310- Human Resource Management	3
BADM 449- Management Policies and Issues	3
CITA 405- Project Management	3
CAHT 332- Advanced Food Production	3
CAHT 335- Advanced Catering Management	3
CAHT 380- Internship Orientation	1
CAHT 480- Internship	9
CAHT 485- Internship Reporting	3
NTRN 122- Nutrition	3
Liberal Arts & Sciences:	**31**
ENGL 101- Composition I	3
ECON 123- Micro-Economics	3
Or ECON 124- Macro-Economics	
MATH 125- Statistics	3
PHED	1
Upper-Level (300-499)	6
Additional Liberal Arts and Sciences	15

Professional Requirements:	**36**
CAHT 103- Food Service Sanitation	2
CAHT 104- Service for Restaurant Professionals	1
CAHT 111- Basic Food Preparation	3
CAHT 132- Fundamentals of Restaurant Operations	3
CAHT 140- Mathematics Hospitality Operations	3
CAHT 145- Food Service Purchasing	3
CAHT 235- Catering	3
CAHT 247- Menu Planning/Merchandising	3
CAHT 270- Restaurant Practicum	3
CAHT 100-499	3
CITA 110- Microcomputer Applications I	3
Management Upper-Level (300-499):	6
chosen from BADM, CAHT, CITA, MKHT, TRAV, ARTS, BIOL, CHEM COMM, ECON, ENGL, GART, GOVT, HIST, MATH, NAMS, PHIL, PSYC, SOSC	
General Electives	**6**
Total Credits	**122**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CAHT 140	Mathematics Hospitality Operat	3
NTRN 122	Nutrition	3
ENGL 101	Composition I	3
Anything from PHED		1
CAHT 111	Basic Food Preparation	3
CAHT 103	Food Service Sanitation	2
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
CAHT 104	Service for Restaurant Profess	1
ACCT 101	Financial Accounting (C)	3
CAHT 247	Menu Planning/Merchandising	3
CAHT 260	Baking and Pastry II	3
ECON 123	Micro-Economics	3

Year 2/FALL		
Code/Name		**Credits**
CAHT 132	Fund of Restaurant Operation	3
CAHT 145	Food Service Purchasing	3
CAHT 235	Catering	3
CAHT 255	Prin Mgmt for Service Business	3
BADM 249	Management	3
Anything from LIBERAL ARTS AND SCIENCES		6

Year 2/SPRING		
Code/Name		**Credits**
ACCT 103	Managerial Accounting (C)	3
CAHT 270	Restaurant Practicum	3
TRAV 223	Travel & Hospitality Law	3
BADM 223	Business Law I	3
Anything from LIBERAL ARTS AND SCIENCES		6
HOTL 205	Prin Mktg for Svc Businesses	3
BADM 134	Principles of Marketing	3

Year 3/FALL		
Code/Name		**Credits**
ACCT 235	Prin of Financial Mgmt (C)	3
BADM 310	Human Resources Management	3
CAHT 332	Advanced Food Production	3
CITA 110	Microcomputer Applications I	3
Anything from LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVE		2

Year 3/SPRING		
Code/Name		**Credits**
CAHT 335	Advanced Catering Management	3
MATH 125	Statistics	3
Management Upper-Level		3
Anything from LIBERAL ARTS AND SCIENCES UPPER LEVEL		3
CAHT 380	Internship Orientation	1
GENERAL ELECTIVE		3

Year 4/FALL		
Code/Name		**Credits**
BADM 449	Management Policy & Issues	3
CITA 405	Project Management	3
Management Upper-Level		3
Anything from LIBERL ARTS AND SCIENCES UPPER LEVEL		3

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

Restaurant Management (A.A.S.) (Curriculum Code – 0572/HEGIS - 5010)

Associate in Applied Science

Overview

The primary goal of the Restaurant Management program is to provide students with educational experiences that will prepare them for entry level and supervisory positions in all segments of the food service industry and/or to prepare them for additional formal education. The SUNY Cobleskill student who graduates with an A.A.S. degree in Restaurant Management will build from a strong background in the liberal arts as a consequence of SUNY's commitment to general education.

Student Learning Outcomes

- Function effectively in all areas of food and beverage operations and management, including customer service, menu planning, purchasing, production, marketing, and back office operations including human resources and financial management.
- Explain and demonstrate excellent guest service.
- Understand the importance of computer applications in restaurant management, including point of sale systems and the role of computers in financial management.

Major Field Requirements:	**39**
ACCT 101- Financial Accounting	3
CAHT 103- Food Service Sanitation	2
CAHT 104- Service for Restaurant Professionals	1
CAHT 111- Basic Food Preparation	3
CAHT 132- Fundamentals of Restaurant Operations	3
CAHT 140- Mathematics Hospitality Operations	3
CAHT 145- Food Service Purchasing	3
CAHT 215- Beverage Management	3
CAHT 235- Catering	3
CAHT 247- Menu Planning/Merchandising	3
CAHT 255- Prin of Management for Serv Business	3
Or BADM 249- Management	
CAHT 270- Restaurant Practicum	3
NTRN 122- Nutrition	3
TRAV 223- Travel & Hospitality Law	3
Or BADM 223- Business Law I	

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
PHED	1
Math/Science	3
Additional Liberal Arts and Sciences	15
Total Credits	**61**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Restaurant Management (A.A.S.) (Curriculum Code – 0572/HEGIS - 5010)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
CAHT 103	Food Service Sanitation	2
FFCS199	Foundations for College Success	1
CAHT 140	Mathematics Hospitality Operat	3
NTRN 122	Nutrition	3
CAHT 111	Basic Food Preparation	3
Anything from PHED		1
Liberal arts and Sciences		3

Year 1/SPRING		
Code/Name		**Credits**
ACCT 101	Financial Accounting (C)	3
CAHT 104	Service for Restaurant Profess	1
CAHT 247	Menu Planning/Merchandising	3
CAHT132	Fund of Restaurant Operations	3
MATH 103 or higher	Mathematics of Finance (or higher)	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Liberal Arts and Sciences		3

Year 2/FALL		
Code/Name		**Credits**
CAHT 145	Food Service Purchasing	3
CAHT 235	Catering	3
CAHT 255	Prin Mgmt for Service Business	3
BADM 249	Management	3
Liberal arts and sciences		6

Year 2/SPRING		
Code/Name		**Credits**
CAHT 215	Beverage Management	3
CAHT 270	Restaurant Practicum	3
TRAV 223	Travel & Hospitality Law	3
BADM 223	Business Law I	3
Liberal arts and sciences		6

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 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- Computer Operating Systems	3

Concentration Requirements: (choose one)	**24**

End User Support

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

Network Support

CITA 120- Computer Hardware Concepts
CITA 190- Linux Operating Systems
CITA 200- Data Communications and Networking
CITA 220- Systems Analysis
CITA 230- Network Technology
CITA 370- Network Design Concepts
BADM 249- Management
3 credits from CITA, ACCT, BADM, or GART

Programming

CITA 140- Introduction to Programming
CITA 190- Linux Operating Systems
CITA 210- Visual Programming and Develop Tools
CITA 215- C++ Programming
CITA 220- Systems Analysis
CITA 305- Java Programming
CITA 340- Database Concepts
3 credits from CITA, ACCT, BADM, or GART

Web and Graphics Design

CITA 130- Web Publishing I
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	3
MATH	3
PHED	1
Additional Liberal Arts and Sciences	15
General Electives	**9**
Total Credits	**61**

Seven of ten Gen Ed Categories
Math 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 199		1

Year 1/SPRING	
Code/Name	**Credits**
Concentration Coursework	9
Liberal Arts and Sciences	6
PHED	1

Year 2/FALL	
Code/Name	**Credits**
Anything from ACCT, BADM, CITA, GART	3
Concentration Coursework	3
Liberal Arts and science	3
General Elective	6

Year 2/SPRING	
Code/Name	**Credits**
Concentration Coursework	9
Liberal Arts and Science	3
General Elective	2

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

Bachelor of Technology

Overview

The demand for skilled knowledge 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.

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- Computer Operating Systems	3
CITA 325- Introduction to Network Security	3
CITA 380- Internship Orientation	1
CITA 405- Project Management	3
CITA 460- Management Information Systems	3
CITA 480- Internship	9
CITA 485- Internship Reporting	3
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	4
Or MATH 231- Calculus I	
PHED	1
Additional Liberal Arts and Sciences	21
Upper-Level (300-499)	6
General Electives	**9**
Total Credits	**122**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Information Technology Advisement Tracks (choose one)

Application and Web Development

CITA 130- Web Publishing I
CITA 140- Introduction to Programming
CITA 190- 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- Computer Hardware Concepts
CITA 190- Linux Operating Systems
CITA 200- Data Communications and Networking
CITA 230- Network Technology
CITA 320- Network Administration
CITA 335- Cisco Routing
CITA XXX- Operating System Security
CITA XXX- Digital Forensics
CITA XXX- Network Security and Cryptography
CITA XXX- Disaster Recovery and Business Continuity
9 credits from ACCT, ARTS, BADM, CITA, COMM, or GART

Information Systems

CITA 130- Web Publishing I
CITA 140- Introduction to Programming
CITA 200- Data Communications and Networking
CITA 220- Systems Analysis
CITA 230- Network Technology
CITA 340- Data Base Concepts
BADM 400- Operations Management
18 credits from ACCT, BADM, CITA, or GART

Network Administration and Support

CITA 120- Computer Hardware Concepts
CITA 190- Linux Operating Systems
CITA 200- Data Communications and Networking
CITA 220- Systems Analysis
CITA 230- Network Technology
CITA 320- Network Administration
CITA 335- Cisco Routing
CITA 430- Software Integration and Interoperability
15 credits from ACCT, ARTS, BADM, CITA, COMM, or GART

Web Graphics and Design

CITA 130- Web Publishing I
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- Dynamic Graphics and Animation
CITA 410- Multi-Media Computing
15 credits from ACCT, ARTS, BADM, CITA, COMM, or GART

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
Anything from CONCENTRATION COURSEWORK		3
ENGL 101	Composition I	3
FFCS 199	Foundation for College Success	1
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from PHED		1

Year 1/SPRING		
Code/Name		**Credits**
Anything from CONCENTRATION COURSEWORK		6
ACCT 101	Financial Accounting (C)	3
Anything from LIBERAL ARTS AND SCIENCES		6

Year 2/FALL		
Code/Name		**Credits**
BADM 249	Management	3
Anything from CONCENTRATION COURSEWORK		6
MATH 125	Statistics	3
MATH 231	Calculus I	4
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/SPRING		
Code/Name		**Credits**
Anything from CONCENTRATION COURSEWORK		9
Anything from 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
Anything from CONCENTRATION COURSEWORK		3
CITA 380	Intern Orientation Info Tech	1
Anything from 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
Anything from CONCENTRATION COURSEWORK		9
Anything from LIBERAL ARTS AND SCIENCES UPPER LEVEL		3

Year 4/FALL		
Code/Name		**Credits**
CITA 460	Management Information Systems	3
Anything from CONCENTRATION COURSEWORK		3
Anything from LIBERAL ARTS AND SCIENCES UPPER LEVEL		3
GENERAL ELECTIVE		5

Year 4/SPRING		
Code/Name		**Credits**
CITA 480	Internship in Information Tech	9
CITA 485	Internship Info Tech Reporting	3
Anything from UPPER LEVEL COURSEWORK		12

Early Childhood: 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.

The program offers two concentrations: Curriculum and Administration/Leadership. The Curriculum track prepares students for employment as infant, toddler, and preschool lead teachers in child care, private preschool programs, and agencies such as Head Start, as well as social service work such as case managers in early intervention. The Administration/Leadership track prepares students to be leaders in the field, providing advanced instruction in management of early childhood programs and helping students prepare for the Children's Program Administrator Credential (CPAC). Several courses are available on-line to accommodate the needs of place-bound, working students.

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
- Administering early childhood programs (*Leadership/Administration option only)

Major Field Requirements:	**43**
ECHD 130- Intro to Early Childhood Programs	3
Or ECHD 190- Intro to Community Agencies	
ECHD 150- Curriculum and Methods	3
ECHD 170- Child Growth and Development Prac	3
ECHD 175- Infants and Toddlers	3
ECHD 234- Prac School/Community Agencies	6
ECHD 280- Children with Special Needs	3
ECHD 351- Families as Partners EC Programs	3
ECHD 352- Child Guidance and Classroom Mgmt	3
ECHD 380- Internship Orientation	1
ECHD 452- Dev Approp Assess/Eval EC Programs	3
ECHD 460- Internship	8
ECHD 461- Internship Reporting	4
Or LAS upper-level 12credits in place of internship	

Major Technical Electives: (chosen from)	**6**
ECHD 121- Expressive Arts	
ECHD 230- Strategies Helping Professions	
ECHD 240- **(leadership track only)** Child Health, Safety and Nutrition	
ECHD 251- Anti-Bias Strategies Human App	
ECHD 252- Conflict Resolution: Create Peace Env	
ECHD 260- Foundations of Modern Education	
Or ECHD prefixed course not already required	

*changed as of 10/16/11

Advisement Track: (choose one)	**9**
Curriculum	
ECHD 354- Math/Science for Young Children	
ECHD 357- Literacy Dev in Young Children	
ECHD 240- Child Health, Safety and Nutrition	
Leadership	
ECHD 453- Admin, Supervising, Fin Plan and Mgmt	
ECHD 454- Operations Mgmt Childrens Program	
ECHD 456- External Environment & Childrens Prog	

***Liberal Arts & Sciences**	**61**
ENGL 101 or 102- Composition I or II	3
MATH 111- College Algebra (or higher)	3
HUMS (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
PHED	1
ENGL 300-499	3

***General Electives**	**1**

***Total Credits**	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Early Childhood: 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 199	Foundations for College Success	1
ECHD 121	Expressive Arts	3
ENGL 101	Composition I	3
ECHD 170	Child Growth & Dev Theory Prac	3
Any lab science from BIOL, CHEM, PHYS, PSCI		3

Year 1/SPRING		
Code/Name		**Credits**
ECHD 150	Curriculum and Methods	3
ECHD 175	Infants and Toddlers	3
MATH 111 or higher	College Algebra (or higher)	3
Liberal Arts and Sciences		3
ECHD 240	Child Health Safety & Nutrition	3
PHED		1

Year 2/FALL		
Code/Name		**Credits**
HUMS 243	Children's Literature	3
ECHD 280	Children with Special Needs	3
Technical Elective		3
ECHD 351	Families as Partners EC Progms	3
ECHD 352	Child Guidance & Classroom Mgt	3
Liberal Arts and Sciences		3

Year 2/SPRING		
Code/Name		**Credits**
ECHD 234	Prac School/Community Agencies	6
Liberal Arts and Sciences		3
HIST 121	History of United States I	3
HIST 122	History of United States II	3
Technical Elective		3

Year 3/FALL		
Code/Name		**Credits**
ECHD 452	Dev Approp 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 352	Child Guidance & Classroom Mgt	3
ECHD 357	Literacy Dev in Young Children	3
Liberal Arts and Sciences		9

Yea r4/FALL		
Code/Name		**Credits**
ECHD 354	Math/Sci for Young Children	3
Liberal Arts and Science Upper Level		12
ECHD 380	Internship Orientation	1

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

Child and Family Services (A.S.) (Curriculum Code – 1328/HEGIS - 5506)

Associate in Sciences

Overview

The A.S. degree in Child and family Services is designed for students who plan to work with children and families in a broad range of careers. The curriculum was designed with a commitment to strengthening families and fostering the healthy development of children. The program's overarching goal is to improve family and community life by preparing students for work with children, adults, and families in a variety of public and private human service agencies and organizations. The curriculum provides a solid base in early childhood and social science course work and field experiences, including a 230-hour practicum offered in a range of settings such as the Department of Social Services, Head Start, Early Intervention, etc. The program includes a strong foundation in the liberal arts and career/college transfer preparation. Graduates will be prepared for entry level positions in child and family services as well as transfer into four-year college programs. The curriculum allows for seamless transfer into the Early Childhood Department's B.S. program in Child Care and Development.

Student Learning Outcomes

- Students will understand the ways individuals interact within the family system and larger social and economic environments.
- Students will be knowledgeable about community agencies and their roles in helping professions.
- Students will be knowledgeable and skilled in observing, documenting, and assessing to support young children and families.
- Students will be knowledgeable about the field of Child and Family Services through an agency-based practicum experience.
- Students will become advocates for individuals, families and communities.

Major Field Requirements:	**30**
ECHD 170- Child Growth and Development Pract	3
ECHD 190- Introduction to Community Agencies	3
ECHD 230- Strategies Helping Professions	3
ECHD 234- Practicum School/Community Agencies	6
ECHD 240- Child Health, Safety and Nutrition	3
ECHD 251- Anti-Bias Strategies Human App	3
ECHD 252- Conflict Resolution: Create Peace Env	3
ECHD 280- Children with Special Needs	3
Elective – Choose 1:	3
PSYC 222- Adolescent Psychology	
PSYC 231- Social Psychology	
SOSC 112- Social Problems	

Liberal Arts & Sciences	**28**
ENGL 101- Composition I	3
Social Science (rec: PSYC 111, SOSC 111, SOSC 211)	9
MATH 111- College Algebra (or higher)	3
PHED	1
Lab Science	3
Additional Liberal Arts and Sciences	9
General Electives	**4**
Total Credits	**62**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Child and Family Services (A.S.) (Curriculum Code – 1328/HEGIS - 5506)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ECHD 190	Intro to Community Agencies	3
FFCS 199	Foundation for College Success	1
PSYC 111	General Psychology	3
SOSC 111	Introduction to Sociology	3
ENGL 101	Composition I	3
MATH 111 or higher	College Algebra (or higher)	3

Year 1/SPRING		
Code/Name		**Credits**
ECHD 170	Child Growth & Dev Theory Prac	3
ECHD 252	Conflct Resol:Create Peace Env	3
SOSC 211	Sociology of the Family	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from PHED		1
GENERAL ELECTIVE		3

Year 2/FALL		
Code/Name		**Credits**
ECHD 240	Child Health, Safety&Nutrition	3
ECHD 251	Anti-Bias Strategies Human App	3
ECHD 230	Strategies for Helping Professions	3
PSYC 222	Adolescent Psychology	3
PSYC 231	Social Psychology	3
SOSC 112	Social Problems	3
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/SPRING		
Code/Name		**Credits**
ECHD 234	Prac School/Community Agencies	6
ECHD 280	Children with Special Needs	3
Anything from LIBERAL ARTS AND SCIENCES		6

Early Childhood (A.A.S.) (Curriculum Code – 0605/HEGIS - 5503)

Associate in Applied Science

Overview

The A.A.S. degree in Early Childhood is a National Association for the Education of Young children (NAEYC) accredited program 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, child care centers, and private preschools on and off campus. The program includes a foundation in the liberal arts and career/college transfer preparation. An exit portfolio is required and assists graduates transitioning to work and/or higher education. The program is designed for seamless transfer into the Early Childhood Department's B.S. program in Child Care and Development.

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 School/Community Agencies	6
ECHD 240- Child Health, Safety, and Nutrition	3
ECHD 280- Children with Special Needs	3
ECHD 351- Families as Partners EC Programs	3
Or ECHD 352- Child Guidance & Classroom Mgmt	
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- Child Guidance and Classroom Mgmt	

Liberal Arts & Sciences	**25**
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
PHED	1
Lab Science	3
MATH 111- College Algebra or higher	3
Foreign Language	3
Social Science	3
Additional Liberal Arts and Sciences	3
General Electives	**4**
Total Credits	**62**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Early Childhood (A.A.S.) (Curriculum Code – 0605/HEGIS - 5503)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ECHD 121	Expressive Arts	3
ECHD 130	Intro Early Childhood Programs	3
ECHD 170	Child Growth & Dev Theory Prac	3
ENGL 101	Composition I	3
Anything lab science from BIOL, CHEM, PSCI, PHYS		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ECHD 150	Curriculum and Methods	3
ECHD 240	Child Health, Safety&Nutrition	3
ECHD 175	Infants and Toddlers	3
MATH 111 or higher	College Algebra (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	Children with Special Needs	3
ECHD 251	Anti-Bias Strategies Human App	3
ECHD 252	Conflct Resol:Create Peace Env	3
ECHD 260	Foundation of Modern Education	3
ECHD 300 or higher	(or higher)	
Anything from Foreign Language		3
ECHD 351	Families as Partners EC Progms	3
ECHD 352	Child Guidance & Classroom Mgt	3

Year 2/SPRING		
Code/Name		**Credits**
ECHD 234	Prac School/Community Agencies	6
General Elective		3
HIST 121	History of United States I	3
HIST 122	History of United States II	3
Liberal Arts and Sciences Elective		3

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.

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 315- Contemporary Issues Mass Media	3
COMM 420- Visual Media	3
COMM 481- Communications Senior Project	3
ENGL 111- Fund of Speech Communications	3
GART 151- Typography and Layout	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 111- Design I	
COMM 480- Communications Internship	
COMM 240- Television Studio Production	
COMM 260- The Art of Audio/Video Editing	
COMM 302- The Dynamics of Narrative	
COMM 311- The Documentary	
GART 375- Web Animation	
JOUR 302- Feature Writing	

Liberal Arts & Sciences	**61**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
Humanities	6
MATH 111- College Algebra (or higher)	3
Lab Science	6
PHED	1
Social Science	12
Language	6
Upper- Level (300-499)	12
Additional Liberal Arts and Sciences	9
General Electives	**6**
Total Credits	**121**
Seven of ten Gen Ed Categories	
Math 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 199	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
Major Technical Elective		3
Anything from PHED		1
BADM 134	Principles of Marketing	3
COMM 210	Single Camera Video Production	3

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
GART 151	Typography and Layout	3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3
COMM 220	Intercultural Communication	3
GART 270	Digital Imaging	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 481	Communications Senior Project	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	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	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.

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 240- Television Studio Production	3
ENGL 102- Composition II	3
ENGL 111- Fundamentals of Speech Communication	3
GART 251- Computer Graphics I	3
GART 265- Web Design	3
JOUR 202- Journalism Newswriting/Reporting	3

Liberal Arts & Sciences	**31**
ENGL 101- Composition I	3
MATH 111- College Algebra	3
Or MATH 125- Statistics	
PHED	1
Social Science	12
Lab Science	6
Humanities	6
General Electives	**2**
Total Credits	**60**
Seven of ten Gen Ed Categories	
Math 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	3
ENGL 101	Composition I	3
ENGL 111	Fund of Speech Communications	3
MATH 111	College Algebra	3
MATH 125	Statistics	3
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3
FFCS 199	Foundations for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
COMM108 or COMM 120	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 240	Television Studio Production	3
ENGL 102	Composition II	3
GART 251	Computer Graphics I	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
Anything from BIOL, CHEM, PHYS, PSCI		3

Graphic Design Technology (A.A.) (Curriculum Code – 1390/HEGIS - 5012)

Associate in Arts

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.

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:	**28**
ARTS 111- Design I	3
ARTS 114- Drawing I	3
ARTS 124- History of Art I	3
ARTS 125- History of Art II	3
GART 151- Typography and Layout	3
GART 251- Computer Graphics I	3
GART 252- Computer Graphics II	3
GART 260- Photography	3
Or GART 270- Digital Imaging	
GART 265- Web Design	3
GART 280- Portfolio Prep and Presentation	1

Liberal Arts & Sciences	**26**
ENGL 101- Composition I	3
ENGL	3
MATH 111- College Algebra (or higher)	3
PHED	1
Social Science	6
Science	3
Additional Liberal Arts and Sciences	7
General Electives	**6**
Total Credits	**60**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Graphic Design Technology (A.A.) (Curriculum Code – 1390/HEGIS - 5012)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ARTS 111	Design I	3
ARTS 124	History of Art I	3
Anything from ENGL BY PLACEMENT		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
FFCS 199	Foundation for College Success	1
GART 151	Typography and Layout	3

Year 1/SPRING		
Code/Name		**Credits**
ARTS 114	Drawing I	3
ARTS 125	History of Art II	3
GART 251	Computer Graphics I	3
Anything from PHED		1
Anything from BIOL, CHEM, PHYS, PSCI		3
General Elective		3

Year 2/FALL		
Code/Name		**Credits**
GART 252	Computer Graphics II	3
GART 265	Web Design	3
ENGL 102 or higher	Composition II (or higher)	3
MATH 111 or higher	College Algebra (or higher)	3
General Elective		2

Year 2/SPRING		
Code/Name		**Credits**
GART 260	Photography	3
GART 270	Digital Imaging	3
GART 280	Portfolio Prep & Presentation	1
Liberal arts and sciences		7
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3

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

Bachelor of Science

Overview

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:	**39**
ARTS 111- Design I	3
ARTS 124- History of Art I	3
ARTS 125- History of Art II	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 351- Advanced Typography	3
GART 324- History of Graphic Design	3
GART 460- Senior Seminar I: Design Research	3
GART 461- Senior Seminar II: Senior Project	3
Advisement Track (choose one):	**15**
Multi-Media: Print/Video Production	
GART 352- Digital Prepress Production	
GART 375- Web Design II: Web Animation	
COMM 210- Single Camera Video Production	
Or COMM 240- Television Studio Production	
COMM 260- The Art of Audio and Video Editing	
COMM 311- The Documentary	
Multi-Media: Print/Web Production	
GART 352- Digital Prepress Production	
GART 375 Web Design II: Web Animation	
CITA 130- Web Page Design and Development	
CITA 330- Web Publishing	
CITA 375- Dynamic Graphics and Animation	
Optional (in addition to advisement track)	3
GART 480- Internship	

Liberal Arts & Sciences	**61**
ENGL 101- Composition I	3
ENGL 102- Composition II	3
Humanities	6
MATH 111- College Algebra (or higher)	3
Science	6
PHED	1
Social Science	12
Language	6
Additional Liberal Arts and Sciences	21
General Electives	**6**
Total Credits	**121**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

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

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
ARTS 111	Design I	3
ARTS 124	History of Art I	3
GART 112	Digital Media	3
ENGL 101	Composition I	3
LIBERAL ARTS AND SCIENCE		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
ARTS 125	History of Art II	3
GART 151	Typography and Layout	3
GART 251	Computer Graphics I	3
ENGL 102	Composition II	3
Anything from HUMANITIES		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
GART 252	Computer Graphics II	3
CITA 130	Web Publishing I	3
COMM 210	Single Camera Video Production	3
COMM 240	Television Studio Production	3
Anything from SCIENCE		3
LIBERAL ARTS AND SCIENCE		3
Anything from SOCIAL SCIENCE		3

Year 2/SPRING		
Code/Name		**Credits**
GART 270	Digital Imaging	3
GART 265	Web Design	3
COMM 260	The Art of Audio/Video Editing	3
MATH 111	College Algebra	3
Anything from SOCIAL SCIENCE		3

Year 3/FALL		
Code/Name		**Credits**
GART 351	Advanced Typography	3
CITA 375	Dynamic Graphics & Animation	2
CITA 375X	Dynamic Graphics&Animation Lab	1
COMM 311	The Documentary	3
Anything from SOCIAL SCIENCE		3
Anything from LANGUAGE		3
LIBERAL ARTS AND SCIENCE		3

Year 3/SPRING		
Code/Name		**Credits**
GART 375	Web Animation	3
CITA 330	Web Publishing	3
COMM 311	The Documentary	3
GART 324	History of Graphic Design	3
GART 352	Digital Prepress Production	3
LIBERAL ARTS AND SCIENCE		3
Anything from SCIENCE		3

Year 4/FALL		
Code/Name		**Credits**
GART 460	Senior Seminar I	3
GART 480	Graphic Design Internship	3
LIBERAL ARTS AND SCIENCE		3
Anything from LANGUAGE		3
Anything from SOCIAL SCIENCE		3
LIBERAL ARTS AND SCIENCE		3

Year 4/SPRING		
Code/Name		**Credits**
GART 461	Senior Seminar II	3
LIBERAL ARTS AND SCIENCE		3
Anything from HUMANITIES		3
Anything from GENERAL ELECTIVES		5

Humanities (A.A.) (Curriculum Code – 0201/HEGIS - 5649)

Associate in Arts

Overview

Humanities consist of art, communication, drama, foreign languages, literature, music, philosophy, religion – all fields whose basis is meant by which humans organize and communicate their experience to others. Due to the emphasis on communication skills, aesthetics, analysis, research and understanding of others' experience – as well as upon specific knowledge areas – Humanities at SUNY Cobleskill is an excellent starting place for the pursuit of art, communications, education, English, foreign languages, law, public relations, theater and even medicine. As students in this major fulfill many of their basic general education requirements, they have the flexibility to change majors without losing credits. Students will take an A.A. core and then use their many electives to concentrate on a specific area of Humanities for preparation for transfer.

Student Learning Outcomes

Goals

- Be culturally literate.
- Have a basic knowledge of activities and forms of expression particular to the humanities: philosophy, art, music, literature, language, cinema and mass media.
- Demonstrate competence in at least one of the following areas: philosophy, art, music, literature, language, cinema and mass media.
- Have developed research skills to a level that enables them to succeed in upper-division courses.
- Have had the opportunity to study effective communications strategies and to participate in teamwork situations.
- Be able to use computers and other technological tools as they apply to activities, forms of expression, and disciplines of knowledge in the humanities areas.

Objectives

Students will:

- Demonstrate knowledge of the influence of the humanities on intercultural experiences.
- Demonstrate an appreciation for the technical and/or aesthetic principles that guide or govern the humanities.
- Demonstrate coherent interpretations, perspectives or applications of course content.
- Demonstrate competency in locating, synthesizing, and documenting the use of information from multiple sources.
- Apply appropriate argumentation and methodology of the discipline
- Demonstrate competence in sending e-mail, utilizing a course information management system, and locating information in multiple forms (print, electronic, audio, video).

Major Field Requirements:	**53**
ENGL 101- Composition I	3
English	3
Humanities/Foreign Language (2 different prefixes)	6
MATH 111- College Algebra (or higher)	3
Lab Science	6
PHED	1
Social Science	12
Additional Liberal Arts and Sciences	19

General Electives	**7**
Total Credits	**60**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Humanities (A.A.) (Curriculum Code – 0201/HEGIS - 5649)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
Anything from ENGL BY PLACEMENT		3
FFCS 199	Foundation for College Success	1
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, MUSC, PHIL. SPAN *suggested HUMS 101		3
Anything from MATH BY PLACEMENT or higher		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3
Liberal Arts and Science Course		3

Year 1/SPRING		
Code/Name		**Credits**
ENGL 102 or higher	Composition II (or higher)	3
Anything from PHED		1
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST		3
Liberal Arts and Sciences		3

Year 2/FALL	
Code/Name	**Credits**
Anything from BIOL, CHEM, PHYS, PSCI	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	3
Liberal Arts and Science Course	6
General Elective	3

Year 2/SPRING	
Code/Name	**Credits**
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC, SUST	3
Liberal Arts and Science Courses	7
General Elective	3

Mathematics (A.S.) (Curriculum Code – 0221/HEGIS - 5617)

Associate in Science

Overview

SUNY Cobleskill offers an A.S. degree in Mathematics. In addition to a devoted faculty and small class sizes that allow for increased student-teacher interaction and collaborative learning techniques, students receive individual attention and advisement as they pursue their educational and career goals.

Student Learning Outcomes

- To provide mathematics majors with a foundation in mathematics for life-long learning and opportunities in mathematics and related fields. Students should:
  - Acquire a body of knowledge including mathematical concepts and skills, data analysis, quantitative measurement, and mathematical perspective.
  - Formulate and solve problems from a mathematical perspective.
  - Develop competency in the application of mathematical concepts, skills, and reasoning in many disciplines and real-world situations.
  - Become competent in the use of technology in mathematical modeling and computation.
- To graduate mathematics majors who are prepared for a mathematically based career and for transfer to a four-year program with a major in mathematics or a related field. Students should:
  - Acquire a core of mathematical knowledge and skills necessary to transfer to a four-year college with junior status as a mathematics or a related field major.
  - Develop effective mathematical communication skills.
  - Work cooperatively with others.
  - Appreciate mathematics as an intellectual endeavor as well as a tool to understand the world around us.

Major Field Requirements:	**27**
MATH 125- Statistics	3
MATH 229- Linear Algebra	3
MATH 231- Calculus I	4
MATH 232- Calculus II	4
MATH 310- Differential Equations	4
Additional MATH/CITA courses:	9
MATH 200 level or above and/or CITA 140 or above	

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
English	3
Humanities	3
PHED	1
Natural Science	6
Social Science	6
General Electives	**11**
Total Credits	**60**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Mathematics (A.S.) (Curriculum Code – 0221/HEGIS - 5617)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
MATH 125	Statistics	3
General Elective		3
FFCS 199	Foundations for College Success	1
ENGL 101	Composition I	3
MATH 131	Precalculus	4
MATH 231	Calculus I	4
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
Anything from PHED		1

Year 1/SPRING		
Code/Name		**Credits**
MATH 125	Statistics	3
General Elective		3
Anything from ENGL		3
MATH 231	Calculus	4
MATH 232	Calculus II	4
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC		3
General Elective		3

Year 2/FALL		
Code/Name		**Credits**
MATH 229	Linear Algebra	3
MATH 232	Calculus II	4
MATH 310	Differential Equations	4
MATH 200 or higher and/or CITA 140 or higher		3
Anything from BIOL, CHEM, PHYS, PSCI		3
Anything from ARAB, ARTS, CHIN, COMM, ENGL, FREN, GART, HUMS, JAPN, JOUR, LANG, MUSC, PHIL, RUSS, SPAN		3

Year 2/SPRING	
Code/Name	**Credits**
Anything from BIOL, CHEM, PHYS, PSCI	3
MATH 200 or higher and/or CITA 140 or higher	6
General Elective	4

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.

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

Liberal Arts & Sciences	**22**
ENGL 101- Composition I	3
MATH (111 or higher)	6
PHED	1
Additional Liberal Arts and Sciences	12
General Electives	**9**
Total Credits	**66**
Seven of ten Gen Ed Categories	
Math 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 199	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	Botany II	3
BIOL 136 w/Lab	Vertebrate Zoology	3
BIOL 258 w/Lab	Anatomy & Physiology I	4
Anything from PHED		1
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/FALL		
Code/Name		**Credits**
Anything from LIBERAL ARTS AND SCIENCES		3
BIOL 219	Microbiology	3
BIOL 219X	Microbiology Lab	1
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from BIOL, ENHT, CHEM, MATH, PHYS		4
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
Anything from LIBERAL ARTS AND SCIENCES		3
GENERAL ELECTIVE		4

Biotechnology (B.S.) (Curriculum Code – 2606/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.

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 – 2606/HEGIS - 0499)

Major Field Requirements:	**49**
BIOL 111- Biology I	4
BIOL 112- Biology II	4
BIOL 219- Microbiology	4
BIOL 364- Biotechnology	4
BIOL 375- Cell Biology	4
BIOL 405- Theory/Methods in Ag Biotech	4
BIOL 410- Molecular Genetics	3
CHEM 111- General Chemistry I	4
CHEM 112- General Chemistry II	4
CHEM 231- Organic Chemistry I	5
BIOL 480- Internship in Ag Biotech	6
Or Upper-level courses chosen from: AGRN 350- Plant Nutrition AGRN 362- Applied Plant Physiology BIOL 305- Ethics in Science, Medicine & Tech BIOL 320- Environmental Toxicology BIOL 490- Special Projects ENVR 350- Environmental Law & Regulation ORHT 329- Hydroponics ORHT 356- Plant Propagation	
Major Technical Electives (chosen from):	**9**
AGRN 242, AGRN 251, AGRN 252, AGSC 111, AGSC 186, AGSC 227, AGSC 281, ANSC 111, ANSC 112, ANSC 209, ANSC 241, ANSC 272, BIOL 116, BIOL 117, FWLD 115, FWLD 125, FWLD 220, FWLD 221, ORHT 121, ORHT 131, ORHT 141, ORHT 251, RECM 222, AGRN 312, AGRN 313, AGRN 335, AGRN 338, AGRN 350, AGRN 362, AGRN 368, AGRN 494, ANSC 322, ANSC 330, ANSC 430, CHEM 351, BIOL 305/PHIL 305, FWLD 330, FWLD 320, FWLD 352, FWLD 400, FWLD 430, FWLD 440, ORHT 317, ORHT 329, ORHT 356, ORHT 377, ORHT 495	

Liberal Arts & Sciences	**34**
ENGL 101- Composition I	3
COMM 301- Technical Communications	3
Humanities	3
MATH (125 or higher)	6
PHED	1
Additional Liberal Arts and Sciences	18
General Electives	**28**
Total Credits	**120**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Biotechnology (B.S.) (Curriculum Code – 2606/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 199	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
Anything from 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
Anything from TECHNICAL ELECTIVE		3
Anything from PHED		1
Anything from LIBERAL ARTS AND SCIENCES		3

Year 2/SPRING	
Code/Name	**Credits**
Anything from TECHNICAL ELECTIVE	3
Anything from 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
Anything from LIBERAL ARTS AND SCIENCES		6
Anything from TECHNICAL ELECTIVE		3
GENERAL ELECTIVE		3

Year 3/SPRING		
Code/Name		**Credits**
BIOL 364	Biotechnology	2
BIOL 364X	Biotechnology Lab	2
COMM 301	Technical Communication	3
Anything from TECHNICAL ELECTIVE - UPPER LEVEL		3
GENERAL ELECTIVE		6

Year 4/FALL		
Code/Name		**Credits**
BIOL 405	Theory/Methods in Ag Biotech	3
BIOL 405X	Theory/Meth Ag Biotech Lab	1
Anything from LIBERAL ARTS AND SCIENCES		3
BIOL 410	Molecular Genetics	3
GENERAL ELECTIVE		5

Year 4/SPRING		
Code/Name		**Credits**
BIOL 480	Internship in Ag Biotechnology	6
GENERAL ELECTIVE		9

Emergency Medical Technician: 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.

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**
BIOL 111- Biology I	4
BIOL 158- Human Anatomy and Physiology I	3
Or BIOL 258- Anatomy and Physiology I	
BIOL 159- Human Anatomy and Physiology II	3
Or BIOL 259- Anatomy and Physiology II	
EMSC 201- Paramedic I	8
EMSC 201- Paramedic I Lab	4
EMSC 202- Paramedic II	6
EMSC 203- Paramedic III	8
EMSC 203- Paramedic III Lab	4
EMSC 204- Paramedic IV	6

Liberal Arts & Sciences	**19**
ENGL 101- Composition I	3
MATH 111- College Algebra or higher	3
PSYC 111- General Psychology	3
Or SOSC 111- Introduction to Sociology	
PHED	1
Additional Liberal Arts and Sciences	9
General Electives	**1**
Total Credits	**66**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Emergency Medical Technician: Paramedic (A.A.S.) (Curriculum Code – 1945/HEGIS - 5299)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
BIOL 111	Biology I	3
BIOL 111X	Biology I Lab	1
BIOL 158	Human Anatomy & Physiology I	2
BIOL 158X	Human Anatomy/Physiology I Lab	1
FFCS 199	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
Anything from 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 II	6

Year 2/SPRING		
Code/Name		**Credits**
EMSC 203	Paramedic III	8
EMSC 203X	Paramedic III Lab	4
EMSC 204	Paramedic IV	6

Health Sciences Studies (A.S.) (Curriculum Code – 1821/HEGIS - 5604)

Associate in Science

Overview

SUNY Cobleskill has an excellent record in producing gradates ready for careers in basic or advanced science and medical areas. The College is the only two-year SUNY institution with an articulation agreement with the College of Medicine at SUNY Upstate Medical University. 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. The Cobleskill-Upstate Early Assurance Physician Program is a one-of-a-kind program in New York State. Students who qualify, and are New York state residents from a rural community, attend SUNY Cobleskill for two years in the Health Sciences Program, then enroll at Cornell University or Siena College for an additional two years of study before continuing their education at SUNY Upstate Medical University in Syracuse.

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- Biology I	4
BIOL 112- Biology II	4
BIOL 114- Medical Orientation E-T-R	1
CHEM 111- General Chemistry I	4
CHEM 112- General Chemistry II	4
Additional BIOL/CHEM/PHYS from the following:	14
BIOL 105- Principles of Genetics	
BIOL 219- Microbiology	
BIOL 251- Microscopic Anatomy	
BIOL 258- Anatomy and Physiology I	
BIOL 259- Anatomy and Physiology II	
BIOL 300- Principles of Parasitology	
CHEM 231- Organic Chemistry I	
CHEM 232- Organic Chemistry II	
CHEM 351- Biochemistry	
PHYS 111- College Physics I	
PHYS 112- College Physics II	
PHYS 211- Calculus Physics I	
PHYS 212- Calculus Physics II	

Liberal Arts & Sciences	**29**
ENGL 101- Composition I	3
PHED	1
PSYC 111- General Psychology	3
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	**6**
Total Credits	**66**
Seven of ten Gen Ed Categories	
Math 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
CHEM 111	General Chemistry I	3
CHEM 111X	General Chemistry I Lab	1
ENGL 101	Composition I	3
Anything from LIBERAL ARTS AND SCIENCES		3
BIOL 114	Medical Orientation E-T-R	1
FFCS 199	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	Statistics	3
MATH 131	Pre-Calculus	4
MATH 231	Calculus I	4
MATH 232	Calculus II	4
PSYC 111	General Psychology	3

Year 2/FALL		
Code/Name		**Credits**
Anything from MAJOR FIELD ELECTIVE		7
Anything from PHED		1
MATH 125	Statistics	3
MATH 131	Pre-Calculus	4
MATH 231	Calculus I	4
MATH 232	Calculus II	4
Anything from LIBERAL ARTS AND SCIENCES		6
GENERAL ELECTIVE		2

Year 2/SPRING	
Code/Name	**Credits**
Anything from MAJOR FIELD ELECTIVE	7
Anything from LIBERAL ARTS AND SCIENCES	6
GENERAL ELECTIVE	3

Histotechnician (A.A.S.) (Curriculum Code – 0600/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.

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:	**42**
BIOL 111- Biology I	4
BIOL 112- Biology II	4
BIOL 114- Medical Orientation E-T-R	1
CHEM 111- General Chemistry I	4
CHEM 112- General Chemistry II	4
BIOL 251- Microscopic Anatomy	4
BIOL 258- Anatomy and Physiology I	4
BIOL 259- Anatomy and Physiology II	4
BIOL 268- Microtechniques	6
BIOL 275- Clinical Experience Histotechnology	4
PHIL 305- Ethics Science, Medicine & Tech	3

Liberal Arts & Sciences	**19**
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
Social Science	3
PHED	1
Additional Liberal Arts and Sciences	9
Total Credits	**61**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Histotechnician (A.A.S.) (Curriculum Code – 0600/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 Orientation E-T-R	1
MATH 111 or higher	College Algebra (or higher)	3
ENGL 101	Composition I	3
FFCS 199	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		.5
LIBERAL ARTS AND SCIENCES		3
Anything from SOCIAL 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
BIOL 305	Ethics Science, Medicine & Tech	3
Anything from 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
Anything from PHED		.5

SUMMER CLINICAL (400 hours)		
Code/Name		**Credits**
BIOL 375	Clinical Experience	4

Science (A.S.) (Curriculum Code – 0220/HEGIS - 5619)

Associate in Science

Overview

Natural sciences at SUNY Cobleskill consist of all major fields in the sciences: astronomy, biology, chemistry, geology, and physics. Especially strong are the biology and chemistry sequences. Students wishing to go into research science education, or any science-related field, are encouraged to concentrate their studies in this science concentration. The concentration is analytical, particularly good for strengthening analytical, critical thinking and research skills. As students in Natural Sciences fulfill many of their basic general education requirements, they have the flexibility to change majors without losing credits. State-of-the-art facilities give more hands-on experience in laboratory settings than most four-year institutions.

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 the ability to perform as part of a team in group activities.
- Students will demonstrate critical thinking skills.

Major Field Requirements:	**24**
Sixteen credits chosen from:	16
BIOL 111- Biology I	
BIOL 112- Biology II	
BIOL 116- Botany I	
BIOL 117- Biology II	
CHEM 111- General Chemistry I	
CHEM 112- General Chemistry II	
PHYS 111- College Physics I	
PHYS 112- College Physics II	
PHYS 211- Calculus Physics I	
PHYS 212- Calculus Physics II	
PSCI 101- Astronomy	
PSCI 102- Physical Geology	
PSCI 104- Energy and the Environment	
PSCI 105- Environmental Science and Technology	
PSCI 303- Field Geology	
Eight credits chosen from:	8
BIOL 219- Microbiology	
BIOL 258- Anatomy and Physiology I	
BIOL 259- Anatomy and Physiology II	
BIOL 364- Biotechnology	
CHEM 216- Water Chemistry	
CHEM 231- organic Chemistry I	
CHEM 244- Instrumental Analysis	
CHEM 251- Biochemistry	
And/or BIOL/CHEM/ENVR/PHYS/PSCI 200 or higher	

Liberal Arts & Sciences	**19**
ENGL 101- Composition I	3
MATH 125- Statistics (or higher)	3
PHED	1
Additional Liberal Arts and Sciences	12
General Electives	**17**
Total Credits	**60**
Seven of ten Gen Ed Categories	
Math Competency	
FFCS Competency	

Science (A.S.) (Curriculum Code – 0220/HEGIS - 5619)

Suggested Course Sequencing

Year 1/FALL		
Code/Name		**Credits**
GENERAL ELECTIVE		3
Anything from CHOOSE 8 CREDITS FROM THE FOLLOWING COURSES: BIOL 111, BIOL 112, BIOL 116, BIOL 117, CHEM 111, CHEM 112, PHYS 111, PHYS 112, PHYS 211, PHYS 212, PSCI 101, PSCI 102, PSCI 103, PSCI 104, PSCI 105		8
ENGL 101	Composition I	3
FFCS 199	Foundation for College Success	1

Year 1/SPRING		
Code/Name		**Credits**
Anything from CHOOSE 8 CREDITS FROM THE FOLLOWING COURSES: BIOL 111, BIOL 112, BIOL 116, BIOL 117, CHEM 111, CHEM 112, PHYS 111, PHYS 112, PHYS 211, PHYS 212, PSCI 101, PSCI 102, PSCI 103, PSCI 104, PSCI 105		8
MATH 125 or higher	Statistics (or higher)	3
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from PHED		1

Year 2/FALL		
Code/Name		**Credits**
GENERAL ELECTIVE		8
Anything from LIBERAL ARTS AND SCIENCES		3
Anything from CHOOSE 4 CREDITS FROM BIOL 219, BIOL 258, CHEM 231 AND/OR ANYTHING FROM BIOL, CHEM, PHYS, PSCI, ENVR 200 OR HIGHER		4

Year 2/SPRING		
Code/Name		**Credits**
Anything from CHOOSE FROM BIOL 259, BIOL 364, CHEM 216, CHEM 244, CHEM 251 OR ANY BIOL, CHEM, ENVR, PHYS, PSCI 200 LEVEL OR HIGHER		4
Anything from LIBERAL ARTS AND SCIENCES		6
GENERAL ELECTIVE		5

Social Science (A.A.) (Curriculum Code – 0212/HEGIS - 5622)

Associate in Science

Overview

The Department of Social and Behavioral Sciences 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.

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**
Three credits chosen from: HIST 101- History of Western Civilization I HIST 102- History of Western Civilization II HIST 103- History of World Civilization I HIST 104- History of World Civilization II	3
Three credits chosen from: ECON 123- Micro-Economics ECON 124- Macro-Economics GOVT 141- American Government	3
Three credits chosen from: PSYC 111- General Psychology SOSC 111- Introduction to Sociology ANTH 114- Physical Anthropology	3
Three credits chosen from: HIST 121- History of the United States I HIST 122- History of the United States II NAMS 121- Introduction to Native American Studies	3

Advisement Track (chose one):	**15**
Social Sciences Courses by Advisement chosen from HIST, GOVT, ECON, NAMS, ANTH, SOSC, MATH, BIOL, HUMS, PHIL, and PERS	
Psychology PSYC 221- Child Psychology PSYC 222- Adolescent Psychology PSYC 231- Social Psychology PSYC 250- Research Methods in Behavioral Science MATH 125- Statistics	
Physical Education PERS 201- Foundations of Physical Education PERS 211- First Aid and CPR PERS 213- Current Issues Health/Wellness PERS 214- Care/Prevent Athletic Injuries PERS 215- Organiz Admin Phys Ed Athl and Rec	

Liberal Arts & Sciences	**30**
ENGL 101- Composition I	3
MATH 111- College Algebra (or higher)	3
Humanities (two different prefixes)	6
Lab Science (BIOL 111 and BIOL 112 recommended)	6
PHED	1
Additional Liberal Arts and Sciences	11

General Electives:	**3**

Total Credits	**60**
Seven of ten Gen Ed Categories Math Competency FFCS Competency	

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 *Suggested SOSC 111 or HIST 101/102		3
FFCS 199	Foundation for College Success	1

Year 1/SPRING	
Code/Name	**Credits**
Anything from ADVISEMENT TRACK	3
Anything from BIOL, CHEM, PHYS, PSCI	3
Anything from AAMS, ANTH, ECON, GOVT, HIST, NAMS, PSYC, SOSC	3
Anything from LIBERAL ARTS AND SCIENCES	3

Year 2/FALL	
Code/Name	**Credits**
Anything from ADVISEMENT TRACK	3
Anything from ADVISEMENT TRACK	3
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	3
Anything from LIBERAL ARTS AND SCIENES	2
Anything from LIBERAL ARTS AND SCIENCES	3

Year 2/SPRING	
Code/Name	**Credits**
Anything from ADVISEMENT TRACK	3
Anything from ADVISEMENT TRACK	3
Anything from PHED	1
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	3
LIBERAL ARTS AND SCIENCE	4

Course Descriptions Key

To go directly to a subject, click on the subject below.

African American Studies

AAMS 111 | Intro African American Studies

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. [3 credits]

Accounting

ACCT 101 | Principles of Accounting I

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. for one credit. Students may receive one credit or three credits but not both. Students enrolling for one credit will cover approximately one-third of the course. [3 credits]

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: ACCT101. [3 credits]

ACCT 103 | Managerial Accounting

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 ACCT102. Prerequisite: ACCT101. [3 credits]

ACCT 110 | Personal Income Tax (C)

A study of current income tax law and its application to the individual taxpayer. Inclusions and exclusions to gross income and adjusted gross income, deductions, capital gains and losses, and preparation of individual returns are emphasized. The practical orientation enables the student completing the course to immediately utilize this newly acquired knowledge. Not open to students receiving credit in ACCT208. [2 credits]

ACCT 115 | Applied Acctg Small Bus (C)

This course is designed to introduce students to the practical nature of the way in which small businesses account for their day-to-day transactions. Students will become familiar with both manual and computerized systems. This five-week module involves manual and computerized cash basis systems together with an introduction of terminology used in obtaining financing for a small business. [1 credits]

ACCT 235 | Prin of Financial Mgmt (C)

An evaluation of the financial functions as they 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: ACCT103 or consent of the department. [3 credits]

ACCT 280A | Accounting Internship

Students may earn credit for approved work experience which is related to the study of accounting. Prerequisite: A grade of "C" or better in ACCT101 and ACCT102 or ACCT103 and prior consent of the Accounting Department. [1 credits]

ACCT 280B | Accounting Internship

Students may earn credit for approved work experience which is related to the study of accounting. Prerequisite: A grade of "C" or better in ACCT101 and ACCT102 or ACCT103 and prior consent of the Accounting Department. [2 credits]

ACCT 280C | Accounting Internship

Students may earn credit for approved work experience which is related to the study of accounting. Prerequisite: A grade of "C" or better in ACCT101 and ACCT102 or ACCT103 and prior consent of the Accounting Department. [3 credits]

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. Prerequisite: Open to second year students who have completed at least nine hours in accounting and have the approval of the department. [1 credits]

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. Prerequisite: Open to second year students who have completed at least nine hours in accounting and have the approval of the department. [2 credits]

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. Prerequisite: Open to second year students who have completed at least nine hours in accounting and have the approval of the department. [3 credits]

ACCT 303 | Intermediate Accounting I

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: ACCT101 and ACCT102 or ACCT103. [3 credits]

ACCT 304 | Intermediate Accounting II

A continuation of Intermediate Accounting I. Major topics include non-current assets, non-current liabilities, capital structure, pensions, and leases. Appropriate references to applicable APB and FASB opinions are an integral part of the course. Prerequisite: ACCT303 or permission of the department. [3 credits]

ACCT 308 | Federal Income Tax

An introductory course designed to study the Federal Income Tax structure and laws. Emphasis is placed on interpretation of tax laws as they pertain to the individual taxpayer and to business in general. Topics covered include: gross income, exclusions from gross income, adjustments to income, nonbusiness deductions, business deductions, tax accounting, special computations of tax, tax credits, depreciation, recapture, bad debts and losses, current tax legislation and income tax planning. Prerequisite: ACCT103. [3 credits]

ACCT 311 | Cost Accounting

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: ACCT101 and ACCT102 or ACCT103. [3 credits]

ACCT 370 | Not-for-Profit Accounting

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: ACCT101 and ACCT102 or ACCT103. [3 credits]

ACCT 401 | Fraud Examination

This course should be of interest to business majors who desire a knowledge of fraud prevention and internal controls. Students will learn how and why occupational fraud is committed, how fraudulent conduct can be deterred and how allegations of fraud should be investigated and resolved. Asset misappropriation, corruption and financial statement fraud are three categories of fraud that are examined in this class. Past fraudulent schemes will be discussed and analyzed to identify how business organizations can deter and detect fraud. This class is required for students desiring a minor in Forensic Accounting. Prerequisite: ACCT303. [3 credits]

Agricultural Business

AGBU 100 | Beginning Agricultural Bus

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. [3 credits]

AGBU 101 | Agricultural Business Industry

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. [3 credits]

AGBU 102 | Fundamentals of Ag Business

This course is designed to give beginning agriculture students an introduction to numerous agricultural business concepts. Areas explored will include setting goals, effective decision making, assessing and solving problems, and development of management skills. [3 credits]

AGBU 103 | Agricultural Economics (C)

The process of economic growth; the nature of production, marketing and consumption of food in the US; basic principles of economics applied to agriculture including the production function, input-output analysis, supply, demand and price determination; an overview of the world agricultural situation; and consideration of farm policy problems are the topics covered. Throughout the course, the interrelationships between agricultural and non-agricultural industries are stressed. [3 credits]

AGBU 107 | Ag Business Operations (C)

An introduction to the organization and operation of small businesses serving the agricultural industry. Areas of study will include business records, office organization and equipment, buying, pricing and selling products and services for a successful business. [3 credits]

AGBU 121 | Marketing Ag Products

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. Course is not available to full-time matriculated students. [3 credits]

AGBU 122 | Milk Marketing

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. A semester course designed primarily for students interested in milk marketing. [2 credits]

AGBU 123 | Fruit & Vegetable Marketing

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. [1 credits]

AGBU 205 | Agricultural Records Mgmt (C)

An introduction to the manner in which the agricultural industry generates, updates, stores, retrieves, and disposes of records. Topics include customer lists, inventory records invoicing for goods and services, customizing forms, working with bank accounts, payroll recording and creating reports. [3 credits]

AGBU 208 | Agricultural Business Mgmt (C)

Designed to prepare the student for eventual agribusiness employment. The course emphasizes the operational function of management unique to the agribusiness industry. Management theory and micro economic analyses are applied to practical settings in agribusiness. The role of the co- operative business structure is examined as one aspect of the uniqueness of agricultural business in the United States. Prerequisite: AGBU103 [3 credits]

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. [3 credits]

AGBU 241 | Farm Management (C)

This course centers on factors which affect the profitability of the farm business. Topics include setting goals, measures of productivity and efficiency, decision- making, measuring farm profitability and effective labor management. [3 credits]

AGBU 242 | Ag Bus Financial Mgmt (C)

A study of credit, insurance, legislation, income tax and social security as they apply to the establishment of successful farm management and farm-related businesses. [3 credits]

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. [2 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

AGBU 301 | Agri Business Industry (C)

A broad-based descriptive course designed to provide students with a basic understanding of agriculture as an important segment of the United States' economy. Components of agriculture as an industry are identified and analyzed. Career opportunities are identified throughout the course. The interrelationships of agriculture and other industries in the economy are stressed. The role of the U.S. agriculture in international relations, business and trade is included. This course

is limited to and required of students with no previous coursework in agricultural business and enrolled in an Agricultural Business BT program. [3 credits]

AGBU 321 | Applied Agric 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. [3 credits]

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: AGBU103 and AGBU242; and AGBU240 or AGBU241; or permission of the instructor. [3 credits]

AGBU 328 | Agri Sales & Sales Management

An advanced course designed for baccalaureate candidates who will be entering a career in non-farm agribusiness. The course will teach advanced techniques in major elements of selling and sales management. Prerequisites: AGBU103 and AGBU107. [3 credits]

AGBU 341 | Ag Economics & Geography (C)

An analysis of agricultural production in the United States and the world based on the major influence of geography. Agricultural development, world trade in agriculture and problems of the farm sector of the United States' economy are studied in relation to geography and economic principles. Prerequisite: AGBU103 or micro- or macro- economics, or permission of the instructor. [3 credits]

AGBU 350 | Equine Business Management

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: ANSC161 and AGBU240 [3 credits]

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. [1 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

AGBU 420 | Agricultural Policy

A study of the purpose and importance of public policy in agriculture, food and resource systems. Focus is on developing an understanding of current policies and policy- making tools which affect agriculture and food industries, consumers and rural communities. World food, international trade and macroeconomics of agriculture are also discussed. Prerequisite: AGBU103 or permission of the instructor. [3 credits]

AGBU 429 | Tax Management in Agriculture

A study of basic taxmanship as it relates to current Federal Income Tax with an emphasis on tax management to the expansion of the agricultural enterprise. The course also surveys the current Federal and State Estate and Gift Tax with the central theme being transfer of the agricultural business. Prerequisites: AGBU103 and ABU241 and AGBU242. [3 credits]

AGBU 440 | Environmental Issues in Ag

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: AGBU103 or permission of the instructor. [3 credits]

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. Pre-requisite: Students must be enrolled in the fifth academic semester or higher as a Bachelor degree candidate. [3 credits]

AGBU 442 | Agricultural Credit

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: AGBU242 and MATH103 or permission of the instructor. [3 credits]

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. (Pre-requisite: AGBU 103 or permission of the instructor.) [3 credits]

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. [15 credits]

Agricultural Education

AGED 307 | Intro Agricultural Education

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: PSYC111, BT students only, or permission of the instructor. [3 credits]

AGED 309 | Teaching/Learning Ag Education

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: AGED307, PSYC111, BT students only, or permission of the instructor. [3 credits]

AGED 411 | Ag Educ & Community Leadership

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: PSYC111, BT students only, or permission of the instructor. [3 credits]

Agricultural Engineering Technology

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. [3 credits]

AGEN 105 | Farm Equip Operatn/Safety

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. [1 credits]

AGEN 111 | Intro Computer in Ag Eng Tech

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. [1 credits]

AGEN 111X | Intro Comp Ag Eng Tech Lab

Hands-on application of the topics covered in AGEN111. [1 credits]

AGEN 112 | Surveying & Land Measurement

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. Prerequisite: MATH101. [1 credits]

AGEN 112X | Surveying & Land Measure Lab

Hands-on application of the topics covered in AGEN112. [1 credits]

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. Prerequisite: Restricted to AGEN majors only. [1 credits]

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 arrange. Prerequisite: Restricted to AGEN majors. [2 credits]

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. Prerequisite: Restricted to AGEN majors. [3 credits]

AGEN 116 | Industry Work Exp Orientation

The course is designed to prepare students and guide them through their work experiences. It will consist of orienting the student to the work environment, tasks, and forms and records to be completed during the work experience. Prerequisite: John Deere Ag Tech, John Deere C&F Tech, or Power Machinery Tech majors only. [1 credits]

AGEN 117 | Industry Work Experience

This work experience course consists of the actual work experience at the dealership that sponsors the student. A minimum of 44 hours of approved experience is required. Prerequisite: AGEN116. [1 credits]

AGEN 118 | Industry Work Experience

A second block of on-site work experience at the dealership sponsoring the student. A minimum of 44 hours of approved experience is required. Prerequisites: AGEN116 and AGEN117. [1 credits]

AGEN 119 | Industry Work Experience

The third block of on-site work experience at the dealership sponsoring the student. This completes the College requirement of on-site experience and counts toward the total of 20 weeks required by the dealership. A minimum of 44 hours of approved experience is required. Prerequisites: AGEN116, AGEN117 and AGEN118. [1 credits]

AGEN 121 | Turf & Grounds Care Equip

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. [2 credits]

AGEN 121X | Turf & Grounds Care Equip Lab

Hands-on application of the topics covered in AGEN121. [1 credits]

AGEN 122 | Basic Small Engine Repair

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. [2 credits]

AGEN 132 | Fund Diesel Engine Tech

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. [2 credits]

AGEN 132X | Fund Diesel Engine Tech Lab

Hands-on application of the topics covered in AGEN132. [1 credits]

AGEN 144 | Farm Electricity

Students will learn basic principles of AC electricity and applications to agriculture. Various types of electrical wiring methods and materials are studied as well as types of electric motors and their application. Electrical energy conservation methods will be stressed. [2 credits]

AGEN 144X | Farm Electricity Lab

Hands-on application of the topics covered in AGEN144. [1 credits]

AGEN 151 | Basic Welding

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. [1 credits]

AGEN 151X | Basic Welding Lab

Hands-on application of the topics covered in AGEN151. [1 credits]

AGEN 166 | Agricultural Mechanics

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. [1 credits]

AGEN 166X | Agricultural Mechanics Lab

Hands-on application of the topics covered in AGEN166. [1 credits]

AGEN 170 | Basic Hydraulics

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. [2 credits]

AGEN 180 | Ag Structures & Equipment I

Students will learn basic skills for construction and maintenance of farm structures and related equipment. Skills will include selection and safe use of tools, concrete and masonry techniques, pole and stud frame construction techniques, and equipment installation procedures. [2 credits]

AGEN 180X | Ag Structures & Equip I Lab

Hands-on application of the topics covered in AGEN180. [1 credits]

AGEN 205 | Ag Safety & Health Management

An educational and organizational look at physical, chemical, animal and equipment-based hazards. Development of a safety program that can be applied to all aspects of agricultural-based tasks and accident avoidance procedures will be stressed. Topics will include: organizing and managing a safety program; equipment safety; animal handling safety; chemical safety; chain saw safety; shop safety; waste recycling and disposal; and accident handling procedures. The course is designed for accident avoidance rather than trauma response, although CPR and First Aid information will be included. [2 credits]

AGEN 220 | Composting Prin & 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, applied technology, sustainability and mechanics. Topics include the nature of the composting process (basic biology and chemistry) characteristics of raw materials ("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. 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 many composting facilities and applications (national and international). Students will work in groups to create, monitor and manage a pilot-scale composting pile through the semester. [2 credits]

AGEN 231 | Electrical/onic Sys Diagnostic

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: PHYS101 [2 credits]

AGEN 231X | Electrical/onic Sys Diag Lab

Hands-on application of the topics covered in AGEN231. [1 credits]

AGEN 232 | Pwr Trn Theory Diag/Repair

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: AGEN132 or permission of the instructor. [2 credits]

AGEN 232X | Pwr Train Theory Diag&Rep Lab

Hands-on application of the topics covered in AGEN232. [2 credits]

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. Prerequisites: PHYS101 and AGEN170 or permission of instructor. [3 credits]

AGEN 241X | Agricultural Machinery Lab

Hands-on application of the topics covered in AGEN241. [1 credits]

AGEN 244 | Ctrl Farm Build Mechanization

A study of the electrical controls used in mechanizing farm building operation: magnetic starters, time delays, limit controls, overload protection, thermostats and pressure switches. Principles and application to farmstead mechanization equipment are stressed. Prerequisite: AGEN144. [2 credits]

AGEN 244X | Ctrl Farm Build Mech Lab

Hands-on application of the topics covered in AGEN244. [1 credits]

AGEN 245 | Air Conditioning

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. [1 credits]

AGEN 245X | Air Conditioning Lab

Hands-on application of the topics covered in AGEN245. [1 credits]

AGEN 253 | Advanced Welding

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: AGEN151 or by permission of instructor. [1 credits]

AGEN 253X | Advanced Welding Lab

Hands-on application of the topics covered in AGEN253. [1 credits]

AGEN 261 | Intro Agricultural Machinery

A study of the operation, adjustment, maintenance and management of farm field machinery and tractors. Designed primarily to meet the needs of Agronomy and Animal Science students. Not open to Agricultural Engineering students. [2 credits]

AGEN 261X | Intro Ag Machinery Lab

Hands-on application of the topics covered in AGEN261. [1 credits]

AGEN 273 | Agricultural Hydraulics Troubleshtg

The principles of hydraulics and their applications to agricultural tractors and machinery. A study of the components and hydraulic circuits dealing with the hydraulic lift systems, power steering, power brakes and external cylinder operation. Inspecting, testing and servicing of hydraulic components and systems will be included. Prerequisite: AGEN170 [2 credits]

AGEN 273X | Ag Hydraulics Troubleshoot Lab

Hands-on application of the topics covered in AGEN273. [1 credits]

AGEN 274 | Construction Equipment Sys

The course is a continuation of studies in hydraulic and mechanical applications dealing with industrial equipment such as loaders, backhoes, excavators, crawler dozers, and fork lifts. Experience will be gained in pre-delivery service, site preparation, and operation of equipment on job sites. [2 credits]

AGEN 274X | Construction Equip Systems Lab

Hands-on application of the topics covered in AGEN274. [1 credits]

AGEN 282 | Ag Structures & Equipment II

This course will emphasize energy efficient design, construction, and operation of farm structures. Equipment emphasized includes the selection and operation of feed handling, water systems, manure handling, ventilation and milking equipment. Experience will be gained by use of College facilities. [2 credits]

AGEN 282X | Ag Structures & Equip II Lab

Hands-on application of the topics covered in AGEN282. [1 credits]

AGEN 285 | Equipment Retailing Mgmt

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. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

AGEN 292 | Fuel Systems

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. [2 credits]

AGEN 292X | Fuel Systems Lab

Hands-on application of the topics covered in AGEN292. [1 credits]

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. [2 credits]

AGEN 331 | Ag Eq Elec Hydric Ctrl Sys

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: PHYS101, PHYS102, AGEN170, AGEN273 or permission of the instructor. [2 credits]

AGEN 331X | Ag Eq Elec Hydrlc Ctrl Sys Lab

Hands-on application of the topics covered in AGEN331. [2 credits]

AGEN 332 | Engine Dynamics Seminar

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: AGEN132, AGEN192 [2 credits]

AGEN 332X | Engine Dynamics Seminar Lab

Hands-on application of the topics covered in AGEN332. [2 credits]

AGEN 333 | Equipment Test & Development

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: AGEN111, AGEN166, AGEN151, PHYS102 [2 credits]

AGEN 333X | Euipment Testing & Devel Lab

Hands-on application of the topics covered in AGEN333. [2 credits]

AGEN 340 | Biomass/Biowaste Energy Tech

The course will provide students with a thorough understanding of the principles, practices and issues surrounding energy from biological resources, including "biomass" and "biowastes." Biomass includes energy-dense materials grown and/or harvested for fuel management. Biowastes are discarded or under used organic materials that contain energy, typically by-products or other production systems or the human economy. These two types of materials share common energy characteristics and conversion technologies. The topics that will be covered include the energy value of biological materials and the steps, processes and technologies used to capture the energy inherent in waste materials. In lecture, the emphasis will be on the governing scientific principles and process requirements. Laboratories will stress practices, equipment, instrumentation and applications. Prerequisites: AGEN 310 or ENVR 301 or an introductory course on alternative/renewable energy systems. [Spring] [3 credits]

AGEN 380 | Internship Orientation Ag Eng

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. [1 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

AGEN 399 | Biomass Energy Tech & Applicat

This course provides students a broad understanding of the emerging biomass industry in order to provide a sufficient basis to begin a career in this green-energy field. The courses cover the sources and forms of biomass energy (agronomic and forest crops), the technology and operations of production, alternative conversion processes, fundamental energy principles, markets for products and by-products and key principles for establishing a biomass-based business. The course is seminar-like in format, with lectures provided by several SUNY Cobleskill faculty from multiple disciplines It also features guest speakers with first-hand experience in biomass, production, use and business. [2 credits]

AGEN 450 | Intern Ag Equip Technology

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. Evaluation will be based on the quality of work performed during the internship. Graded as S/U only. Concurrent enrollment in AGEN451 required. Prerequisite: AGEN480 [9 credits]

AGEN 451 | Ag Eng Internship Reporting

Students enrolled in AGEN450 must be concurrently enrolled in this course. Each Agricultural Engineering Technology BT intern is required to submit daily log entries during their internship as well as several reports and evaluations. At the conclusion of the internship, each student is required to give an oral as well as a written presentation summarizing his or her internship experience. This course will be letter graded (A-F). Prerequisite: AGEN480 [6 credits]

AGEN 480 | Ag Equip Tech Seminar

A seminar course designed to study the current issues in the manufacturing, distribution, and marketing of agricultural construction, forestry, lawn, and grounds care equipment. Comparisons will be made with the automotive, over-the-road truck, and recreational vehicle marketing strategies. Students will be required to work in groups, present oral and written projects, and do a one-hour teaching presentation under the direction of an Agricultural Engineering Technology faculty member. [3 credits]

AGEN 485 | Adv Ag Equip Diagnostics

Students will study and practice skills of agricultural equipment diagnostics using industry-accepted methods. Experience will be gained in laboratories using available equipment. Prerequisites: AGEN331, AGEN332, AGEN480 [1 credits]

AGEN 485X | Adv Ag Equip Diagnostics Lab

Hands-on application of the topics covered in AGEN385. [1 credits]

Agronomy

AGRN 121 | Soil & Water Conservation (C)

A study of soil erosion, nonpoint water pollution and water depletion problems. Erosion control methods, water conservation practices and water quality protection are discussed for agricultural, recreational, silvicultural and urban land uses. Hands-on laboratory activities involve the design and implementation of erosion control practices. Soil surveys, topographic maps and computer programs are utilized to predict erosion and evaluate land resources. [3 credits]

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. [3 credits]

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. [3 credits]

AGRN 242 | Forage & Seed Crops

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. [3 credits]

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. [3 credits]

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. [3 credits]

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. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

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: BIOL116 and one college-level math course [3 credits]

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. Prerequisite: AGSC111 or equivalent: Inorganic Chemistry recommended. [3 credits]

AGRN 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. Pre-reqs: AGSC111 and CHEM111. [3 credits]

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, AGRN238 and AGSC186 and AGSC281 recommended. [3 credits]

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: AGSC111; BIOL116 recommended. [3 credits]

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: AGSC111 and BIOL116 and CHEM111 or equivalent of any of these three courses. [3 credits]

AGRN 362 | Applied Plant Physiology (C)

The physiology of plant growth, development and senescence will be investigated in relation to cultural and environmental influences. Prerequisites: BIOL116, CHEM111 or equivalent. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

AGRN 425 | Watershed Management

Watershed management is an advanced three-credit course that provides the student with a comprehensive understanding of the fundamental 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. Pre-requisites: AGRN 121 and AGRN 324. [3 credits]

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. Prerequisite: Minimum of 30 upper-division credits, concurrent enrollment in AGRN451 [12 credits]

AGRN 451 | Agronomy Internship Reporting

Plant Science Bachelor of Technology students enrolled in AGRN450 - 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 AGRN450. [3 credits]

AGRN 494 | Plant and Soil Diagnostics

This course is designed to put into practice the knowledge and techniques acquired in previous courses. Students will diagnose soil problems, weed, insect, and disease identification and control, and other agronomic or horticultural problems. Prerequisites: AGSC111, AGSC186, AGSC281 [3 credits]

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 development and management will be studied. (This course may be considered as a liberal arts and science elective for environmental studies majors only.) [3 credits]

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. [3 credits]

AGSC 186 | Entomology

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 may satisfy liberal arts and sciences elective credit for environmental studies majors only.) [3 credits]

AGSC 227 | Intro to Plant Biotechnology

This course is an introduction to plant biotechnology, with an emphasis on the issues in the use of biotechnology and techniques used for gene transfer into plants. Students will learn how biotechnology can be used for continuous improvement of people's lives. The students who successfully complete this course will have a better appreciation of the differences and similarities between traditional plant breeding and modern molecular breeding. The student will also have a better awareness of the issues involved in the application of biotechnology to scientific investigations in general and to plant improvement in particular, and will be able to form an informed opinion on whether or not biotechnology should be applied to some hotly debated areas, such as genetically modified organisms including animals. Prerequisite: BIOL116 or BIOL101 [3 credits]

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: BIOL116 or BIOL101 [3 credits]

AGSC 310 | Mng Multicultural Wrkfrc in Ag

This course provides an exposure to the culture and language of primarily Hispanic groups living and working in agriculture in the United States. Topics presented will foster an understanding of the challenges of adapting to and working in a foreign culture for both the employees and employers. Students will learn about best practices for human resource management of migrant and/or immigrant agricultural employees. A cultural cinema laboratory within the course will provide insight and understanding into differing cultural aspects of various Spanish speakers coming to work in the U.S. This course will also include practice and skill development in an additional 1 credit-hour Spanish language laboratory experience pertinent to specialized agricultural workplaces. [2 credits]

AGSC 310X | Ag Workplace Spanish (MMW)

This laboratory will provide for practice and skill development in a Spanish language experience pertinent to specialized agricultural workplaces. Student must register concurrently for AGSC 310. [1 credits]

AGSC 310Y | Cultural Cinema Series (MMW)

This cinema laboratory is tied to AGSC 310 class and will provide insight and understanding into differing cultural aspects of various Spanish speakers coming to work in the U.S. Students will view, listen, and learn through visual, auditory, and written exercises to foster understanding of a foreign culture. Student must register concurrently for AGSC 310. [1 credits]

AGSC 399 | Mng Multicultral Wrkfrc in Ag

The course will provide an exposure to the culture and language of primarily Hispanic groups living and working in agriculture in the United States. Topics presented will foster an 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. This will include practice and skill development in Spanish language pertinent to specialized agricultural workplaces. [3 credits]

American Sign Language

AMSL 145 | American Sign Language I

In 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. [3 credits]

AMSL 146 | American Sign Language II

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: AMSL145 [3 credits]

Animal Science

ANSC 107 | Meat Products

Principles and practice in the slaughtering and cutting of farm animals; preparation of animals and poultry for slaughter; wrapping, packaging, and processing of meat for home use and market. [3 credits]

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. [3 credits]

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. Course may be repeated for credit. Prerequisite: AGBU111 or permission of the instructor. [1 credits]

ANSC 110 | Sausage Preparation

This course will be devoted to the principles and preparation of specialty meat products. Included is selection of ingredients, spice selection, use of natural and artificial casing, cooking and smoking. Sausages will be evaluated by a class taste panel. [3 credits]

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. [3 credits]

ANSC 112 | Dairy Science Techniques I

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. [2 credits]

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. Two credits, meeting hours are variable and will be arranged after initial meeting in semester. Pre-requisite: ANSC107 or ANSC108 or ANSC109 or permission of the instructor. Course may be repeated once to develop skills and proficiency. [2 credits]

ANSC 114 | Canine Management (C)

A five-week modular course which examines various aspects of living with and caring for dogs. [1 credits]

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. [2 credits]

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) preferable the fall and spring of their freshman year. [1 credits]

ANSC 117 | Intro to Livestock Prodctn

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. The college herds and flocks will be utilized for demonstrations and handling experiences. [3 credits]

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. Oral discussion and reasoning will be emphasized with practical outcomes of livestock evaluation emphasized. [3 credits]

ANSC 122 | Feeds and Feeding (C)

Basic principles involved in the feeding of livestock, which will include classification and composition of feedstuffs and factors that affect feed utilization. Also includes formulation of rations and a study of the basic nutrients and their use in the body. The use of computers will be stressed in ration formulation. [4 credits]

ANSC 123 | Intro to Dairy Nutrition (C)

This course will focus on feeds and feeding issues as they pertain to dairy cattle. Basic principles involved in the feeding of dairy cattle, which will include classification and composition of feedstuffs and factors that affect feed utilization, will be covered. This course will include farm visits and students will evaluate and formulate rations using current versions of dairy nutrition software. [4 credits]

ANSC 124 | Poultry Science and Production

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. Project birds will be raised throughout and marketed at the conclusion of the course. [3 credits]

ANSC 132 | Select & Show Dairy Cattle

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. [2 credits]

ANSC 134 | Advanced Dairy Cattle Judging

An eight-week modular course designed for students who have had extensive experience judging and selecting diary cattle. This course will continue to develop skills for evaluating dairy animals based on the conformation. [1 credits]

ANSC 140 | Small Animal Management

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. [3 credits]

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. Laboratory sessions involve the actual training of dogs for obedience, tracking and trailing. [3 credits]

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. [3 credits]

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. [3 credits]

ANSC 161 | Light Horse Management

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. [2 credits]

ANSC 161X | Light Horse Management Lab

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. [1 credits]

ANSC 162 | Equine Judging

Detailed consideration of factors, both in conformation and performance, with regard to selection and evaluation of horses is studied. Ability to present accurate, clear and concise reasons is stressed. Prerequisite: ANSC161 [2 credits]

ANSC 164 | Intro to Equine Training

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. [1 credits]

ANSC 164X | Intro to Equine Training Lab

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. [2 credits]

ANSC 166 | Intro Eng & Western Equitation

A course designed to introduce students to the basics of Hunter Seat and Stock Seat equitation. Content will include emphasis on controlling the horse, understanding the use of aids, the movements of the horse, the rider's position and safely working with horses. Course fee of $350 is required. [1 credits]

ANSC 168 | Occup Exp Riding Instruction

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 ANSC268 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. [1 credits]

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. Fall/Spring Lab fee required. [1 credits]

ANSC 201 | Dairy Herd Manager Techniques

An applied dairy herd techniques course covering the development of skills used in management of dairy herds. Topics include measuring, monitoring and troubleshooting the herd for potential problems associated with the herd including calving, reproduction, nutrition and health. Special consideration will be given to the organization of tasks, methods and the use of SOP's in order to maximize productivity of the herd and herd manager. Prerequisite: ANSC115 [1 credits]

ANSC 202 | Dairy Seminar

A seminar course designed to discuss recent, up-to-date research and developments in the dairy industry through a seminar format that includes industry speakers, field trips and visits to industry meetings. Placement opportunities will also be discussed. [2 credits]

ANSC 212 | Dairy Cattle Management

An examination of decision-making processes as they affect the dairy herd. Topics include feeding management, herd expansion, record management, new technologies, 3X milking and maximizing profitability. Class discussions, lecture, speakers and field trips offer variety in the presentation of material. [3 credits]

ANSC 213 | Adv Dairy Science Techniques

Students in this elective course work closely with first year students, primarily Dairy Production and Management majors, in their completion of ANSC112, Dairy Science Techniques I, course requirements. Students enrolled in Advanced Dairy Science Techniques will work as mentors to assist in the teaching of required milking procedures and chores in the dairy barn. Students enrolled in this course will be expected to have an active role in completing the work involved in the daily milkings, subsequent milking center cleanup, and other associated barn chores. Students will be expected to participate in herd management decision making with the Dairy Farm Management Team. The course format will include both a weekly

class lecture period and direct work hours by arrangement in the College dairy facility. A student may elect this course two times. Prerequisite: ANSC112 [2 credits]

ANSC 215 | Animal Science Techniques II

ANSC215 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: ANSC115. Hours by arrangement. [1 credits]

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. Course may be repeated for additional credit. [1 credits]

ANSC 218 | Livestock Prdtn, Eval & Mktg

This course will build upon the basic livestock industry content introduced in ANSC117 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. Students will be involved with college livestock animals that will include beef, sheep, goats, hogs and poultry. Prerequisite: ANSC117 or permission of the instructor. [3 credits]

ANSC 219 | Advanced Livestock Evaluation

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. Prerequisite: ANSC119 or permission of the instructor. [2 credits]

ANSC 220 | Animal Reproduction

An introductory study of animal reproduction as it applies to cattle, swine, small ruminants and horses. Rabbits, rodents, canine and poultry reproduction will also be discussed. Topics to be covered include the anatomy and function of the reproductive organs; hormonal controls of reproduction, pregnancy, parturition and lactation. Management for improved reproduction and current technologies will be discussed. [3 credits]

ANSC 221 | Equine/Companion Animal Nutrit

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. [3 credits]

ANSC 222 | Behavior Prob Companion Animal

A comprehensive look at the causes and treatments of the common behavior problems of companion animals. Pre [3 credits]

ANSC 230 | Ranch Horsemanship

This course serves to reinforce western riding theories and techniques and provides a connection of those principles to working circumstances including ranch roping, sorting, and trail. Students will continue the development of correct seat and aids, resulting in increased tact, sensitivity, and effectiveness. Empathy for the horses and cattle is stressed at all times. Course does not include gymkhana, rodeo, or team penning content. Placement intended for riders possessing balance, security, independent seat, hand, and leg, and tactful application of aids. This course is repeatable as many times as necessary. Pre-requisite: 1 credit of ANSC 281 or instructor's permission. Fall/Spring [1 credits]

ANSC 234 | Dairy Cattle Judging Practicum

A practical hands-on course to further develop dairy cattle evaluation skills. Primary emphasis will be placed on the development of oral reasons that justify a student's placings. Several on-farm visits to herds of various breeds will be held. Videotaping and audio taping of student presentations will be utilized. Times will be arranged but will be equivalent to two, three-hour labs for five weeks. Prerequisite: ANSC134 [1 credits]

ANSC 240 | Equine Breeding & Brdg Farm Mgmt

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. [2 credits]

ANSC 240X | Equine Brdg/Brdg Farm Mgt Lab

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. [1 credits]

ANSC 241 | Dairy Cattle Breeding

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. Each student also extensively utilizes their own computer-simulated herd of cows. [3 credits]

ANSC 242 | Canine Training

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. [1 credits]

ANSC 252 | Animal Health

A study of animal 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 animal health. Routine practices that a manager or herdsperson can perform to maintain animal health will be stressed. Major emphasis in this course will be on the health of dairy and beef cattle. [3 credits]

ANSC 254 | Equine Health

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. [3 credits]

ANSC 257 | Cooperative Work Experience

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. [3 credits]

ANSC 258 | Thoroughbred Work Exp Seminar

This course is designed for students who have participated in the summer work experience in Saratoga. The skills and practices learned during the summer will be directly applied to work with college yearlings in sales preparation and in initial breaking and training. Students will be asked to work at the Fasig-Tipton Mid-Atlantic Yearling Sale located in Maryland and held in October. This course is open to AAS majors in Thoroughbred Management, Animal Science/ Agricultural Science, and Equine Studies. Prerequisite: ANSC257 [4 credits]

ANSC 260 | Care & Train of Driving Horse

A course designed for those students interested in the development of driving skills for pleasure and competition. Classes will cover the care, selection, harnessing, driving and training of the driving horse. Discussions will cover the various uses and sports of horses in harness, including harness racing and combined driving events. Course Fee of $350 is required. [3 credits]

ANSC 262 | Care & Train Equine Athlete

A course designed to enable the student to gain an understanding of how the horse functions as an athlete and to develop the skills necessary to develop individualized training programs to maximize the horse's performance. Proper care of the athlete, including nutrition and physical therapy, will be covered. Riding skill is essential as laboratories will be spent training horses. Course fee of $350 is required. [3 credits]

ANSC 264 | Tackless Training

This course studies the inter-species communication between humans and horses. It emphasizes nonconventional training techniques and their behavioral foundations. Laboratory sessions will emphasize tackless training techniques. [2 credits]

ANSC 265 | Applied Tackless Training

A repeatable hands on course designed to allow students to develop higher level skills in McCall style free lunging. Regular class meetings will involve evaluation of student progress through practical demonstration. Prerequisite: ANSC 264 or permission of instructor. [1 credits]

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 $350 is required. [2 credits]

ANSC 268 | Intro to Riding Instruction

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. Students will gain practical teaching experience in riding instruction. Prerequisite: ANSC266 [2 credits]

ANSC 269 | Training Thoroughbred Horses

This course will emphasize the training and conditioning of thoroughbred horses for racing. Topics will include the initial education of young horses, equitation considerations when galloping, race track procedures, conditioning methodology and health management. Early mornings are required, as the student will assist in the training of horses located at the Oklahoma Training Track in Saratoga. Course may be repeated for credit. [3 credits]

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. [2 credits]

ANSC 272 | Artificial Insemination Tech

This course is designed to study the techniques needed to successfully implement an artificial insemination program for cattle. Practice of all artificial insemination techniques will be carried out on live animals. Common breeding practices designed to improve reproductive efficiency will also be discussed. 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. [3 credits]

ANSC 274 | Bovine Hoof Care & Maintenance

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. Students will gain understanding of the related anatomy through lab dissections and hands-on hoof trimming experience, using both hand and power trimming tools. 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. Prerequisite: BIOL104 [3 credits]

ANSC 275 | Thoroughbred Mgmt Internship

A six-month educational experience working on a central Kentucky thoroughbred farm, organized in conjunction with the Kentucky Equine Management Internship program. Students will complete periodic assignments, compile a student portfolio, work six days a week, and attend classes one evening a week. Housing is provided and the students receive an hourly rate of pay. Additional tuition expense, payable to KEMI is required. Prerequisite: ANSC257 and ANSC269 [12 credits]

ANSC 281 | Equine Competition Techniques

This course is designed to introduce students to the considerations one must take when participating in combined training, fox hunting, driving competitions and competitive trail riding. Driving, flatwork, jumping and/or training skills will be further developed. Topics will include developing a competitive plan, basic conditioning programs, shipping and show ring procedure. Participation in competition is encouraged. Prerequisite: ANSC260 or ANSC266 and instructor's permission. May be repeated for credit. Course fee of $350 is required. [1 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

ANSC 299B | Training the Riding Horse

A course designed to give students experience in the training of horses for the various disciplines. Students will be working with young horses and horses requiring retraining. A variety of training techniques will be used as appropriate to individualize the training for each horse. Students will be working horses from the ground and under saddle. Reading and writing assignments and oral presentations will compliment hands on assignments. Permission of the instructor is required. Course is repeatable. [1 credits]

ANSC 318 | Sheep & Goat Production & Mgmt

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. The College flock and herd will be utilized for demonstrations and handling experiences, as well as field trips to sheep and goat producers to address advanced or specialized concepts in the area of small ruminant production and science. Prerequisite: ANSC117 or permission of the instructor. [3 credits]

ANSC 320 | Swine Production & Mgmt

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. Using the college swine herd, practical experience will be gained in farrowing, feeding & evaluation of hog growth. 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. Prerequisite: ANSC117 or permission of the instructor. [3 credits]

ANSC 322 | Advanced Ruminant Nutrition

This will be an in-depth course dealing with the fermentation, digestion and metabolism of nutrients by the ruminant animal. 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. Prerequisite: ANSC122 or CHEM101 [3 credits]

ANSC 324 | Feed Milling

This course presents an introduction to the activities and procedures associated with feed manufacturing. Topics include: 1. ingredient purchasing, receiving and storage; 2. feed formulation, processing, premixing, mixing and packaging; 3. trucking concerns, and 4. quality assurance. The course will emphasize the effects of various feed milling operations on the performance of all commercially imported species of livestock including pets and fish. Prerequisite: ANSC121 or ANSC122 [3 credits]

ANSC 364 | Domestic Animal Behavior

This course examines the natural behavior patterns of domestic animals and how they can be used to solve behavioral problems. [3 credits]

ANSC 368 | Therapeutic Riding Instruction

This course explores various forms of therapeutic riding interventions. Teaching format will include discussions, guest speakers and videotape review of disabilities such as: attention to deficit hyperactivity disorder, autism, mental retardation, learning disabled, motor impairments, etc. 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 selecting and training a suitable therapeutic riding horse. [3 credits]

ANSC 370 | Adv Field Studies Animal Sci

Students will visit agricultural enterprises as part of an organized study. An examination of decision-making processes, efficiency factors, size factors and regional marketing differences will be emphasized. Written and oral reports of observations will be expected from participants. Student expense ($100-$500) will vary depending upon location and length of study. Limited enrollment. Course may be repeated for a maximum of four credits. [2 credits]

ANSC 372 | Applied Bovine Reproduction

This course will emphasize an in-depth study of the anatomy and physiology of the female bovine reproductive system as it relates to contemporary dairy and beef herd management strategies designed to maximize reproductive efficiency. Topic areas presented will include the latest technological advances in post partum reproductive therapy, estrous synchronization protocols, reproductive records analysis using herd management computer software, embryo transfer and pregnancy awareness. Discussions, farm visits, industry guest speakers and student research projects will supplement lecture information and laboratory work. Prerequisites: BIOL104, ANSC155 or permission of instructor [3 credits]

ANSC 374 | Advanced Equine Reproduction

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. Prerequisites: ANSC240 and BIOL104 [3 credits]

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: Completion of at least one semester in BT program. [1 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

ANSC 412 | Dairy Herd Management Seminar

An 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 field work as well as information gained from the student's internship and recent research. Attendance at industry conferences may be required; student expense may be $50. [3 credits]

ANSC 418 | Advanced Beef Production

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. Using the college beef herd, practical experience will be gained in feeding, calving, breeding, selection, management and evaluation of calf growth. The Beef Quality Assurance program will be integrated in this course, and students can become certified as a result of positive completion of course requirements. Prerequisite: ANSC117 or permission of instructor. [3 credits]

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. Prerequisite: ANSC380 [15 credits]

ANSC 464 | Equine Exercise Physiology

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. Prerequisite: BIOL104 or BIOL111 [3 credits]

Anthropology

ANTH 114 | Physical Anthropology

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. [3 credits]

ANTH 115 | Cultural Anthropology

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 ANTH114 as a prerequisite. [3 credits]

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. [3 credits]

ANTH 214 | Archeological Field Work

An introduction to archeological excavation and laboratory techniques in a program taught jointly with the Iroquois Indian Museum. Emphasis is on hands-on experience gained by actually working on a 8,400 year-old site on the College farm. One session in June, the other in July. No prerequisites: ANTH114 is helpful [4 credits]

ANTH 214A | Archeological Field Work

An introduction to archeological excavation and laboratory techniques in a program taught jointly with the Iroquois Indian Museum. Emphasis is on hands-on experience gained by actually working on a 8,400-year-old site on the College farm. One session in June, the other in July. No prerequisites: ANTH114 is helpful [1 credits]

ANTH 214B | Archeological Field Work

An introduction to archeological excavation and laboratory techniques in a program taught jointly with the Iroquois Indian Museum. Emphasis is on hand-on experience gained by actually working on a 8,400-year-old site on the College farm. One session in June, the other in July. No prerequisites; ANTH114 is helpful. [2 credits]

ANTH 214C | Archeological Field Work

An introduction to archeological excavation and laboratory techniques in a program taught jointly with the Iroquois Indian Museum. Emphasis is on hands-on experience gained by actually working on a 8,400-year-old site on the College farm. One session in June, the other in July. No prerequisites: ANTH114 is helpful. [4 credits]

ANTH 214D | Archaeological Field Work

An introduction to archeological excavation and laboratory techniques in a program taught jointly with the Iroquois Indian Museum. Emphasis is on hands-on experience gained by actually working on an 8,400-year-old site on the College farm. One session in June, the other in July. No prerequisites: ANTH114 is helpful [4 credits]

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: ANTH114, ANTH115, HIST 101, HIST102, HIST121, HIST122, NAMS111 [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

ANTH 317 | Agriculture and Society

This course is an 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: ANTH115 or HIST101 suggested but not required. [3 credits]

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. [3 credits]

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. [3 credits]

Art

ARTS 111 | Design I

A studio course for beginners. Using various media, students explore the basic elements of design such as line, color and form. [3 credits]

ARTS 114 | Drawing I

This studio course examines the fundamentals of drawing as an act of creating independent works of art. The course will explore both representational (perspective drawing) and abstract approaches to a variety of subjects. Students are exposed to various drawing media: pencil, charcoal, ink, pastel and conte. Opportunity for creative self-expression. Drawing supply kit required. Prerequisite: ARTS111 or permission of instructor. [3 credits]

ARTS 115 | Painting

A basic studio course in painting. Students explore painting concepts, materials and techniques through the beginning level. Emphasis placed on study of composition, color, value, observation and perception primarily through still life subject. Gallery attendance encouraged, materials required. Prerequisites: ARTS111 or ARTS114 or permission [3 credits]

ARTS 124 | History of Art I

A survey of the visual arts from the Prehistoric to late Gothic period. Lecture and slide presentation. [3 credits]

ARTS 125 | History of Art II

A survey of the visual arts from the late Gothic to 20th Century. Lecture and slide presentation. [3 credits]

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: ARTS114 [3 credits]

ARTS 260 | Photography & Digital Imaging

An introduction to film-based photography as well as the creation and manipulation of digital images. The course will include the principles of black and white photography including use of a camera, film processing, and printing. Digital photographic techniques covered will include scanning and editing of photographic images in Adobe Photoshop. Design and composition will be stressed. Students will be expected to have a 35mm camera. Students will be expected to purchase additional materials needed to complete class projects. The course will consist of two lecture sessions and one two-hour lab. [3 credits]

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. Prerequisite: Must have approval of supervising faculty before signing up for course. [1 credits]

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. Prerequisite: Must have approval of supervising faculty before signing up for course. [2 credits]

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. [3 credits]

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: ARTS124 or ARTS125, BT student or permission of instructor [3 credits]

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. [3 credits]

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. [3 credits]

Business Administration

BADM 121 | Fundamentals of Business

An introductory survey of the functions and principles of business, giving the student an overview of the interrelationships between business and the basic environments with which it must interact. The course develops an understanding of those functional areas of business that the student will study in more detail in later courses. [3 credits]

BADM 134 | Principles of Marketing

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. [3 credits]

BADM 135 | Retailing

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: BADM134 or permission of the instructor [3 credits]

BADM 137 | Professional Selling

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. [3 credits]

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. [3 credits]

BADM 223 | Business Law I

A study of contract law and the Uniform Commercial Code relating to contracts, bailments and sales. [3 credits]

BADM 224 | Business Law II

A study of law relating to negotiable instruments, agency, partnerships, corporations, and real and personal property. Prerequisite: BADM223 or permission of the instructor. [3 credits]

BADM 249 | Management

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. Prerequisite: BADM121 or permission of the instructor. [3 credits]

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. [3 credits]

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. 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. [1 credits]

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. 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. [2 credits]

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. 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. [3 credits]

BADM 300 | Management Communications

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: ENGL111 or BADM145, CITA110 or permission of the department. [3 credits]

BADM 305 | International Business

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: ECON124 and BADM145 or permission of the instructor. [3 credits]

BADM 310 | Human Resources Management

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: BADM249 and PSYC111 or permission of the instructor. [3 credits]

BADM 315 | Entrepreneurship

This course provides an in-depth analysis of the required skills, resources, and techniques needed to transform an idea into a viable business entity. Entrepreneurial decision-making is stressed. Topics include: starting and managing a business, franchise/buy/start-up, location, layout, computers for the small enterprise, ethics and social responsibility. Among the course requirements is that each student will prepare a formal business plan. Prerequisite: BADM249 and/or ACCT101 or permission of the instructor. [3 credits]

BADM 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. Prerequisite: Junior status. [3 credits]

BADM 325 | International Marketing

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: BADM134 [3 credits]

BADM 330 | Advertising and Promotion

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: BADM134 or permission of the instructor. [3 credits]

BADM 334 | Marketing Research

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: BADM134 or permission of the instructor. [3 credits]

BADM 349 | Strategic Mgmt for Quality

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: BADM249 or permission of the instructor. [3 credits]

BADM 370 | 7 Habits Highly Effect People

An in-depth exploration of fundamental principles of personal effectiveness and interpersonal leadership, and the application of these principles in personal and working relationships. This four-day Franklin Covey seminar is taught by a certified facilitator and is available to matriculated students through SUNY Cobleskill as a licensed organization. Participation requires attendance on two weekends in addition to weekly class meetings. A certificate of completion is also awarded. Prerequisite: Upper division standing or permission of the instructor. [3 credits]

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. Prerequisite: Completion of one semester in the BBA. [1 credits]

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. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [1 credits]

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. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [2 credits]

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. Prerequisites: Third- or fourth-year BBA major in good academic standing and prior approval from a Project Coordinator (cooperating faculty member) and faculty advisor. [3 credits]

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. [3 credits]

BADM 420 | Marketing Management

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 student. Prerequisites: BADM134, BAMD249 [3 credits]

BADM 430 | Management of Technology

This course is designed to assist students in developing a strong conceptual foundation/framework for managing technological innovation that will aid organizations in gaining sustainable competitive advantage in the marketplace. Prerequisites: BADM249, Management, and Junior standing or permission of the instructor. [3 credits]

BADM 449 | Management Policy & Issues

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: BADM249 or permission of the instructor. [3 credits]

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. 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: BADM485 [9 credits]

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 BADM480 [3 credits]

Biological Sciences

BIOL 101 | Introduction to Biology

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. Co- or pre-requisite: BIOL 101X. [2 credits]

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. [1 credits]

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. [2 credits]

BIOL 104 | Prin Animal Anatomy/Physiology

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 and in their environments. Lecture includes a study of the following: the integument and the nervous, circulatory, respiratory, renal, endocrine, reproductive and immune systems. [3 credits]

BIOL 105 | Principles of Genetics

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. [2 credits]

BIOL 105X | Principles of Genetics Lab

1 credit laboratory course designed to compliment BIOL 105. Focus will be on solving written problems designed to illustrate the principles covered in BIOL 105. [1 credits]

BIOL 106 | Environmental Sci for Educator

Environmental Science for Educators examines the basic principles of upstate New York 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. Co-requisite: BIOL 106X [2 credits]

BIOL 106X | Environ Sci for Educators Lab

The lab component of BIOL 106- Environmental Science for Educators. Co-requisite: BIOL 106 [1 credits]

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. [3 credits]

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. Co-or prerequisite: BIOL111X [3 credits]

BIOL 111X | Biology I Lab

BIOL111X is a one-credit laboratory designed to accompany lecture topics covered in BIOL111, Biology I lecture. Students should be currently enrolled in or have previously completed BIOL111 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- or prerequisite: BIOL111 [1 credits]

BIOL 112 | Biology II

A continuation of BIOL111. Topics include: cell energetics, the biology of plants (selected topics), animal form, function and regulation, genetics, development, and evolution and ecology. Prerequisite: BIOL111. Co- or prerequisite: BIOL112X [3 credits]

BIOL 112X | Biology II Lab

BIOL112X is a one-credit laboratory designed to accompany lecture topics covered in BIOL112, Biology II lecture. Students should be currently enrolled in or have previously completed BIOL112 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- or prerequisite: BIOL112 [1 credits]

BIOL 114 | Medical Orientation Ethics-T-R

This course is designed for students entering the allied health fields such as medical technology, histotechnology, physical therapy, medical secretaries, etc. It is designed to familiarize students with medical terminology, medical records and proper professional and ethical practices in the clinical professions. [1 credits]

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. [3 credits]

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. Recommended prerequisite: BIOL116 or BIOL111 [3 credits]

BIOL 131 | Natural History of Vertebrates

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. (Students cannot take both BIOL131 and BIOL136.) Prerequisite: BIOL101 or BIOL111 [3 credits]

BIOL 136 | Vertebrate Biology

An in-depth study of the biology of the vertebrates covering characteristics, identification, taxonomy, distribution, adaptation, behavior, population dynamics, ecology and evolution. Special topics will cover biodiversity and current environmental problems, conservation, migration, orientation, dormancy, homing and navigation abilities. Prerequisites: BIOL101, BIOL104 or BIOL111 [2 credits]

BIOL 136X | Vertebrate Biology Lab

Appropriate lab and field experiences related to lecture material in BIOL136. Co- or prerequisite: BIOL136 [1 credits]

BIOL 158 | Human Anatomy & Physiology I

Human Anatomy and Physiology I and II is an introductory course sequence 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 and biochemistry are taught within the framework of the human body. Prerequisite: High school biology [2 credits]

BIOL 158X | Human Anatomy/Physiology I Lab

BIOL158X is a one-credit laboratory course designed to accompany lecture topics covered in BIOL158. [1 credits]

BIOL 159 | Human Anatomy & Physiology II

Human Anatomy and Physiology I and II is an introductory course sequence 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 and biochemistry are taught within the framework of the human body. Prerequisite: BIOL158 [2 credits]

BIOL 159X | Human Anatomy/Physiolog II Lab

BIOL159X is a one-credit laboratory designed to accompany lecture topics covered in BIOL159. [1 credits]

BIOL 211 | Terrestrial Ecology

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. Prerequisites: BIOL111 or BIOL116 [3 credits]

BIOL 215 | Aquatic Ecology

Lectures and field surveys will examine the physical, chemical, and biological components, interrelationships and sampling techniques characteristic of the major north temperate aquatic and marine environments. An applied ecosystem approach will be utilized in the study of the ecology of streams, rivers, reservoirs, lakes, ponds, swamps, marshes, estuaries, as well as intertidal shores, tidal ponds and marshes, hard and soft benthos, and coastal and offshore environments. 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. [3 credits]

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. Prerequisite: BIOL111 [3 credits]

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: BIOL219 [1 credits]

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. Prerequisite: BIOL111 and CHEM 111. BIOL 112 and CHEM 112 strongly recommended; a final grade of "C" or better or permission by the Histotechnology Committee is required for students who expect to take BIOL 268. [2 credits]

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- or prerequisite: BIOL251; a grade of "C" or better or permission of the Department of Natural Sciences is required for students who expect to take BIOL268. [2 credits]

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. Prerequisites: BIOL111 and CHEM111 or permission of the instructor. BIOL 112 and CHEM 112 strongly recommended. Co-requisite: BIOL 258x [3 credits]

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: BIOL258 [1 credits]

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: BIOL111 and CHEM111 or permission of instructor. BIOL258 and BIOL258X and BIOL 112, CHEM 112 strongly recommended. Co-requisite: BIOL 259X. [3 credits]

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. Prerequisites: BIOL111 and CHEM111 or permission of instructor. BIOL258 and BIOL258X strongly recommended. [1 credits]

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. Prerequisites: BIOL112, CHEM112, and BIOL251 and BIOL251X; a grade of "C" or better or permission by the Department of Natural Sciences is required for students who expect to take BIOL275. [3 credits]

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- or prerequisite: BIOL268; a grade of "C" or better or permission by the Department of Natural Sciences is required for students who expect to take BIOL275. [3 credits]

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.). Prerequisites: BIOL251 and BIOL251X; BIOL268 and BIOL268X; grade of "C" or better in each prerequisite or permission of the Department of Natural Sciences. 60 working days, hours to be arranged. [4 credits]

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. [1 credits]

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. [2 credits]

BIOL 290C | Spec Projects Biology

Independent study or work experience such as work in a hospital laboratory or other laboratory, or scientific experience n 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. [3 credits]

BIOL 300 | Principles of Parasitology

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. [3 credits]

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: BIOL105, BIOL111 or permission of the instructor. [1 credits]

BIOL 305 | Ethics Science,Medicine & Tech

This 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. Prerequisites: A college-level science or philosophy course or permission of the instructor. [3 credits]

BIOL 307 | Invertebrate Zoology

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: BIOL111 [3 credits]

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: BIOL131, BIOL211 or BIOL215 [3 credits]

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: BIOL131, BIOL211 or BIOL215 [3 credits]

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: BIOL131, FWLD221 [3 credits]

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 environmental 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, BIOL302X, may also be taken. Prerequisite: CHEM 111 and 6 credits of Biology including BIOL 111. [3 credits]

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: BIOL320. [1 credits]

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, BIOL355X, may be taken with this course. Prerequisite: Six credits of biology including BIOL111. [3 credits]

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: BIOL111X. Co-requisite: BIOL355 [1 credits]

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. [2 credits]

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: BIOL111/112 and BIOL111X/BIOL112X; CHEM111 lecture and labs. Co-requisite: BIOL364 [2 credits]

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: BIOL111/BIOL112 or equivalent and CHEM111/112 or equivalent or permission of the instructor. [3 credits]

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: BIOL316, BIOL317 or BIOL318. Students not meeting prerequisites need permission of the instructor. [3 credits]

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 to improve food production through recombinant DNA technology. Topics will include, but are not limited to, 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 course is designed to prepare the student for the Senior Internship in Biotechnology. Prerequisites: Biotechnology (BIOL 364) and Cell Biology (BIOL 375) or permission of instructor. [3 credits]

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: BIOL111/112 or equivalent and CHEM111/112 or equivalent or permission of the instructor. Microbiology or Cell Biology is recommended. [3 credits]

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: BIOL215. [3 credits]

BIOL 480 | Internship in Ag Biotechnolgy

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: BIOL364 Biotechnology and a minimum of 3 credits at the 200 level or above in specialization electives. [6 credits]

Business Orientation Seminar

BSEM 100 | Business Freshmen Seminar

The intent of Freshmen Seminar is to improve a student's chance of being successful in college. Course activities are intentionally centered around the student's major so as to increase interest and maintain relevance to the student's discipline. Focus of the course is on reading and writing, study skills, library techniques (including how to find information for term papers), techniques for being successful taking tests and developing critical thinking methods. Any student who feels nervous about starting his or her college career should seriously consider enrolling in Freshmen Seminar. [2 credits]

Bachelor of Technology

BTEC 380 | Internship Orientation

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. Enrollment in this course is recommended the semester immediately prior to interning. Prerequisite: Completion of one semester in BT program. [1 credits]

Business

BUSI 295 | Emerging Internet Issues

Topics in Business is a course which provides maximum opportunities to study topics of current interest or practical applications from the broad range of business. Topics may be offered under this title when approved by the department chairperson. No more than six credits of BUSI295 may be applied toward degree requirements. [1 credits]

BUSI 395 | Management Decision Making

Advanced Topics in Business is a course which provides maximum opportunities to study topics of current interest or practical applications from the broad range of business. Topics may be offered under this title when approved by the

department chairperson. No more than six credits of BUSI395 may be applied toward degree requirements. Prerequisite: Second-year student or permission of the department. [3 credits]

Culinary Arts, Hospitality, and Tourism

CAHT 103 | Food Service Sanitation

The study of sanitation and the prevention of food-borne illness as it applies to the purchase, receiving, storage, preparation and service of food. Hazard Analysis Critical Control Point (HACCP) plans to insure food safety are discussed and students have a project which requires that they develop a HACCP plan. Serv Safe examination of the National Restaurant Association is included in the class. [2 credits]

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. Successful completion of the class requires that the student earn the Dining Room Associate certificate of the Federation of Dining Room Professionals. [1 credits]

CAHT 111 | Basic Food Preparation

This course is designed to teach the basic culinary skills that can be applied in any style or level of food service operations. The course concentrates on providing students an understanding of how to cook, rather than simply presenting a set of unrelated recipes. The course has a dual goal: understanding and performing, with the emphasis on actual kitchen procedures and techniques with recipes. This course recognizes that in a production-oriented training program there is no substitute for actual seeing and doing, under the guidance and supervision of the experienced Chef Instructor. Lab supplies fee $50 [3 credits]

CAHT 132 | Fund of Restaurant Operation

A course designed to help the student transfer from small quantity to large quantity food production in the operation of Luncheon at the American Heritage. An introduction to the problems such as menu-making, costing, sanitation and safety as they occur in restaurant operations. Prerequisite: CAHT111 [3 credits]

CAHT 140 | Mathematics Hospitality Operat

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. [3 credits]

CAHT 145 | Food Service Purchasing

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 discussed in lecture, labs will focus on product identification, evaluation, selection, storage and handling, yield testing, quality standards, nutritional information, costs and intended uses. Additional discussions are devoted to how the market functions and how buyers can more efficiently function within the market place. Lab fee of $50 is required. [3 credits]

CAHT 147 | Financial Mgt Hospitality Oper

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 CAHT140 [3 credits]

CAHT 160 | Baking & Pastry I

This course includes the study of the terms, equipment, techniques and ingredients needed to prepare breads, cookies, pastries, cakes, pies, laminated doughs, tarts and pate choux products. Students study gluten formation from different flours and learn the effect that leavening systems, sugar, eggs, fat and liquids have on the tenderness and flakiness of baked products. There is an introduction to creams, icings, meringues, custards and sauces in this class. Students cost recipes, prepare and critique the baked products studied during the lab period. One class hour, one four-hour lab. Three credits. $50.00 lab fee. [3 credits]

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. Lab fee of $50 is required. [1 credits]

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 CAHT210 Vegetarianism lecture. Prerequisites: CAHT111 and CAHT132. [2 credits]

CAHT 215 | Beverage Management

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 $50 for controlled wine tastings. [3 credits]

CAHT 235 | Catering

The planning, production, supervision, costing and service of meals for special occasions. Prerequisites: CAHT132, CAHT140 [3 credits]

CAHT 247 | Menu Planning/Merchandising

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 in lab projects. This course also evaluates facility design and layout. Emphasis is placed on space allocation, developing basic production work flow, and equipment selection. [3 credits]

CAHT 255 | Prin Mgmt for Service Business

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. [3 credits]

CAHT 260 | Baking and Pastry II

This course builds on the principles and baking taught in the introductory course and includes the study of composition plated desserts and buffet platter presentation. More advanced baking techniques and forms of baked products studied in CAHT160 are explained. Students are expected to prepare, present and explain the process of baking including sensory evaluation and critiques of baked product. A special study of chocolate and candy preparation is included. Production management, recipe adjustment, costing and pricing is further developed. $50 Lab fee [3 credits]

CAHT 262 | Garde Manger

Display foods, aspic decorating, chafing dish, rechaud cookery, ice sculpture, hors d'oeuvres, pates and galantines. Includes garde manger work. Participation in The Salon of Culinary Art at the International Hotel and Restaurant Show is required of each student. Lab fee $50. Prerequisite: CAHT132 [3 credits]

CAHT 264 | International Cuisine

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: $50. [3 credits]

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. Prerequisite: CAHT160 [3 credits]

CAHT 266 | American Cuisine

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 $50. Prerequisite: CAHT132 [3 credits]

CAHT 268 | Chinese & Asian Cuisine

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 $50 is required. [3 credits]

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. Prerequisite: CAHT 235 [3 credits]

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. [3 credits]

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. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

CAHT 303 | Advance Hospitality Sanitation

Students will rely on the fundamental knowledge gained in the previous CAHT103, Hospitality Sanitation. After CAHT303 they will be able to apply their knowledge from a manager's viewpoint. Students will be able to train others to execute the principle of Hazard Analysis Critical Control Point in a variety of food service settings and a variety of experiences. They will also be able to deal with the public concerning critical events; or deal with inspectors from the health department. Thus, they will be able to identify, analyze, prevent and solve food safety problems in a scientific and professional manner. Prerequisites: CAHT103 and 90 on Serve Safe Certification. [1 credits]

CAHT 310 | Customer Service

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: CAHT255 or BADM249 or permission of the instructor. [3 credits]

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. Prerequisites: CAHT140, CAHT145, CATH160, CAHT111, CAHT132. Lab fee of $50 is required. [4 credits]

CAHT 320 | Principles Food Distribution

This course will study the economic implications of the food industry emphasizing retail and wholesale operations, and of the processes by which prices and profits are determined for the retail and wholesale aspects of the food industry. Prerequisites: AGBU 103 or ECON 123 [3 credits]

CAHT 330 | Supermarket Management

This course is designed to meet the needs of students in supermarket management by acquainting the student with management functions of planning, organizing, staffing, directing, controlling innovating and representing, as they apply to the supermarket. Prerequisites: CAHT 255 or BADM 249 [3 credits]

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 $50.00. [3 credits]

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: $50.00. [3 credits]

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. [3 credits]

CAHT 390A | Special Projects CAHT

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management: Culinary Arts student. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. [1 credits]

CAHT 390B | Special Projects CAHT

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management: Culinary Arts student. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. [2 credits]

CAHT 390C | Special Project

An advanced independent study of topics of special interest to the Bachelor of Business Administration in Technology Management: Culinary Arts student. Students must have prior approval from a cooperating faculty member and the advisor to enroll in this course. [3 credits]

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. [2 credits]

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- or prerequisite: CHEM 101 [1 credits]

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. [2 credits]

CHEM 111 | General Chemistry I

The first semester of a two-semester university-level general chemistry course. This first part will focus on understanding the basic principles of chemistry. Why does matter behave as it does? Topics include: mathematics of chemistry, nomenclature, chemical reactions, stoichiometry, solutions, gases, thermochemistry, atomic structure, chemical bonding and molecular structure. Students will experience a mixture of lectures, demonstrations and group- learning activities. Prerequisite: "C" in high school chemistry or CHEM 101 and placement in MATH 111 or higher; and co-requisite or pre-requisite CHEM 111X [3 credits]

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 prerequisite: CHEM 111 [1 credits]

CHEM 112 | General Chemistry II

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: interpartical forces, states of matter, solutions, chemical equilibrium, acids and bases, electrochemistry, coordination compounds, organic chemistry, polymers, biochemical molecules and nuclear chemistry. Prerequisite: CHEM 111; and co-requisite or prerequisite CHEM 112X [3 credits]

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. It is highly recommended that this course be taken concurrent with CHEM 112. Prerequisite: CHEM 111X; and co-requisite or prerequisite: CHEM 112 [1 credits]

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. Prerequisites: CHEM111 or permission of instructor. [2 credits]

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 or prerequisite: CHEM 216 [1 credits]

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. Prerequisite: CHEM111/CHEM111X and CHEM 112/CHEM 112 X. Co-requisite CHEM231X. [3 credits]

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 spectroscropy, gas chromatography, melting and boiling point analysis, refractive index, and optical rotation are used to identify hydrocarbons. Co-req. or Prerequisite: CHEM 231 [2 credits]

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. Prerequisite: CHEM 231 and CHEM 231X; and co- requisite or prerequisite: CHEM 231X and CHEM 232X [3 credits]

CHEM 232X | Organic Chemistry II Lab

Continued study of the methods, techniques, syntheses and instrumentation of representative classes of organic compounds. Prerequisite: CHEM 231 and CHEM 231X; and co-requisite or prerequisite: CHEM 232 [2 credits]

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. Prerequisite: CHEM 111 and CHEM 111X [2 credits]

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. [2 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

CHEM 351 | Biochemistry

The structure, function and synthesis of proteins, nucleic acids, carbohydrates and lipids, enzyme kinetics, bioenergetics and introduction to metabolism. Prerequisite: CHEM111 and CHEM231 or permission of the instructor. 3 class hours [3 credits]

Chinese

CHIN 101 | Beginning Chinese

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. [3 credits]

CHIN 102 | Beginning Chinese 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 already formally studied another foreign language, completed CHIN101 or can be recommended by a faculty member who teaches a foreign language. [3 credits]

Information Technology

CITA 110 | Microcomputer Applications I

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. [3 credits]

CITA 112 | Spreadsheet & Database Applic

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. [3 credits]

CITA 115 | Computer Operating Systems

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. Co-requisite: CITA115X Course fee of $45 is required. [2 credits]

CITA 115X | Computer Operating Systems Lab

Laboratory experience directly related to the material in CITA115. 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: CITA115 [1 credits]

CITA 120 | Computer Hardware Concepts

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. [2 credits]

CITA 120X | Comp Concepts & Op Systems Lab

Laboratory experience directly related to the material in CITA120. Students will construct PCs, and install, configure, test and troubleshoot system software to apply the various concepts covered in the lecture. Co-requisite: CITA120 [1 credits]

CITA 130 | Web Publishing I

This course is a study of the planning and creating of web pages using XHTML (Extensible Hypertext Markup Language). Topics include: The World Wide Web, XHTML standards, XHTML tags, hypertext links, planning and designing a web page, using colors and graphics, a web page with tables, a web page with forms, using frames in a website, image maps and Cascading Style Sheets. Students will plan, design and create web pages. [3 credits]

CITA 140 | Intro to Programming

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. [3 credits]

CITA 150 | Typography and Layout

The requirements for CITA 150 will be met by GART 151. [3 credits]

CITA 170 | COBOL Programming

A study of ANSI COBOL (Common Business Oriented Language) programming techniques and applications. Emphasis is placed on sequential file processing and concepts of modular and structured programming. Students will write, test and debug programs that involve business applications in an on-line programming environment. Prerequisite: CITA 140 or permission of the department. [3 credits]

CITA 190 | Linux Operating System

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: CITA115 or permission of the instructor. Co-requisite: CITA190X Course fee of $45 is required. [2 credits]

CITA 190X | Linux Operating System Lab

Laboratory experience directly related to the material in CITA190. Students will use a hands-on approach to learn how to install, configure, and administer Linux-based computers. [1 credits]

CITA 200 | Data Communication Networking

A study of the terminology, hardware and software associated with data communications systems. Topics include design principles for human-computer dialogues, selection criteria for communications devices, the technology behind data transmission, techniques and message protocols for line control and error processing. Prerequisite: CITA115, CITA190 Co-requisiste: CITA200X. Course fee of $45 is required. [2 credits]

CITA 200X | Data Comm & Networking Lab

Laboratory experience directly related to the material in CITA200. Students will utilize hardware and software to apply techniques and message protocols for line control and error processing. [1 credits]

CITA 205 | Advanced COBOL Programming

A study of advanced ANSI COBOL programming techniques and applications. Topics include: program development, advanced file processing techniques, program management and contemporary programming techniques. Students will write, test and debug programs that involve business applications. Prerequisite: CITA 170 or permission of the department. [3 credits]

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. [3 credits]

CITA 215 | C++ Programming

An intense survey and introduction to programming in the C++ programming language. Topics will include instruction format, expressions, data types and representations, control structures, input and output formats, structures and functions, and error handling. Prerequisite: CITA 140 or permission of department. Course fee of $45 is required. [3 credits]

CITA 220 | Systems Analysis

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. Prerequisite: CITA115, CITA190 or permission of the department. Course fee of $45 is required. [3 credits]

CITA 230 | Network Technology

Survey and evaluation of network media, access methods and topologies. Design, configuration, operation and maintenance questions are explored. Topics will include end-user perspective, network operating systems, cabling hardware protocols, software, design and administration. Prerequisite: CITA115, CITA190 or permission of the department. Co-requisite: CITA230X. Course fee of $45 is required. [2 credits]

CITA 230X | Network Technology Lab

Laboratory experience directly related to the material in CITA230. Students will design, develop, implement and administer computer networks. Co-requisite: CITA230 [1 credits]

CITA 240 | Computer Graphics I

The requirements for CITA 240 will be met by GART 251. [3 credits]

CITA 245 | Introduction of Cisco Routing

The main goal of this course is to provide students with a comprehensive understanding of the first half of the CISCO Networking Academies Program material. This includes, but is not limited to, Cisco's semesters I and II. This course covers network devices, routed and routing protocols, TCP/IP and IP addressing and subnetting, electricity and electronics, network maintenance and troubleshooting, WAN concepts, and basic Cisco router commands. The second half of the Cisco curriculum is taught in a separate course. After the second course, all CCNA and Net+ certification objectives will have been covered. Thus the ultimate objective is for the students to pass the CCNA exam. If they want to, students may also sit for the Net+ exam. Prerequisite: CITA115 or permission of instructor. Co-requisite: CITA245X [2 credits]

CITA 245X | Introduction Cisco Routing Lab

Laboratory experience directly related to the material in CITA245. Students will design and install, maintain and troubleshoot computer networks that include network devices and routers. Co-requisite: CITA245. [1 credits]

CITA 250 | Computer Graphics II

The requirements for CITA 250 will be met by GART 252. [3 credits]

CITA 260 | Photography & Digital Imaging

The requirements for CITA 260 will be met by GART 260. [3 credits]

CITA 270 | Desktop Publishing

This course provides the computer user, who has little or no design background, with the information and hands-on experience needed to use desktop publishing. This course develops the skills necessary to create professionally attractive and effective published materials, such as newsletters, advertisements, brochures, manuals and other documents. It enables the user to choose a variety of type faces, fonts and sizes; design grid systems and lay rules and screens; create graphics or "import" graphics from other programs; and "pour" text and paste graphics into the grid systems. Projects are developed using a variety of design grid systems, types and graphics. Prerequisites: CITA 110 or permission of instructor. [3 credits]

CITA 275 | Intro to Telecommunications

This course presents an introduction to telecommunications concepts and terminology, network components, communications applications and common carriers. It is designed to provide an overview of network management techniques for the major communications technologies. It provides an excellent foundation for students planning to enter the telecommunications field, as well as a basis for further studies in distributed systems and computer networking systems. Prerequisites: CITA 140 or permission of department. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

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]

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. Prerequisite: Open to second-year students who have completed at least one programming language and have the approval of department. [1 credits]

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. Prerequisite: Open to second-year students who have completed at least one programming language and have the approval of department. [2 credits]

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. [3 credits]

CITA 300 | Comp Sys Support & Maintenance

This is a project oriented course that focuses on the support and maintenance of PCs. Students will learn how to plan, organize, implement and operate a support system and apply this knowledge and skill through actual participation in a help desk environment. Students will also learn how to upgrade, troubleshoot and maintain PC hardware and software, how to

build and repair PCs in a hands-on environment. Prerequisites: CITA120, CITA190 or permission of department. Co-requisite: CITA300X. Course fee of $45 is required. [2 credits]

CITA 300X | Comp Sys Support/Maint Lab

Laboratory experience directly related to the material in CITA300. Students will build, repair, upgrade, troubleshoot and maintain PC hardware and software. Co-requisite: CITA300 [1 credits]

CITA 305 | JAVA Programming

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 feature such as user interface design, exception handling and multithreading. Prerequisite: CITA215 or permission of the department. [3 credits]

CITA 310 | Web Server Administration

A comprehensive survey of all aspects of web server administration. Students will gain hands-on experience by actually installing and administering their own web servers in a lab environment. Topics include: server installation and configuration, site planning, supporting dynamic content with CGIs and ASPs, web server maintenance and web site security. Prerequisite: CITA230 or permission of the department. Co-requisite: CITA310X. Course fee of $45 is required. [2 credits]

CITA 310X | Web Server Administration Lab

Laboratory experience directly related to the material in CITA310. Students will plan, install, configure, and maintain a web server site with security. Co-requisite: CITA310 [1 credits]

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: CITA230 or permission of department. Co-requisite: CITA320X. Course fee of $45 is required. [2 credits]

CITA 320X | Networking Administration Lab

Laboratory experience directly related to the material in CITA320. Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Corequisite: CITA320. [1 credits]

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. [2 credits]

CITA 330 | Web Publishing

A comprehensive survey of using HyperText Markup Language (HTML) to create robust and functional Web pages. Topics include: HTML: standards and browser capabilities, information architecture, bandwidth considerations, image formats, image maps, frames, forms and CGIs, and introduction to technologies for creating dynamic content including JavaScript, Java, ActiveX and Active Server Pages. Will also include topics of current interest such as Dynamic HTML and Cascading Style Sheets. Prerequisite: CITA130 or permission of department. Course fee of $45 is required. [3 credits]

CITA 335 | Cisco Routing

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 CITA245 and this course will have met all CCNA objectives and be able to pass the CCNA exam. Prerequisite: CITA200, CITA245 or permission of department. Co-requisite: CITA335X [2 credits]

CITA 335X | Cisco Routing Lab

Laboratory experience directly related to the material in CITA335. Students will use and configure Cisco routers. Co-requisite: CITA335 [1 credits]

CITA 340 | Data Base Concepts

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, CODASYL data description language, and comparison of the database techniques and traditional approaches. Students will design, create and implement database solutions to business problems. Prerequisite: CITA112 or permission of the department. Course fee of $45 is required. [3 credits]

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. [3 credits]

CITA 355 | Info Tech I: Expert Sys Applic

An introduction to the management of information technology as a strategic resource for organizations. Special emphasis will be placed on microcomputer connectivity, information processing, information storage, technology transfer, computer-human interaction, interpersonal communication skills and expert systems through the use of technical hands-on assignments, projects and case studies. Prerequisite: CITA400 or permission of department. [3 credits]

CITA 360 | Adv Software Applications

This course will study the installation and use of application software. Students gain experience implementing a variety of industry-wide software including, but not limited to, operating systems (MS Windows, Lotus notes, Linus, etc.), mail systems, groupware, back office systems, CAD systems, office productivity suites and voice recognition and synthesis systems. Prerequisite: CITA220, CITA230 or permission of the department. Co-requisite: CITAA360X. Course fee of $45 is required. [2 credits]

CITA 360X | Adv Software Applications Lab

Laboratory experience directly related to the material in CITA360. Students will implement a variety of industry-wide software. Co-requisite: CITA360 [1 credits]

CITA 370 | Network Design Concepts

This course studies the design and implementation of network systems utilizing the various topologies, media, protocols and network hardware, such as bridges, switches, hubs and routers. Prerequisite: CITA220 or permission of department. Co-requisite: CITA370X. Course fee of $45 is required. [2 credits]

CITA 370X | Network Design Concepts Lab

Laboratory experience directly related to the material in CITA370. Students will design and implement network systems utilizing the various topologies, media, protocols and network hardware, such as bridges, switches, hubs and routers. Co-requisite: CITA370 [1 credits]

CITA 375 | Dynamic Graphics & Animation

This is a survey of the use of dynamic graphics in user interfaces and animation in the simulation and visualization of information. Prerequisite: CITA240 or permission of department. Co-requisite: CITA375X [2 credits]

CITA 375X | Dynamic Graphics&Animation Lab

Laboratory experience directly related to the material in CITA375. Students will use the tools and techniques to produce computer graphics and animation. Student projects will be required. Co-requisite: CITA375 [1 credits]

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. Prerequisite: 30 credits of upper division courses. [1 credits]

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. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [1 credits]

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. Prerequisite: Third- or fourth-year BT in IT major in good academic standing and prior approval from a cooperating faculty member and the advisor. [2 credits]

CITA 390C | Special Project Info Tech

A 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. [3 credits]

CITA 392 | Seminar Emerging Technologies

Readings, discussions and presentations on emerging technologies as they relate to the field of Information Technology Management. Students will research, orally present and write summaries on emerging technologies. (May be taken three times for credit.) [1 credits]

CITA 400 | Quant Approaches 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. Prerequisites: MATH 125 and CITA 130 or permission of the department. [3 credits]

CITA 405 | Project Management

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: BADM249 and Junior status. Course fee of $45 is required. [3 credits]

CITA 410 | Multi-Media Computing

This course is a study of the simultaneous control of media elements including graphic, hypertext, digital audio, CD audio, MIDI, digital video and animation. Students will learn and apply the process of creating participant interactive or self-running computer presentations. Prerequisite: CITA 375 or permission of department. [3 credits]

CITA 420 | Programming for the Web

A survey of programming languages and techniques for web development. Topics include CGIs, client side programming with JavaScript; dynamic content using Java and ActiveX; server side programming using Active Server Pages and VBScript;

creating dynamic, database driven content; and developing web based client/server database applications. Prerequisite:CITA330 or permission of department. permission of department . [3 credits]

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 370 or permission of department. Co-requisite: CITA430X. Course fee of $45 is required. [2 credits]

CITA 430X | Sys Integ & Inoperability Lab

Laboratory experience directly related to the material in CITA430. Students will construct and integrate system network components for optimum interoperability. Co-requisite: CITA430 [1 credits]

CITA 440 | Design & Manage Org Training

This course studies the use of the Instructional Systems Design (ISD) model for developing instruction to train end-users of information technology. Students will select an instructional topic and use the ISD model to develop and validate a unit of instruction for end-users. Prerequisite: CITA360, senior student status or permission of the department. [3 credits]

CITA 450 | Applied Data Base Mgmt

A study of object-oriented system applications including but not limited to relational database concepts and methodology, SQL, ODBC, Access programming with VBA, client/server concepts and SQL server. One or more graphical user interface, object-oriented languages. Prerequisite: CITA 350 or permission of the department. Course fee of $45 is required. [3 credits]

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. [3 credits]

CITA 470 | Web Applications

This course allows the student to work directly with e-commerce and Internet technologies to build experience and cement knowledge gained in the classroom. Each student will be required to complete a major course project that will focus on the research, development and implementation of a real Internet e-commerce site. Students will utilize current technology and equipment. Prerequisite: CITA310, CITA340, CITA 420 or permission of the department. Co-requisite: CITA470X [2 credits]

CITA 470X | Web Applications Lab

Laboratory experience directly related to the material in CITA470. Each student will be required to complete a major course project that will focus on the research, development and implementation of a real Internet e-commerce site. Students will utilize current technology and equipment. Co-requisite: CITA470 [1 credits]

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. Prerequisite: 30 credits of upper-level course work (courses with 300 through 400 prefixes) or permission of instructor [9 credits]

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 CITA480 [3 credits]

Communications

COMM 108 | Intro to 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. [3 credits]

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. [3 credits]

COMM 210 | Single Camera Video Production

A course devoted to the techniques of narrative video production. The work will involve preproduction planning, script development, the art of the camera and post- production video and audio editing. [3 credits]

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 difference influence human interaction in an increasingly global environment. Prerequisite: ENGL101 or permission of instructor. [3 credits]

COMM 240 | Television Studio Production

A course devoted to teaching the techniques of television studio production. The work will involve preproduction planning, script development, lighting design, audio design, the art of three studio-camera shooting, technical directing and studio television directing. The students will develop programs intended to be cablecast on the Schopeg Access Television channel. [3 credits]

COMM 260 | The Art of Audio/Video Editing

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: COMM210 and COMM240. [3 credits]

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. [3 credits]

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. Prerequisites: COMM108, COMM210 or COMM240. Must have approval of supervising faculty before signing up for course. [1 credits]

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. Prerequisites: COMM108, COMM210 or COMM240. Must have approval of supervising faculty before signing up for course. [2 credits]

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: COMM108, COMM210 or COMM240. Must have approval of supervising faculty before signing up for course. [3 credits]

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: ENGL101 or ENGL201 This course is intended primarily for bachelor degree students. [3 credits]

COMM 302 | The Dynamics of Narrative

This course is designed to familiarize the student with models of cultural and linguistic systems of signification and their application in media writing. The theoretical component involves study of sign theory and semiology, with special focus on dynamics of narrativity, to include concepts of intertextuality, modalities of action, and the rhetorical function of liminality, schema of transformation, and generating and sustaining tension through semantic opposition. These concepts will be applied in both analytical exercises and a story adaptation. [3 credits]

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. [3 credits]

COMM 311 | The Documentary

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. Prerequisite: COMM210 [3 credits]

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 requires research projects, presentations, classroom discussion and extensive readings and observations of mass media outlets. It is for upper-level communications majors and students in all bachelors programs. Of particular interest will be the corporate culture of media, particularly media consolidation, as well as government regulation. Burgeoning internet media will also be a focus, including news blogging and the controversy over Network Neutrality. We will also examine media bias, the relationship between a healthy press and democracy, and other controversies and legislation (Telcom Act of 1996, Fairness Doctrine, etc). In addition, the course will explore key issues regarding print, radio, TV, and film. Prerequisite: ENGL101 or higher [3 credits]

COMM 380 | Supervised TV Productn Project

The first in a two semester sequence devoted to teaching the work of the video producer through the development of major production projects related to the workplace. The student producer will construct, under the supervision and guidance of a college faculty member, production plans based on educational or corporate needs of his or her employer. The student producer will work with on-site crew, talent, and equipment to complete the production plan. When necessary, equipment needs may be supplemented by college equipment. A minimum of two major projects will be required to complete the course. Prerequisite: COMM210, COMM240, COMM260 [3 credits]

COMM 381 | Supervis TV Production Project

The second course in a two semester sequence devoted to teaching the work of the video producer through the development of major production projects related to the workplace. The student producer will construct, under the supervision and guidance of a college faculty member, production plans based on educational or corporate needs of his or her employer. The student producer will work with on-site crew, talent, and equipment to complete the production plan. When necessary, equipment needs may be supplemented by college equipment. A minimum of two major projects will be required to complete the course. Prerequisite: COMM380 [3 credits]

COMM 411 | Communication Theory/Practice

A capstone course for upper-division communications students, COMM 411 focuses on the art of both oral and written professional communication and presentations. Students will learn effective communication techniques, how to work in groups and how to use state-of-the-art technology in presentations. Prerequisite: ENGL 111 and 2 semesters of writing courses. [3 credits]

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. [3 credits]

COMM 480 | Communications Internship

The internship, along with the Senior Project, represents a culmination of the student's coursework in the Communications in Technology B.S. Students should seek faculty advisement well in advance of internship placement to ensure a suitable fit for the student's interests and talents. The internship will consist of 120 hours of applied experience and may be taken incrementally over the students' 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, 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 Career Development Center. [3 credits]

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. [3 credits]

Early Childhood

ECHD 101 | Basics of Early Childhood

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. [3 credits]

ECHD 121 | Expressive Arts

An introduction to the theoretical and philosophical issues involved in the expressive arts, music, creativity, and aesthetic education, with emphasis on developmentally appropriate practice and young children's holistic development. The course presents a hands-on practical approach to art materials and their safe use and function with children ages 2 to 8, awareness of diverse needs, multicultural backgrounds, and anti-bias strategies will be included. A portfolio will be developed to demonstrate skills, knowledge, and understandings of course content. [3 credits]

ECHD 130 | Intro Early Childhood Programs

The course provides an overview of developmentally appropriate practice in infant, toddler, preschool, kindergarten and primary classrooms. It examines the link between child development and room arrangement, daily schedule, curriculum design and assessment, child guidance, parent-teacher-child relationships, parental involvement and ethical professional conduct. Students are introduced to the variety of professional roles and employment opportunities available to the Early Childhood educator. The history of Early Childhood is examined and differing curriculum models are compared. A position paper on a current issue in Early Childhood Education is written and orally presented. A 6-hour volunteer service in a program for children from birth to age eight is required. [3 credits]

ECHD 150 | Curriculum and Methods

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. [3 credits]

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. [3 credits]

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. [3 credits]

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. [3 credits]

ECHD 229 | Pract Child Care Certificate

A competency-based experience for second semester students enrolled in the Child Care Practice Certificate Program. Students observe, plan activities, assess children's developmental progress and gain leadership skills while assisting with the daily program two hours per day. Seminars, guidance and individual evaluation are provided by Early Childhood faculty. Prerequisites: Grade of "C" or better in ECHD 121, ECHD 143, ECHD 150, ECHD 170 and a GPA of no less than 2.00 [4 credits]

ECHD 230 | Strategies Helping Professions

This course will prepare students for working with families and children as a service provider in a community-based agency. Preparation for the responsibilities of the Child and Family Services professional will be a focus. This includes the following skills: interviewing and counseling techniques, assessment, completing reports, understanding family dynamics, making referrals and addressing legal and ethical issues. Students will shadow professionals and select a practicum site fro the following semester (ECHD 234 for 6 credits). Students must earn a grade of "C" or higher. Pre-requisites: ECHD 170, ECHD 190 [3 credits]

ECHD 231A | Pract Child Care Concentration

A competency-based semester-long experience during the second year at the Campus Child Care Center. Emphasis is placed on the special needs of young children in all-day child care including planning the daily program; curriculum development, nutrition, health and safety issues, family involvement, record-keeping, following state licensing regulations, and child study. A portfolio is required. Prerequisite: Grade of "C" or better in ECHD121, ECHD130, ECHD143, ECHD150, ECHD170 and a GPA of not less than 2.00. Students must be enrolled in Child Care track. [8 credits]

ECHD 231B | Pract Child Care Concentration

A competency-based semester-long experience during the second year at the Campus Child Care Center. Emphasis is placed on the special needs of young children in all-day child care including planning the daily program; curriculum development, nutrition, health and safety issues, family involvement, record-keeping, following state licensing regulation, and child study. A portfolio is required. Prerequisites: Grade of "C" or better in ECHD121, ECHD130, ECHD143, ECHD150, ECHD170 and a GPA of not less than 2.00. Students must be enrolled in Child Care track. [10 credits]

ECHD 231C | Pract Child Care Sequence

A competency-based semester-long experience during the second year at the Campus Child Care Center. Emphasis is placed on the special needs of young children in all-day child care including planning the daily program; curriculum development, nutrition, health and safety issues, family involvement, record-keeping, following state licensing regulations, and child study. A portfolio is required. Prerequisites: Grade of "C" or better in ECHD121, ECHD130, ECHD143, ECHD150, ECHD170 and a GPA of not less than 2.00. Students must be enrolled in Child Care track. [12 credits]

ECHD 232 | Practicum: Early Childhood Prog

A competency-based experience in the second year at the Campus Child Care Center. Emphasis is placed upon the special needs of young children in all-day care. The daily program, licensing, nutrition, health and safety, family involvement, record-keeping, child study and curriculum development are among topics to be considered. A portfolio is required. Prerequisites: Grade of "C" or better in ECHD 121, ECHD 130, ECHD 143, ECHD 150, ECHD 170 and a GPA of not less than 2.00 [4 credits]

ECHD 233 | Pract Early Childhood Programs

This second-year "hands-on" experience with preschoolers at the Effie Bennett-Powe Child Development Center gives each student the opportunity to put into practice everything they have learned in prior courses. Emphasis is placed upon the increasing responsibility in the teacher's role today in the planning, implementing and evaluating of developmentally appropriate experiences for children in the following areas: language and literacy, pre-mathematics, science, sensory and expressive arts. Students design a parent newsletter and implement other forms of parent communication. A required child study, daily evaluations, weekly individual and/or group conferences are included in this practicum. A portfolio is required. Prerequisites: Grade of "C" or better in ECHD 121, ECHD 130, ECHD 143, ECHD 150, ECHD 170 and a GPA of not less than 2.00 [4 credits]

ECHD 234 | Prac School/Community Agencies

This experience is designed to give second-year students the opportunity to apply theoretical knowledge in kindergarten to third grade public school classrooms, special needs classrooms or programs in human service agencies in the community. Students observe, plan, record and assess outcomes under the supervision of the classroom teacher or agency professional. Early Childhood faculty advisors coordinate placement, weekly seminars and individual evaluation. A portfolio is required. Prerequisites: AS in Child and Family Services Program, grade of "C" or better in ECHD230 , and a GPA of not less than 2.00. One class hour seminar per week; minimum of 145 total contact hours of field experience. [6 credits]

ECHD 240 | Child Health, Safety & Nutrition

Students explore a variety of environmental, behavioral, and constitutional factors which influence health dynamics within the family. The role of the teacher/practitioner in observation, prevention, communication, referral and follow up 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, and common childhood emergency awareness and care. Current educational focus for teachers includes the effects of drugs, alcohol, tobacco and HIV/AIDS upon children's health. New York State certification will be provided for Child Abuse/Maltreatment Prevention and Violence Prevention and Intervention (S.A.V.E.). [3 credits]

ECHD 251 | Anti-Bias Curric for Children

Course provides goals and models for incorporating an anti-bias perspective in all areas of teaching. Effective ways of responding to the needs of children in a diverse and changing social environment will be emphasized. [3 credits]

ECHD 252 | Conflict 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. [3 credits]

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. [3 credits]

ECHD 280 | Children with Special Needs

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. Prerequisite: ECHD170 [3 credits]

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 [1 credits]

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 [2 credits]

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 [3 credits]

ECHD 351 | Families as Partners EC Progms

An examination of the importance of families as partners with early childhood staff in the provision of early care and education for their children. Includes a historical perspective of parent involvement and parent education programs, recognition of parents as the primary educators of their children, and the development of true partnerships as families, teachers, and administrators work together to support and enhance a child's development at home and in school. Prerequisite: ECHD130, ECHD170, ECHD280 (may take concurrently) or permission of the instructor. [3 credits]

ECHD 352 | Child Guidance & Classroom Mgt

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, environment, staffing patterns, scheduling, professional development of staff, conflict resolution and reflective teaching. Prerequisite: ECHD130, EHC170 or permission of the instructor. [3 credits]

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: ECHD150 and one science course. 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. [3 credits]

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: EHCD150, ECHD170 or permission of the instructor. Must have earned a grade of "B" or better in Early Childhood Practicum course. This course is for B.S. Child Care and Development students only. [3 credits]

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. Prerequisites: enrollment in the Bachelor of Science in Child Care Development program, junior status. Must have earned a "B" or better in Early Childhood Practicum course. This course is for B.S. Child Care and Development majors only. [1 credits]

ECHD 452 | Dev Approp Assess/Eval EC Prgm

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: MATH125, ECHD150, ECHD170 or permission of the instructor. Must have earned a "B" or better in Early Childhood Practicum course. This course is for B.S. Child Care and Development majors only. [3 credits]

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. [3 credits]

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: ECHD453, 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. [3 credits]

ECHD 455 | Financial Pln & Mgmt EC Prgms

An analysis of all aspects of financial management in quality programs for children and families. Includes hands-on experience with the financial planning process and with the practical applications involved in the fiscal administration of children's programs. Prerequisite: ECHD453, 60 college credits, 18 of which must be in Early Childhood [3 credits]

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: ECHD453, 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. [3 credits]

ECHD 460 | Internship in Early Childhood

The internship is the culminating experience in the bachelor's program. It focuses on the integration and application of the concepts and skills acquired in courses and field experiences during the first three years of the program. The internship is planned by the student and faculty advisor, to meet the student's specific career goals. This experience may involve supervisory or administrative responsibilities, advocacy, program planning, classroom teaching, partnership with families, collaboration among community agencies around the needs of young children and families, or other related areas as approved. As settings for internships, students may choose child care/preschool/Head Start programs; pre-kindergarten/kindergarten public school placements; child life programs in hospitals; early intervention programs; community agencies or other approved early care and education related settings. Students will prepare a comprehensive report and professional portfolio as a requirement of ECHD461. Prerequisite: Senior year standing, GPA of 2.8 or higher [8 credits]

ECHD 461 | Internship Reporting

ECHD461, Internship Reporting, is a four-credit course taken simultaneously with ECHD460, Internship. ECHD461 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 2.8 or higher. [4 credits]

Economics

ECON 123 | Micro-Economics

A study of the composition of the market structure, price and distribution theory, and an analysis of the factors of production and international trade. [3 credits]

ECON 124 | Macro-Economics

An introduction to the operation of the modern national economy including: analysis of national output, income employment, business fluctuations, money and banking. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

ECON 330 | Comparative Economic Systems

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. [3 credits]

Emergency Medical Science

EMSC 112 | Emergency Med Tech EMT

This course completes the requirements for entry into the Basic EMT Exam given by the New York State Department of Health. The course includes giving students a thorough knowledge of NYS treatment protocols associated with trauma and medical-related emergencies as well as with psychological emergencies and hazardous materials awareness. A rigorous clinical component in an emergency room or EMS setting is required. [6 credits]

EMSC 113 | Intro to EMS Instruction

This course is designed for those students who currently possess a valid New York State Emergency Medical Technician certification. This course will introduce students to effective methods used as an EMS educator, especially in the pedagogy of laboratory skills sections of EMS education and training. Students will work closely with the EMS Instructor-Coordinator as they provide leadership and training to those students currently seeking certification as a New York State Emergency Medical Technician. Prerequisite: Valid NYS EMT Certification. [2 credits]

EMSC 201 | Paramedic I

Paramedic candidates will participate in classroom lecture and education that prepare them to provide competent and correct advanced life support treatment of the sick and injured. Curriculum to exceed that of NYS EMT-Intermediate. Prerequisite: Current NYS EMT certification. [8 credits]

EMSC 201X | Paramedic I Lab

Paramedic candidates will participate in paramedic lab sessions that prepare them to provide advanced life support treatment of the sick and injured. Lab section for EMSC 201 (Paramedic Lecture I). This section will be graded as Pass/Fail based upon completion of the curriculum skill competencies. Prerequisite: Paramedic Program acceptance, current NYS EMT certification. Co-requisite: EMSC 201. [4 credits]

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: EMSC201 [6 credits]

EMSC 203 | Paramedic II

Paramedic candidates will participate in continued classroom lecture and education that prepares them to provide competent and correct advanced life support treatment of the sick and injured and expands upon the material covered in EMSC 201. Curriculum to exceed that of NYS EMT-Critical Care. Prerequisite: Current NYS EMT certification, EMSC 201 & EMSC 201X. Co-requisite: EMSC 202 and EMSC 203X. [8 credits]

EMSC 203X | Paramedic II Lab

Paramedic candidates will participate in continued paramedic lab scenarios that prepare them to provide competent and correct advanced life support treatment of the sick and injured and expands upon the material covered in EMSC 201X. This course will be graded as Pass/Fail based upon the completion of curriculum skill competencies. Prerequisite: Current NYS EMT certification, EMSC 201, EMSC 201X. Co-requisite: EMSC 203. [4 credits]

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 [6 credits]

English

ENGL 099 | Intro to College Writing

An introductory course focused on written communication. Students will learn to appreciate, recognize and use effectively those techniques and skills necessary in writing such as basic punctuation, sentence structure, specific and directed content, paragraphing, and essay construction. [3 credits]

ENGL 101 Composition I

In this composition course, students will write personal essays developing a point or an idea with evidence drawn from their own lives and academic essays organized around an intellectual task, such as arguing in favor of an idea, comparing, defining or analyzing. 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. [3 credits]

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 102 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. [3 credits]

ENGL 104 | Oral Interpretation

Development of the ability to discover and to communicate orally an author's ideas, mood and feeling through an analysis of readings in literature. [3 credits]

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. [3 credits]

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. [3 credits]

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. [3 credits]

ENGL 201 | Expository Writing

A course in composition concerned with the principles of rhetoric necessary for effective prose. The emphasis will be upon the methods of exposition, particularly argument, and the development of a style of writing which is unified, coherent and expressive. Prerequisite: ENGL 101, "C+" or above. [3 credits]

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 and practice tutoring skills such as assessing students' needs, listening effectively, asking probing and appropriate questions, and providing constructive feedback. Tutors will learn how to coach students to articulate the meaning of their written work, to generate outlines and/or conceptual information maps to organize material, to generate a thesis statement and to edit for grammatical clarity. Communication skills, assessment and diagnostic tools learned in the course will be applicable to the work- place and the community.

Prerequisites: ENGL 101, with a "B" or better, letter of recommendation from composition faculty and permission of instructor. [2 credits]

ENGL 210 | Latin Am Novel in English Tran

This 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. [3 credits]

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: ENGL101 [3 credits]

ENGL 219 | British Lit a Perspective

Students are steered through a lively series of writings- ranging from the Anglo-Saxons to Samuel Beckett-and provided with a clear line of British literary development. Evaluation will be based upon such factors as class participation, tests including essay questions and written assignments. [3 credits]

ENGL 221 | Readings in Literature

An examination and critical analysis of selected readings which reflect significant intellectual attitudes as they appear in the drama, the novel and in poetic forms. Evaluation will be based upon such factors as class participation, tests including essay questions, and written assignments. [3 credits]

ENGL 223 | Readings 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. [3 credits]

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. [3 credits]

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 241 or by instructor's permission [3 credits]

ENGL 290A | Special Projects-Composition

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 ENGL101 and ENGL201. Prerequisite: Must have approval of supervising faculty before signing up for course. [1 credits]

ENGL 290B | Special Projects - Composition

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 ENGL101 and ENGL201. Prerequisite: Must have approval of supervising faculty before signing up for course. [2 credits]

ENGL 290C | Special Projects - Composition

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 ENGL101 and ENGL201. Prerequisite: Must have prior approval of supervising faculty before signing up for course. [3 credits]

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 102, or ENGL 101 and any Literature class; or ENGL 101 and permission of instructor (all English courses used to satisfy prerequisite requirements must have been passed with a "C+" or better) [3 credits]

ENGL 310 | Selected Topics in English

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. Prerequisite: ENGL 219, ENGL 221, or ENGL 223 [3 credits]

ENGL 316 | Rdngs in Native American Lit

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: ENGL101 and one lower-level literature or writing course, or permission of the instructor. Either NAMS111 or NAMS121 highly recommended. [3 credits]

ENGL 320 | Write:Human Express&Ntrl Wrld

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 or other introductory writing course except ENGL 099 [3 credits]

Engineering

ENGR 110 | Principles of Engineering

This course provides a basic knowledge about the field of engineering. The relationships between science, technology, and engineering will be developed through case studies of robotics, automobiles, structures, and communications and computer control. The case study approach allows students to solve problems using the same techniques employed in engineering firms. Students will use CAD software, computer automated machining equipment, and simulation software to build prototypes of their ideas. Prerequisite: Admission into the Engineering Science Concentration, or permission of instructor. [3 credits]

ENGR 210 | Statics: Engineer Mechanics I

A study of objects in equilibrium (or rigid bodies) using a vector analysis approach. Force systems, centroids and centers of gravity, analysis of structures, shear and bending moments, friction and moments of inertia. Prerequisite: MATH 232 and PHYS 212 [3 credits]

ENGR 215 | Dynamics:Engineer Mechanics II

A vector analysis approach to objects in motion. Kinematics and kinetics of particles, systems of particles and rigid bodies. Forces, mass, acceleration, impulse, momentum, work and energy techniques. Prerequisite: ENGR 210 [3 credits]

ENGR 220 | Engineering Circuit Analysis I

Units and definitions: charge, current, voltage, power and energy, active and passive circuit elements and Ohm's Law; Kirchoff's laws, network reduction, nodal and mesh analysis techniques; Thevenin's and Norton's theorems: Capacitance and inductance; natural and forced response of R-L, R-C, and R-L-C circuits; AC sinusoidal steady state analysis and sinsuoidal forcing functions; Introduction to computer-aided circuit analysis. Prerequisite: MATH 232 and PHYS 212 [3 credits]

Environmental Health

ENHT 101 | Intro Environmental Health

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. [3 credits]

ENHT 109 | Water Supply

Various water treatment processes are studied along with elements of management and sanitation. Some time is spent studying construction and operation of storage tanks, pumps, valves and distribution systems. Various administrative services are considered such as record- keeping, personnel and plant management. Lab exercises may be held at various locations and may involve field trips to local water treatment facilities. Prerequisite: ENHT 101 [3 credits]

Environmental

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 course] [3 credits]

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. Prerequisites: PHYS 111 and MATH 231. [Fall] [4 credits]

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. [3 credits]

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 field. Pre-requisite: PHYS 112 OR PHYS 212. [3 credits]

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] [3 credits]

ENVR 450 | Internship in EET

This course is designed to provide the student with study opportunities and learning experiences with an industry, organization, or agency that are relevant to the student's area of specialization. Prerequisite: Successful completion of six semesters of study in BT EET program. [Spring, Summer, Fall] [12 credits]

English as a Second Language

ESOL 100 | ENGL Speakers Other Languages

Each (beginning, intermediate, advanced) level of this course consists of one month of intensive study in English as a foreign language. Students are taught listening, speaking, reading and writing skills through content-based, context-sensitive materials, including computers. Class- room study with trained ESL instructors takes place five mornings per week for three hours at each session. After noon sessions provide English language reinforcement in US cultural situations. Placement is determined by a writing sample on the first day of class if no TOEFL scores are provided. Students who have taken the TOEFL exam and have received a score of 500 or better are enrolled in the advanced level. [3 credits]

ESOL 120 | ENGL Speakers Other Languages

Each (beginning, intermediate, advanced) level of this course consists of one month of intensive study in English as a foreign language. Students are taught listening, speaking, reading and writing skills through content-based, context-sensitive materials, including computers. Classroom study with trained ESL instructors takes place five mornings per week for three hours at each session. Afternoon sessions provide English language reinforcement in U.S. cultural situations. Placement is determined by a writing sample on the first day of class if no TOEFL scores are provided. Students who have taken the TOEFL exam and have received a score of 500 or better are enrolled in the advanced level. [3 credits]

ESOL 130 | ENGL Speakers Other Languages

Each (beginning, intermediate, advanced) level of this course consists of one month of intensive study in English as a foreign language. Students are taught listening, speaking, reading and writing skills through content-based, context-sensitive materials, including computers. Classroom study with trained ESL instructors takes place five mornings per week for three hours at each session. Afternoon sessions provide English language reinforcement in U. S. cultural situations. Placement is determined by a writing sample on the first day of class if no TOEFL scores are provided. Students who have taken the TOEFL exam and have received a score of 500 or better are enrolled in the advanced level. [3 credits]

Exploratory Studies

EXPL 101 | Exploratory Studies Seminar

A course designed to enhance student skills and abilities necessary to achieve educational objectives and to make academic program choices toward career goals. Topics include time management, study techniques, library skills, test-taking skills and various aspects of self awareness. Emphasis placed on career planning. Field trips required. Open to Exploratory Studies students only or by permission of instructor. [3 credits]

Foundation for College Success

FFCS 199 | 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; a passing grade is required for graduation. [1 credits]

French

FREN 101 | Beginning French I

This is the first semester of a two-semester sequence in the basic skills of understanding, speaking, reading and writing the French language. [3 credits]

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: FREN101 or three years of high school French and a 75 or higher on the NYS Regents [3 credits]

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 [3 credits]

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. the instructor [3 credits]

Financial Services Management

FSMA 201 | Fundamentals of Financial Plng

This course introduces the discipline of personal financial planning as an occupation and also covers the role and scope of investments. The topics that will be covered include professional ethics, economic indicators, risk management and investment principles. In terms of investments, such topics as security markets, corporate and government bonds, common stock investment and analysis, mutual funds, and investment strategies will be discussed. [3 credits]

FSMA 300 | Investments

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 [3 credits]

FSMA 310 | Income Tax Planning

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. [3 credits]

FSMA 325 | Insurance & Risk Management

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. [3 credits]

FSMA 330 | Computer App in Financial Svcs

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: ACCT101, ACCT103, CIT110, FSMA201 [3 credits]

FSMA 340 | Emp Benefit/Retirement Plan

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: FSMA201 Prerequisite: FSMA 201 [3 credits]

FSMA 380 | Internship Orientation Fin Svc

Bachelor degree 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. Prerequisite: Completion of one semester in the Bachelor's program. [1 credits]

FSMA 410 | Estate Planning

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 [3 credits]

FSMA 420 | Case Studies Financial Plng

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 [3 credits]

FSMA 480 | Internship

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 of 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. Prerequisite: 9 credits upper-level FSMA courses Corequisite:FSMA485 [9 credits]

FSMA 485 | Internship Financial Svcs Rptg

Financial Services students enrolled in FSMA480, Internship in Financial Services, 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 FSMA480. [3 credits]

Fisheries and Wildlife – Natural Resources

FWLD 101 | Intro Fish Wildlife Cons

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. [3 credits]

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. [1 credits]

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) [3 credits]

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) [3 credits]

FWLD 209 | Fish Nutrition

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. [1 credits]

FWLD 211 | Wildlife Law Enforce & PR

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. [2 credits]

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. [1 credits]

FWLD 220 | Wildlife Management

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 major only) [3 credits]

FWLD 221 | Fisheries Science

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. [3 credits]

FWLD 223 | Fisheries & Wildlife Seminar

In this seminar students will conduct intensive research on a subject area otherwise not covered in Fisheries and Wild- life courses. These projects will include both field and library research. The results will be written up in a manner suitable for publication in a scientific journal. Prerequisite: BIOL 131, FWLD 115 or FWLD 125 and senior status in the Fisheries and Wildlife Technology major [2 credits]

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. [1 credits]

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. [3 credits]

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: BIOL131, FWLD220 or FWLD221. [3 credits]

FWLD 325 | Aquaculture Engineering

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: MATH111 or its equivalent. [3 credits]

FWLD 330 | Production Aqua/Merriculture

The objective of this course is to introduce students to the principles and practices applied in production aquaculture/merriculture. 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. [3 credits]

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 [3 credits]

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 [1 credits]

FWLD 352 | Wetland Ecosystems

A comparative review of the physical and biological characteristics of major wetland ecosystems across North America. The functional role of wetlands systems and associated wildlife will be emphasized. Prerequisite: FWLD 350 [1 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

FWLD 400 | Pond Management

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: BIOL318 or permission of instructor. [1 credits]

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: FWLD115, FWLD221 and MATH125. [3 credits]

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 assimiliates 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: FWLD330 [3 credits]

FWLD 440 | Fisheries Research

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: Technical Writing and A.A.S. Fisheries courses. [3 credits]

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. [15 credits]

FWLD 451 | Aquatic & Marine Resource Mgmt

Aquatic and marine resource management issues are technically and politically complex, involving many interests, perspectives and stakeholds. This course emphasizes the information needs for policy and decision making and provides for a close interface with scientists active in this area through visiting lecturers and three-month professional experience 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: Twelve weeks professional experience, BIOL215 and BIOL415. [3 credits]

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. [3 credits]

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. [3 credits]

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 [3 credits]

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 [3 credits]

GART 260 | Photography

An introduction to the principles of black and white photography including the use of a 35 mm camera, film processing, and printing. Photography is explored as a means of creative expression. Emphasis will be placed on design and composition. [3 credits]

GART 265 | Web Design

This course approaches the creation of a Web site as a design problem. Students will learn the basics of HTML as well as the creation and preparation of images for Web publication. Particular attention will be paid to the role that graphics (photographs, illustrations and navigational graphics) play in the overall design of the site. File size considerations, file formats, color models and the importance of tables for alignment will also be covered. We will examine numerous sites already posted on the Web and discuss their effectiveness in terms of design and construct several different types of sites including commercial, informational and those which require user input. [3 credits]

GART 270 | Digital Imaging

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. [3 credits]

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. [1 credits]

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. 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. [1 credits]

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. 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. [2 credits]

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. [3 credits]

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. [3 credits]

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. [3 credits]

GART 375 | Web Animation

The course provides a fundamental understanding of the methods and procedures for interactive Web animation. Students will have hands-on experience designing and implementing highly functional animated Web presentations using sound, video and vector graphics. Pre-req: GART 265. [3 credits]

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. [3 credits]

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. [3 credits]

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. [3 credits]

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. Prerequisites: MATH111 and CITA110. [2 credits]

GIST 130X | Geographic Info Systems Lab

Hands-on application of the topics covered in GIST130. [1 credits]

Government

GOVT 141 | American Government

A survey of the federal government, its institutions and operation, and the political processes related thereto. [3 credits]

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 [3 credits]

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 [3 credits]

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. 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. [1 credits]

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. 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. [2 credits]

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. 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. [3 credits]

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: GOVT141 - American Government, or permission of the instructor. [3 credits]

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: GOVT141 - American Government, or permission of the instructor. [3 credits]

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: GOVT141, HIST102 or GOVT143 or permission of instructor [3 credits]

History

HIST 101 | Hist Western Civilization I

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. [3 credits]

HIST 102 | Hist Western Civilization II

This course is a continuation of HIST101. 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. HIST101 is not a prerequisite for HIST102. [3 credits]

HIST 103 | History World Civilization I

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. [3 credits]

HIST 104 | History World Civilization II

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. [3 credits]

HIST 121 | History of United States I

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. [3 credits]

HIST 122 | History of United States II

An investigation of the political, economic and social development of the United States. The course begins with Reconstruction and moves to the 1990s. [3 credits]

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: HIST102 or HIST104 or HIST121 or HIST122 or SOSC111. [3 credits]

HIST 290A | Special Projects History

An independent or small group study course designed to permit an individual student or group of students to pursue 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. [1 credits]

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. 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. [2 credits]

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. 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. [3 credits]

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: HIST122. [3 credits]

Honors

HONR 101 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for colloquium sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 102 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for colloquium sessions by reading, researching, writing etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 201 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable 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 colloquium sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 202 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for colloquium sessions by reading, researching, writing etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 250 | Honors Assistantship

Honors Assistantship is open solely to current Honors Program students. Participating honors students will receive college credit for tutoring in local high schools. Students will contract with local on-site faculty/administrators and Honors Program director to design tutoring activities. To receive one college credit will require three hours per week of tutoring through the semester. Students will work closely with supervising on-site faculty and honors director. Contracts will include requirement for weekly progress reports to be completed by on-site supervising faculty, weekly journal of student's tutoring activities, and final paper summarizing the tutoring experiences at semester's end. Final grade will be determined via review of progress reports, journal and final paper by Honors Program director and on-site supervising faculty/administrator. Prerequisite: Current membership in good standing in Honors Program. [1 credits]

HONR 299 | Honors Capstone Project

This Capstone Project is a culminating course offered in 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. [3 credits]

HONR 301 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for colloquium sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 302 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for colloquium sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 401 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Student will prepare for colloquium sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 402 | Honors Colloquium

An intensive small-group colloquium on major public or intellectual issues. It is intended for highly capable students from all majors: its appeal will be general and/or interdisciplinary, and its focus will be determined by the expertise of the presenting professor. Topics will vary each semester. Students will prepare for colloquium sessions by reading, researching, writing, etc., as appropriate. Prerequisite: enrollment in the Honors Program or a 3.5 GPA or permission of instructor. Priority will be given to Honors Program participants. [1 credits]

HONR 499 | Honors Capstone Project

The Capstone Project is a culminating course offered in 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. [3 credits]

Hotel Technology

HOTL 101 | Hotel Mgnt & Operations

The course will provide an overview of the many aspects of management in various types of lodging properties. Each department of the hotel will be examined, along with the importance of the interrelationships of these departments. The course will focus on understanding hotel operations and the significance of service in hospitality. Field trip required: approximately $25. [3 credits]

HOTL 110 | Hotel/Motel Housekeeping

The course will focus on the management of the housekeeping department as it relates to the overall operation of the hotel or institution. The course includes basic principles of service in a hospitality organization and the duties and management responsibilities of the Executive Housekeeper. The course also includes human resources practices, housekeeping and maintenance procedures, guest room cleaning, purchasing, room layout and design, and safety and risk management. [3 credits]

HOTL 150 | Hotel/Motel Front Office Proc

This course is an introduction to front office management and operations. The course includes an introduction to the hotel industry, front office procedures including guest services, the guest cycle from reservations through checkout, internal accounting, billing procedures and the night audit. The course includes extensive computer utilization including a simulation of a hotel property management system and a hotel reservation system. [3 credits]

HOTL 205 | Prin Mktg for Svc Businesses

A principles of marketing course that introduces the student to the market, marketing segmentation, external and internal influences, channels of distribution, and the communication mix of advertising, promotions, public relations and personal selling. As a foundations of marketing course, the role of the sales and marketing office is described, along with marketing research and the development of a marketing plan. Illustrations of the marketing principles presented in this course come from the hospitality and tourism industry. [3 credits]

HOTL 210 | Lodging Accommodations Mgmt

The course will focus on the management of the housekeeping department as it relates to the overall operation of the hotel or institution. The course includes basic principles of service in a hospitality organization and the duties and management responsibilities of the Executive Housekeeper. The course also includes human resources practices, housekeeping and maintenance procedures, guest room cleaning, purchasing, room layout and design, and safety and risk management. Prerequisite: HOTL101. [3 credits]

HOTL 275 | Hotel Practicum Mgmnt Systems

Field work in the hotel 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. [3 credits]

Humanities

HUMS 101 | Intro to the Humanities

A 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. [3 credits]

HUMS 160A | Stagecraft Theater

Individual study in the art of acting or in the techniques of play production. [1 credits]

HUMS 160B | Stagecraft Theater

Individual study in the art of acting or in the techniques of play production. [2 credits]

HUMS 160C | Stagecraft Theater

Individual study in the art of acting or in the techniques of play production. [3 credits]

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. Pre-requisite: ENGL 101 or ENGL 102 [3 credits]

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. [3 credits]

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. Prerequisite: Must have approval of supervising faculty before signing up for course [1 credits]

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. Prerequisite: Must have approval of supervising faculty before signing up for course [2 credits]

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 [3 credits]

HUMS 309 | Documentary Theory & Aesthetic

This course is a theoretical consideration of documentary filmmaking, covering the subgenres, conventions, evolution, social impact, and contemporary issues of the genre. Students will watch and critique films that represent a variety of approaches to the genre. Prerequisite: Hums 210 or permissions of instructor. [3 credits]

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. [3 credits]

HUMS 315 | Middle East Culture

The Middle East Culture course is a four-week (summer) overview of language and culture in the Middle East (particularly Egypt). It provides an interdisciplinary approach that allows students to gain deeper insights and a greater understanding of the Middle East region. The course is designed for students studying abroad at SUNY Cobleskill's partner institution in Egypt. Pre-requisites: Completion of sophomore year or permission of the Director of International Programs; 2.5 GPA. Application is due by March 15 (per study abroad on Cobleskill website). [3 credits]

HUMS 490 | Study Abroad Internship

The Study Abroad Internship is a semester-long experience involving language immersion and volunteer work components. Students earn 3-4 foreign language credits while studying at an approved language institute or university and living with a host family. After the four-week language immersion portion of the internship, students engage in approximately eight weeks (120 or 135 hours) of volunteer work with social, educational, governmental, or health-related agencies and earn eight or nine additional credits. During the volunteer work experience, students may live with host families or in institutional housing. A total of 12 credits is awarded for successful completion of the Study Abroad Internship. Intermediate level knowledge of a foreign language is required for the volunteer work experience. Therefore, at minimum, students enrolling in the Study Abroad Internship must have successfully completed Foreign Language 101 at the college level before going abroad. Prerequisite: Senior level status; 3.00 GPA in the major. [12 credits]

Japanese

JAPN 101 | Beginning Japanese

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. [3 credits]

JAPN 102 | Beginning Japanese 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 already formally studied another foreign language, completed 101 or can be recommended by a faculty member who teaches a foreign language. [3 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 [3 credits]

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 [3 credits]

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 bachelors 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. [3 credits]

Language

LANG 290A | Spec Project Modern Languages

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects in modern languages, as approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [1 credits]

LANG 290B | Spec Project Modern Languages

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects in modern languages, as approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [2 credits]

LANG 290C | Spec Project Modern Languages

An independent or small group study course designed to permit an individual student or a group of students to pursue topics or projects in modern languages, as approved by supervising faculty. Prerequisite: Must have approval of supervising faculty before signing up for course. [3 credits]

LANG 310 | Selected Topics Language

This course will allow qualified native speakers of a foreign language to observe and analyze the challenges involved in second language acquisition. Native-speaker students will accomplish these tasks as they mentor and tutor novice students in a self-instructional foreign language program. Tutors will be required to design natural language situations that provide appropriate contexts for conversation practice and grammar drills. At the end of the semester, they will also be expected to submit a report that describes and analyzes the challenges faced by the second- language learners in the class. [3 credits]

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 MATH101X, MATH103 or higher. Placement:based on high school or college transcript. [3 credits]

MATH 101X | Into Coll Math Review Fund Mat

A course which integrates arithmetic topics with the introductory topics in MATH101. The arithmetic topics include operations on whole numbers, fractions, and decimals; arithmetic applications, percents and their applications; ratio; proportions and their applications. The algebra 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.A., A.S, B.B.A., B.S. or B.T. degree. The course can only be used for free elective credit. This course is not open to students who have successfully completed MATH101, or higher. Placement: based on high school transcript. [3 credits]

MATH 103 | Mathematics of Finance

A course in which arithmetic and algebra are applied to business problems including ratio, proportion, percentage, formula derivation and transformation, income statement analysis, simple interest and bank discount, compound interest and discount, annuities, debt extinction and depreciation. Prerequisite: placement per high school department. transcript, MATH101 or MATH101X , or permission of the competency in the Mathematics Department. [3 credits]

MATH 106 | Contemporary Math Topics

A survey course designed for students entering fields of study which do not have a strong emphasis on mathematical techniques beyond the introductory algebra level. Students will gain an appreciation for the power and utility of mathematics in solving everyday problems. Topics may include introductory statistics and probability, consumer mathematics, social choice, problem-solving, geometry of size and shape. Additional topics may be added or substituted by the instructor. Not open to students with four units of high school mathematics. Prerequisite: placement per high school transcript, MATH101 or MATH101X, or permission of the Mathematics Department. [3 credits]

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 MATH101 or MATH101X with "C-" or higher, or by permission of the Mathematics Department. [3 credits]

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, MATH111, or by permission of the Mathematics Department. [3 credits]

MATH 114 | Topics Elem Math 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. [3 credits]

MATH 125 | Statistics

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: placement per high school transcript, MATH111 or above, or by permission of the Mathematics Department. [3 credits]

MATH 131 | Pre-Calculus

A course designed to provide the necessary foundation for a standard calculus course. The focus of precalculus 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 MATH112, or by permission of the Mathematics Department. [4 credits]

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: MATH125 or its equivalent with a minimum grade of "C." [3 credits]

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. [3 credits]

MATH 231 | Calculus I

A course in plane analytic geometry, functions, limits, continuity, differentiation and anitdifferentiation 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 precalculus, MATH131 ("C" or better), or by permission of the Mathematics Department. [4 credits]

MATH 232 | Calculus II

A continuation of MATH231. Topics include the definite integral, applications of integration, advanced integration techniques numerical approximations of definite integrals, indeterminate forms, improper integrals and infinite series. Prerequisite: MATH231 [4 credits]

MATH 233 | Calculus III

A multivariable calculus course including the following topics: power series, parametric equations and polar coordinates, vectors and vector functions, three-dimensional coordinate system, partial differentiation, double and triple integrals, applications, line integrals. Prerequisite: MATH232 [4 credits]

MATH 285 | Discrete Mathematics

Introduction to logic, principles of set theory, induction and recursion, techniques of mathematical proofs, combinatorics, introduction to graph theory. Prerequisite: MATH231 or by permission of the instructor. [3 credits]

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. [1 credits]

MATH 290B | Spec Projects Math

An independent or small group study course designed to permit and individual student or a group of students 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 choices of project at the time of enrollment. [2 credits]

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. [3 credits]

MATH 310 | Differential Equations

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: MATH232. [4 credits]

MATH 385 | Mathematical Structures

This course provides students with a working knowledge of the following topics: algebraic structures, uniform structures and topological structures. Through this course students will have a chance to dramatically expand their mathematical horizons. This course emphasizes rigor and the concept of mathematical proof, providing the students with adequate tools to handle future courses in the pure sciences. Prerequisite: MATH285 or permission of the instructor. [3 credits]

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. Prerequisite: HOTL205 or BADM134 [3 credits]

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. Prerequisites: PSYC111 and CAHT255 or BADM249 [3 credits]

MKHT 455 | Strategic Mktg Hosplty/Tourism

An advanced level principles of marketing course that provides the student with both the theory and application of strategic marketing in service businesses. The role of marketing in strategic planning will be examined in order to achieve organizations goals of customer retention and increased profitability. The course will focus on the analysis, planning and implementation of marketing strategies. The course will include use of case studies and internet research. Illustration of the marketing principles presented in this course come from the hospitality and tourism industry but can be applied to any service business. Prerequisite: HOTL205 or BADM134 [3 credits]

Music

MUSC 111 | College Choir

An organization of men and women who study and perform standard choral literature of all musical periods. Open by permission of the instructor to acceptable singers on either a credit or an audit basis. There is no limit on the number of semesters a student may elect this course. [1 credits]

MUSC 113A | Women's Choruses

The Men's and Women's Chorus perform both as separate groups and also combined to form a large mixed chorus. Performance material ranges from barbershop numbers to masterpieces of choral literature. Membership is open to all students on either a credit or an audit basis. There is no limit on the number of semesters a student may elect this course. [1 credits]

MUSC 113B | Men's Choruses

The Men's and Women' Chorus perform both as separate groups and also combined to form a large mixed chorus. Performance materials range from barbershop numbers to masterpieces of choral literature. Membership is open to all students on either a credit or an audit basis. There is no limit on the number of semesters a student may elect this course. [1 credits]

MUSC 121 | Introduction to Music

An introductory course in music listening and appreciation which begins with the basic characteristics of music and is so organized that the elements of music are examined through listening to music. The course will require concert performance attendance with the possibility of a field trip to concerts in the Capital District. Cost: Approximately $15 [3 credits]

MUSC 123 | 20th Century Music Am Contrib

A study of the mainstreams in American 20th Century music: rock and roll, jazz, serial, and chance. The course will require concert performance attendance with the possibility of a field trip to a concert in the Capital District: Cost: approximately $15. Prerequisite: MUSC121 or permission of instructor. [3 credits]

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. [1 credits]

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. Prerequisite: Must have approval of supervising faculty before signing up for course. [1 credits]

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. Prerequisite: Must have approval of supervising faculty before signing up for course. [2 credits]

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. [3 credits]

MUSC 310 | Selected Topics 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. [3 credits]

Native American Studies

NAMS 111 | Intro to Iroquois

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. [3 credits]

NAMS 121 | Intro Native American Studies

The course is intended to provide students with an introduction to Native American Societies in the present-day US from prior to the arrival of Europeans until US 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 US -- on native nations. [3 credits]

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 US 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 1970s. The course will focus on the survival stories of native peoples who defended their ways of life against the US onslaught and reached a point in the 21st century of being flourishing communities dealing with modern challenges while maintaining traditional perspectives. [3 credits]

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: NAMS111 or NAMS121. [3 credits]

Nutrition

NTRN 122 | Nutrition

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. [3 credits]

Ornamental Horticulture

ORHT 105 | Introduction to Horticulture

This course is designed to introduce students to the careers and opportunities in the green industry/plant sciences. An overview of the industry will be studied. Students will learn about the growth and care of plants for outdoor gardens and indoor settings. Students will be given the opportunity to learn about the wide diversity of horticultural species including house plants, flowers, vegetables, turf grass, weeds, shrubs, and trees. Skills in sexual and asexual plant propagation, growing plants, and plant maintenance will be studied. This is a basic course specifically designed for students who have little or no previous experience in horticulture and wish to develop skills and knowledge with plants. Lectures and field/greenhouse experience. [3 credits]

ORHT 111 | Floral Design I

Basic principles of floral design with emphasis on commercial florist practices. Centerpieces, line designs, novelties and dried floral arrangements are created as well as corsages. Pricing and selling and care of cut flowers are discussed. Optional field trips to design shows sponsored by the florist industry. Laboratory fee of $100 is required. [3 credits]

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. [1 credits]

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. [1 credits]

ORHT 121 | Woody Plant Materials

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. [3 credits]

ORHT 122 | Environmental Design I

An introduction to the physical and environmental composition of the private, public and commercial landscape. Emphasis is placed upon principles of design, use of plant materials and sociological needs of people in order to achieve the optimum functional, economic and aesthetic development of land areas. There is a large studio for designing. Drawing supplies are needed. Course supply costs are approximately $120 (including $20 copy machine user fee). Field trips are required. [3 credits]

ORHT 133 | Horticultural 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). [3 credits]

ORHT 134 | Horticulture Therapy Technique

This course is designed to be a guide with suggestions and procedures for initiating and conducting a horticultural program for the disabled and disadvantaged. Special consideration will be given to meeting the needs of the physical and psychological characteristics of handicapped people by horticultural therapy techniques. Various horticultural activities and procedures that can be adapted to meet the needs and capabilities of these various groups will be discussed and implemented at nearby facilities. [3 credits]

ORHT 160 | Landscape Contracts

The course is a five-week study of the working relationships that exist between landscape architects, contractors, sub-contractors and clients as governed by written contracts. Students will learn the many different types of contracts that are part of the landscape industry. Additionally, they will learn to write a basic contract and do quantity measurements for the preparation of specifications and cost estimates. [1 credits]

ORHT 161 | Landscape Graphics

The course is a ten-week study of the methods of illustration used by landscape designers and the media used to render those illustrations. Students will create elevations, orthographic and perspective views of landscapes. Projects will focus on both sketched and constructed drawings. Media used will include pencil, ink and colored pencils. Emphasis will be on skill development. Course costs are approximately $120, including copy machine user fee ($20.). [2 credits]

ORHT 172 | Mgmt of Horticulture Business

The principles and practices necessary for planning and operating a successful retail horticulture business is the focus of this course. In-depth studies will include: market analysis, business plan, site and location, shop location, ownership, business insurance, start-up capital, merchandise displays, pricing, inventory control, salesmanship, marketing, human resource management and computer record keeping. Students will receive first-hand training in retail horticulture sales with a campus flower shop and garden center business called "Anything Grows." The course includes a term project to plan for the opening of a retail or wholesale horticulture business. Additional course fees, including field trip to horticulture businesses are required. [3 credits]

ORHT 199 | Contemporary Design

Current trends and techniques in American and European design will be covered. Students will use a variety of plant materials as they develop table decorations, party and balloon designs, vegetable arrangements as well as topiary and others. Prerequisite: ORHT111. Laboratory fee of $100 is required. [3 credits]

ORHT 200 | Occ Exp/Nursery Production

Courses designed in selected areas 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 courses is by permission of the instructors since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 201 | Occ Exp/Green Roofing

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 202 | Occ Exp/ALCA

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 203 | Occ Exp/Student Career Days

Courses designed in 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 204 | Occ Exp/Interior Plants

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 205 | Occ Exp/Turf Management

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 206 | Occ Exp/Landscape Imaging

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 207 | Occ Exp/Heritage Tree

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 208 | Occ Exp/Greenhouse Mgt

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 209 | Occ Exp/Bonsai

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 210 | Occ Exp/Golf Course Management

Courses designed in selected areas 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 courses is by permission of the instructors, since the courses are intentionally kept small to permit proper supervision. Instructor's permission required. [1 credits]

ORHT 212 | Floral Design II

Emphasis on design of wedding and sympathy arrangements: bouquets, corsages, sprays, wreaths, baskets, fraternal designs and others. Arrangements for special occasions may be included. Pricing and selling is covered. Prerequisite: ORHT111. Lab fee of $100 is required. [3 credits]

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. [3 credits]

ORHT 217 | Annual-Perennial/Prod/Sel/Uses

Students will be introduced to herbaceous plants suitable for floriculture and nursery production as well as landscape design. Identification, culture, and selection of approximately 150 annuals and perennials will be covered. Emphasis will be on plant combinations for specific sites such as cottage and herb gardens, perennial borders, and container plantings. Prerequisites: ORHT131 or ORHT141 or permission of instructor. [3 credits]

ORHT 221 | Landscape Construction

This course provides applied experiences in assorted construction techniques necessary in the development of landscapes. Included are: a survey of construction materials, including wood, brick, stone and concrete; deck design and construction; patio and walkway installation; mortarless stone wall construction; fencing; retaining wall design and construction; and landscape irrigation systems. Earthwork calculations and estimating materials are included. Required field trips supplement the classroom instruction. [3 credits]

ORHT 223 | Environmental Design II

The course is a continuation and expansion of the material offered in ORHT122. Students will work with actual residential and commercial sites and clients. Additional emphasis will be given to the development of foundation plantings, patio design and scale models. New topics of study will include architecture, coastal land planning, site analysis, cost estimation and bidding. Guest speakers and required field trips will supplement the classroom and text materials. Additional course fees, including field trips and $20 copy machine user fee are required. Prerequisite: ORHT121 and ORHT122 [3 credits]

ORHT 232 | Floriculture Crop Production

This course is designed to provide students with the knowledge and skills to produce and market Floriculture crops. Emphasis will be placed on methods of production, the products and equipment utilized in production and the scheduling and marketing of crops for sale. Production will focus on seasonal crops including Easter Lilies, Tulips, Geraniums, Pansies, Bedding Plants, and Hanging Baskets. An overview of greenhouse business management, marketing and organization will be provided. [3 credits]

ORHT 242 | Nursery Management

This course will cover the basics of establishing a nursery operation, growing crops utilizing current technologies and quality nursery stock in the field and in containers. Topics may include site planning, propagation, planting, harvesting, crop and

pest management, equipment use, and business operations. Lab exercises will involve crop production and care and a study of businesses to lecture reinforce material. Prerequisite: AGSC111 or ORHT141 [3 credits]

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. [3 credits]

ORHT 280 | History of European Gardens

This summer course offers a two-week concentrated investigation into the historical development of European gardens. The course will study the importance of the gardens as reflections of the social cultures of their times, the chronological order of their development and the designers important to their style. The course will also offer opportunities for the study of the plant materials and modern landscape techniques of western Europe. The entire course will be taught abroad. [3 credits]

ORHT 282 | Arboriculture

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. [3 credits]

ORHT 289 | Designing Silk & Dried Flowers

Students will be introduced to the variety of silk and dried flowers currently on the market. A field trip to a local floral wholesaler will be scheduled. Designs to be covered include centerpieces, line designs, European gardens, wreaths, bouquets and boutique items. Pricing will be discussed. Laboratory fee of $100 is required. Prerequisite: ORHT111 [2 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

ORHT 317 | Wildflower Culture/Propagation

The identification and habitat preference of wildflowers and ferns will be covered. Field trips will be scheduled to familiarize students with native plants in natural and cultivated situations. The culture of both woodland and meadow plants is included with emphasis on the more showy species of New York State. Students will attempt to propagate a number of species, including those that are protected. Prerequisites: AGSC111, BIOL116 [3 credits]

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. [3 credits]

ORHT 322 | Herbaceous Plts: Garden Design

This course will focus on the different types of herbaceous (perennial, annual, and biennial) gardens that are designed and constructed in the landscape/horticulture industry. There are many specialty gardens necessitating specific soil, light, moisture, site and environmental requirements. Some examples are: woodland gardens, shade gardens, xeriscape gardens, bog gardens, aquatic gardens, rock gardens, historical gardens, plants with medicinal use gardens, gardens for persons with special needs/handicapped accessible gardens, and gardens for commercial restaurant and bed and breakfast use. The laboratory portion of the class will stress hands-on garden design. The final project will be an historical/period garden. The student will select a specific style of an historic garden or time period. They will be expected to research this time period and the gardens from this time. Prerequisite: ORHT321, Herbaceous Plant Materials. [3 credits]

ORHT 325 | Environmental Design III

The course addresses design problems that are less traditional than those covered in the design courses of the lower division, e.g. historic properties, oriental gardens interior plantscapes, and commercial properties. Students will learn to design in perspective, supplementing their training in plan view graphics learned in lower division courses. Other areas of study will include landscape garden history, land sculpting, and landscape detailing. Field trips may be required. Additional course fees, including copy machine user fee ($20) and field trip are required. field trips, are required. [3 credits]

ORHT 329 | Hydroponics

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. Prerequisite: AGSC111; BIOL116; CHEM101 or 111 [3 credits]

ORHT 332 | Speciality Cut/Pot Flower Prod

This course will provide students with information on the production and handling of specialty cut flowers, dried flowers and unusual container crops. All aspects of crop culture will be studied including propagation, planting, growth regulators, storage, handling and pest management. Greenhouse production as well as field cultural techniques will be studied. Additional course fees, including one overnight field trip, are required. Prerequisites: ORHT131 or ORHT232 or permission of instructor. [3 credits]

ORHT 335 | Irrigation

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. [3 credits]

ORHT 356 | Plant Propagation

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. Prerequisite: BIOL116 within the last five years. [3 credits]

ORHT 360 | Advanced Landscape Contracts

The course investigates the legal relationships that exist between a landscape firm and other firms, suppliers and/or clients. Topics covered include area, volume and quantity determination; preparing take-offs from landscape plans; types of contracts and other legal forms; and specification preparation. Students will later encounter actual case studies of contractual problems as presented by industry practitioners. Additionally, students will gain experience reading and preparing contracts and specifications. Prerequisites: ORHT122 and ORHT160 [3 credits]

ORHT 377 | Integrated Pest Mgt Ornamentls

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. [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

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 ORHT121. Prerequisite: ORHT121 within the last two years. [3 credits]

ORHT 433 | Landscape Firm Management

The course focuses on the theory and practice of managing a landscape company through an entire year of operation. Case studies and simulations will be used to provide realistic experiences. Additional course fees, including a five- to nine-day field trip to selected landscape firms within a specific geographic region, are required. Computer competency is recommended. [3 credits]

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: ORHT122 or permission of instructor, and CITA110 or its equivalent [3 credits]

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 Prerequisite: Minimum of 30 upper-division credits, concurrent enrollment in ORHT451 [12 credits]

ORHT 451 | Orn Hort Internship Reporting

Plant Science Bachelor of Technology students enrolled in ORHT450 - 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 OHRT450. [3 credits]

ORHT 472 | Mktg of Horticultural Products

A study of marketing principles and strategies, marketing research, marketing channels, marketing services and specific markets for horticulture products such as greenhouse crops, florist crops, nursery crops, landscape commodities and turfgrass. The student will study current marketing practices used by producers, shippers, wholesalers, retailers and purveyors of horticulture services. The role of state and federal regulatory agencies will be reviewed. Additional course fees, including a field trip, are required. Prerequisite: ORHT172 or industry experience. [3 credits]

ORHT 495 | Special Topics Plant Science

An in-depth study of specific topics in the field of Plant Science. Topics to be announced. Prerequisite: enrolled in B.T. program. [3 credits]

Physical Education, Recreation and Sport Studies

PERS 200 | Lifeguard Training

A course designed to develop the knowledge and skills needed to help prevent aquatic-related accidents and give assistance to accident victims. Successful completion of the course will result in the awarding of the Lifeguard Training Certificate by the American National Red Cross. [3 credits]

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. [3 credits]

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. [3 credits]

PERS 212 | Water Safety Instructor

A course designed to provide the student with the opportunity to develop the knowledge and skills needed to be able to successfully instruct others enrolled in various American Red Cross Swimming and Water Safety courses. Successful completion of the course and Red Cross certification requirements will result in the awarding of the Water Safety Instructor (WSI) certification by the American Red Cross. Prerequisite: Students must pass a Red Cross swimming skills test. [2 credits]

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. Prerequisite: PERS201 [3 credits]

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. [3 credits]

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: PERS201 [3 credits]

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. Prerequisite: PERS201 [3 credits]

PERS 217 | Exercise Prescription

This course is designed to provide students with the knowledge and experience to assess current fitness levels, program effective training sessions, and evaluate program progress. Additional topics to be covered include legal liability and exercise technique. Prerequisite: PERS201 [3 credits]

PERS 221 | Outdoor Education

A consideration of trends in camping and summer camp programs as they relate to administrative and counselor problems and responsibilities. Techniques for the development of leadership in public school outdoor programs and summer camp activities will be included. [2 credits]

PERS 225 | Recreational Leadership

Planned opportunities to develop qualities important for school and community leadership and administrative ability. Practical application through community service projects and field trips are used to supplement the study of current theory and practice. [2 credits]

PERS 290 | 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. [2 credits]

Physical Education

PHED 105 | Beg Aerobic Activities Co-Ed

An introduction to the practices and principles of aerobic fitness through a variety of activities. Consists of regular participation in aerobic activity as well as emphasis on the physiology of aerobic fitness. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

PHED 110 | Badminton

Instruction in basic techniques including basic strokes, serving, court positioning in singles and doubles, strategy and rules. [0.5 credits]

PHED 111 | Basketball for Men

A comprehensive study of fundamental skills, strategy and rules of basketball with emphasis on skill competency. [0.5 credits]

PHED 114 | Snowboarding

Instruction in skills and techniques required for safely traversing ski slopes. Students will be exposed to the mechanics of balance, rotary movements, turns, climbing, and proper equipment necessary for a safe boarding experience. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

PHED 123 | Racquetball

Instruction in the basic strokes, serves, safety rules, court positioning and strategy. Singles, cutthroat and doubles are played. [0.5 credits]

PHED 124 | 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. [0.5 credits]

PHED 125 | Alpine Skiing

Instruction in techniques for the beginning to intermediate skier including the wedge, wedge turn, traverse and parallel Christie. Equipment will be provided, or students may bring their own to class. All classes will be conducted at the College ski area. [0.5 credits]

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. [0.5 credits]

PHED 129 | Intermediate Swimming/Diving

Instruction in various swimming strokes as well as the fundamentals of various aquatic activities and conditioning. [0.5 credits]

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. [0.5 credits]

PHED 137 | Intermediate Tennis

This course is open to any student with an adequate background in tennis and is able to execute the forehand, backhand and serve. This course will cover advanced techniques and introduce the lob, volley, overhead and topspin shots as well as advanced strategy in singles and doubles. Prerequisite: PHED136 [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

PHED 147 | Indoor Soccer - Men

The student will develop a proficiency in the sport of soccer. Basic soccer skills such as passing, trapping and dribbling will be covered. Emphasis will be on individual competency in soccer skills and team play as they relate to the indoor game. [0.5 credits]

PHED 148 | Indoor Soccer for Women

The student will develop a proficiency in the sport of soccer. Basic soccer skills such as passing, trapping and dribbling will be covered. Emphasis will be on individual competency in soccer skills and team play as they relate to the indoor game. [0.5 credits]

PHED 150 | Cardiopulmonary Resuscitation

A course designed to provide the student with the opportunity to gain knowledge and skills needed to be able to effectively perform Cardiopulmonary Resuscitation (CPR). Successful completion of the course and certification requirements will result in the awarding of CPR certification by the American Red Cross. [0.5 credits]

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 through two 4-week blocks of participation in areas that include: lifetime sports, net sports, outdoor education and fitness, nutrition/weight management, stress reduction, mental health, injury prevention, cancer, substance abuse and abuse, sexually transmitted disease, overweight/obesity, the rise in chronic disease, alcohol, and risks associated with tobacco use. [1 credits]

PHED 152 | Sport Management

An independent study in which students will work directly with intercollegiate sport programs. Individual assignments are contingent upon agreement of the student, coach, and chairperson of the Department of Physical Education. [0.5 credits]

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. [0.5 credits]

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. [0.5 credits]

Philosophy

PHIL 101 | Introduction to Philosophy

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, and evaluate and to develop the critical and reflective attitude of mind that is basic to philosophic thinking. [3 credits]

PHIL 102 | Intro to Asian Philosophy

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 and Taoism. [3 credits]

PHIL 305 | Ethics Science, Medicine, Tech

This 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 b eon gaining cognitive skills and applying reason to all decision-making processes, including the appropriate use of emerging science and technologies. Prerequisites: A college-level science or philosophy course or permission of the instructor. [3 credits]

PHIL 310 | Selected Topics Philosophy

This course will explore in depth a particular issue in philosophy. Themes of the course will change each semester in which it is offered and will be announced prior to registration. [3 credits]

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). Prerequisite: Junior status. [3 credits]

Physics

PHYS 101 | Principles of Physics I

Students will learn the principles of the science and behavior of magnetism, electricity, electronics and heat energy. Activities will include applications in 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. [2 credits]

PHYS 101X | Principles of Physics I Lab

Hands-on application of the topics covered in PHYS101. [1 credits]

PHYS 102 | Principles of Physics II

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. [2 credits]

PHYS 102X | Principles of Physics II Lab

Hands-on application of the topics covered in PHYS102. [1 credits]

PHYS 108 | The Physics of Everyday Things

This course will explore the principles and applications of physics we encounter in our day-to-day lives. The math used will be as low a level as possible, no higher than elementary algebra. Maximum emphasis will be placed on conceptual understanding. Active class participation and oral reporting are an integral part of the course. Topics may vary somewhat according to student interests. Toys, sports, the human body, heat, electronics, music and many other topics will be explored. [3 credits]

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. Prerequisites: Satisfactory completion of three years of high school mathematics or MATH 111. Co-requisite: PHYS 111X (however, this course may be repeated without lab if PHYS 111X has been successfully completed previously) 3 class hours; 1 one-hour recitation. [3 credits]

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. Co- or prerequisite: PHYS 111 1 three hour lab. [1 credits]

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). Prerequisites: PHYS 111, PHYS 111X Corequisite: PHYS 112X (however, this course may be repeated without lab if PHYS 112X has been successfully completed previously) 3 class hours; 1 one-hour recitation [3 credits]

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. Co- or prerequisite: PHYS 112; 1 three-hour lab. [1 credits]

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. Prerequisite: High School Regents Physics or PHYS 111 AND one semester of calculus (Math 231). Co-requisite:PHYS 211X (however, this course may be repeated without lab if PHYS 211X has been successfully completed previously) 3 class hours; 1 one-hour recitation [3 credits]

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. Co- or prerequisite: PHYS 211; 1 three-hour lab [1 credits]

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). Credit may not be earned for both PHYS 112 and PHYS 212.

Co-requisite: PHYS 212X (however, this course may be repeated without lab if PHYS 212X has been successfully completed previously) 3 class hours; 1 one-hour recitation. [3 credits]

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. Co- or prerequisite: PHYS 212; 1 three hour lab [1 credits]

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: PSCI101X (lab) [3 credits]

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 (lab) [3 credits]

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. [3 credits]

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. Prerequisite: MATH101 or higher [3 credits]

PSCI 303 | Field Geology

This course is designed to improve geological skills through direct observation of geologic phenomena in the field. Mapping exercises will be combined with field trips to explore the geologic history of the Cobleskill region. Good physical condition is strongly advised. [3 credits]

Psychology

PSYC 111 | General Psychology

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. [3 credits]

PSYC 221 | Child Psychology

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: PSYC111 [3 credits]

PSYC 222 | Adolescent Psychology

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: PSYC111 [3 credits]

PSYC 231 | Social Psychology

The scientific study of the activities and behavior of the individual as influenced by other individuals, society, culture and environment. Prerequisite: PSYC111 [3 credits]

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. [3 credits]

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. 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. [1 credits]

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. 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. [2 credits]

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. 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. [3 credits]

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: PSYC111 [3 credits]

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: PSYC111. [3 credits]

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 and at least one 200 level PSYC course. [3 credits]

PSYC 341 | Organizational Psychology

A study of the changing structure and purpose of organizations and the impact of these changes on individual and interpersonal changes. Prerequisite: PSYC111 [3 credits]

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: PSYC111 [3 credits]

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 [3 credits]

Recreation and Sports Area Management

RECM 100 | Rec Land Mgmt Techniques I

A practical methods course designed for Recreation and Sports Area Management majors. Students will be working under the supervision of Plant Science faculty and staff in occupational experiences that simulate many of the day-to- day work skills of persons employed in recreational resource management positions. Each student is required to participate in a total of 30 hours of work experience per semester. [1 credits]

RECM 115 | Intro to Recreational Service

A study of the development of the recreation movement with an overview of the role of parks and recreational facilities in modern society. It stresses basic concepts of recreation and the interlinkages of recreation with other uses of natural resources. [2 credits]

RECM 200 | Rec Land Mgmt Techniques II

A practical methods course designed for Recreation and Sports Area Management majors. Students will be working under the supervision of Plant Science faculty and staff in occupational experiences that simulate many of the day-to- day work skills of persons employed in recreational resource management positions. Each student is required to participate in a total of 30 hours of work experience per semester. [1 credits]

RECM 222 | Turfgrass Management

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. [3 credits]

RECM 225 | Recreational Land Mgt & Policy

This course deals with methods and techniques of management of various park and recreation facilities. Topics discussed include: planning and developing facilities, scheduling of work activities, employee supervision, financial skills such as budget preparation, liability protection, and prevention of vandalism. Review procedures for regulatory compliance with local, state and federal agencies. [3 credits]

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. Prerequisite: RECM115 [2 credits]

RECM 256 | Sports Field Management

This course is designed to introduce students to the maintenance and construction of sports fields. Soccer, football and baseball fields are emphasized. Topics discussed include turfgrass species and cultivar selection fertilizer programs, aeration, topdressing, mowing techniques, lining, overseeding, irrigation, pest control, and field safety. There are field trips to sports facilities and students will be scheduled to work on the College athletic fields. Prerequisite: RECM222 [2 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

RECM 378 | Golf Course Management

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. Prerequisites: RECM222 and RECM223 [3 credits]

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. [1 credits]

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. [2 credits]

RECM 390C | Spec Projects Rec Land Mgt

An advanced independent study of topics of special interest to the Bachelor fo 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. [3 credits]

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: RECM223 or RECM245, RECM378 [3 credits]

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. Prerequisite: Minimum of 30 upper-level credits, concurrent enrollment in RECM451 [12 credits]

RECM 451 | Rec Land Mgmt Intern Reporting

Plant Science Bachelor of Technology students enrolled in RECM450 - 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 RECM450. [3 credits]

Russian

RUSS 101 | Beginning Russian

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 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 mode 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. [3 credits]

RUSS 102 | Beginning Russian 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 mode the language for students. Prerequisite: Student should have already formally studied another foreign language, completed 101 or can be recommended by a faculty member who teaches a foreign language. [3 credits]

Sociology

SOSC 111 | Introduction to Sociology

An introduction to the nature of social organization, culture, socialization, group structure and social process. [3 credits]

SOSC 112 | Social Problems

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. [3 credits]

SOSC 211 | Sociology of the Family

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: SOSC111 [3 credits]

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. [1 credits]

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. [2 credits]

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. [3 credits]

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: None for B.T. students; SOSC111 or SOSC112 for Associate Degree students. [3 credits]

SOSC 312 | Sociology of Community

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. [3 credits]

Spanish

SPAN 101 | Beginning Spanish I

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. [3 credits]

SPAN 102 | Beginning Spanish II

A sequel to SPAN101, this is the second semester of a two- semester sequence. Prerequisites: SPAN101 or the equivalent or permission of instructor. [3 credits]

SPAN 103 | Intro to College Spanish

This is a course in basic Spanish for those students who have had some preparation, but are not ready to enter SPAN 201. It is designed to complement and build upon previous study and to prepare the student for success at the intermediate level. Prerequisite: Two years of high school Spanish or the equivalent, or permission of the instructor. [3 credits]

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: SPAN102 or the equivalent or permission of the instructor. [3 credits]

SPAN 202 | Continuing Spanish II

A sequel to SPAN201, this is the second semester of a two- semester sequence in intermediate-level Spanish. Prerequisites: SPAN201 or the equivalent or permission of instructor. [3 credits]

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 concentration on theories, problems, and solution. The course will include a significant amount of reading as well as the application of a written research project. [3 credits]

SUST 301 | Capstone Sem Sustainability

In recent history humans have transformed the environment at unprecedented levels. Sustainability fulfills present and future needs while not harming resources such as air, water, land, and energy. This course includes a comprehensive capstone project done within the community that illustrates the concept of sustainability. Prerequisites: SUST101, PHYS103, and GOVT141 or ECON124. [3 credits]

Travel and Resort Marketing

TRAV 103 | World Geography

A study of the physical geography, historical and cultural background of travel destinations with emphasis on the Western Hemisphere. [3 credits]

TRAV 104 | World Geography II

A study of the physical geography and the historical and cultural background of travel destinations with emphasis on the Eastern Hemisphere. [3 credits]

TRAV 111 | E-Commerce & Info Distribution

A study of how to meet the travel needs of the public. Initiating and completing travel arrangements for clients involving airlines, cruise ships, motorcoaches, Amtrak, car rentals and lodging requirements. Students will also learn how to construct airline fares, domestic and international, and process tickets. [3 credits]

TRAV 131 | The Tourism System

A perspective of the Travel and Tourism industry. Why people travel, the economic importance of the industry and the business of travel as applied to airlines, cruise ships, Amtrak and motorcoach transportation, related travel services, travel agents and travel wholesalers. Additional fee required for field trips. [3 credits]

TRAV 211 | Travel Marketing & E-Commerce

Practical experience providing travel advice to members of the campus community. Each student will design a promotional strategy for the Travel Center during the internship. Prerequisite: TRAV111. [3 credits]

TRAV 212 | Computer Reservation System II

Designed to provide students with the knowledge to use the non-airline functions of the airline computer system. Students will learn to book cruises, tour packages, car rentals and hotel rooms. Prerequisite: TRAV210. [3 credits]

TRAV 223 | Travel & Hospitality Law

This course presents the principles of law meeting the following topics: our court system, contract and employment law, uniform commercial code, liability and sale of food and alcohol, real property, criminal and civil law proceedings, travel and hospitality law with emphasis on the illustration of the hospitality industry. [3 credits]

TRAV 241 | Group & Convention Mgmt

Principles of tour package design and management. Includes advertising and coordinating groups and conventions after booking. Students will participate in one or more actual sales promotion activities for hotels, resorts and restaurants within the Northeast region of the U.S. Prerequisite: HOTL205 [3 credits]

TRAV 275 | Pract Travel Resort Marketing

A student may secure field work in the industry. Each student will be supervised at a work location by a qualified professional. Students must furnish transportation. Permission of the program director is required. Second-year students only. [3 credits]

TRAV 290A | Spec Projects Travel

An independent or small group study course designed to permit students to pursue topics or projects in which they have a specific interest. Prerequisite: Travel major with second-year status and in good academic standing. Program guidelines must be followed. [1 credits]

TRAV 290B | Spec Projects Travel

An independent or small group study course designed to permit students to pursue topics or projects in which they have a specific interest. Prerequisite: Travel major with second-year status and in good academic standing. Program guidelines must be followed. [2 credits]

TRAV 290C | Spec Projects Travel

An independent or small group study course designed to permit students to pursue topics or projects in which they have a specific interest. Prerequisite: Travel major with second-year status and in good academic standing. Program guidelines must be followed. [3 credits]

TRAV 307 | Casino Management

Casino Management is a comprehensive course designed to look into Casino and Gaming Operations Management. The student will explore and develop working plans centering around each of the main areas of the casino: rooms, food and beverage, security and surveillance, gaming, marketing/promotions, gaming regulations and staffing (human resources) departments. Additionally, the student will learn the dynamics of the most popular games and their history. The student will complete a comprehensive computer-based research project. Additional topics may be covered depending on time. This is a required course for Travel majors. Prerequisite: TRAV131 or permission of the instructor. [3 credits]

Academic Policies

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).

1.11 A campus visit is strongly recommended for all applicants for the associate degree.

1.12 All applicants for the Liberal Arts and Sciences curriculum from Albany, Otsego, Saratoga, and Schoharie Counties will be given admissions preference. 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. Such programs are limited to a 10 percent enrollment based on the total budgeted enrollment approved for the College.

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.

1.40 **Certificate Programs**
Students may be admitted to these programs as outlined in the College catalog.

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 regular academic standards required for admission to the College curriculum specified on the application.

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. Special note: consult with EOP staff relative to current economic guidelines.

1.60 **Foreign 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).

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 write to the director of admissions no later than March 1 for the fall semester and October 15 for the spring semester. Failure to comply with these deadlines may result in the College being unable to grant readmission.

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.

1.80 **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 first. A second associate or bachelor degree will not be awarded for fulfilling the requirements of a different option or concentration of the original degree program.

The General Education requirements for the first degree may be applied toward the General Education requirements of the second degree. All major field requirements are the requirements specified in the College Catalog at the time of acceptance for the second associate or bachelor degree program.

For a second associate degree the requirements are as follows:
- First associate degree has been awarded.
- A minimum of 33 credits must be earned at SUNY Cobleskill above and beyond the first associate degree.
- Electives are by advisement.
- A minimum GPA of 2.00 in all course work completed in the second associate degree is required.

For a second bachelor degree the requirements are as follows:
- A minimum of 30 credit hours of significantly different academic work above and beyond the original bachelor's degree must be earned at SUNY Cobleskill as prescribed for the program of study for the second degree.
- No fewer than 15 credits ***MUST*** be earned by fulfilling upper level major field/professional requirements.
- The appropriate internship must be completed if required by the second degree program.

1.81 Matriculation for a second associate or bachelor degree is a privilege extended to students under exceptional circumstances. The students must have demonstrated 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 Transfer students must have forwarded official copies of all their transcripts from all previously attended colleges to the registrar for evaluation. 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. This total will be used to judge the student against the cumulative grade point average specified for hours completed.

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 credits by the dean with input from the department chair of the new major.

2.02 Credit may be granted for credit courses from accredited colleges, as certified by the registrar, in which grades of "C" (2.00) or better were earned, subject to evaluation by the appropriate dean with input from the department chair. If the student's incoming cumulative average is "C" (2.00) or better, credit for "C-" or "D+" grades may be accepted for elective credit only. ***Physical Education transfer credits of Pass/Satisfactory may be applied towards Physical Education requirements regardless of legend (approved 1/20/11).***

2.03 Credits earned off campus are non-residence credits. No more than 33 total non-residence credits may be applied toward degree requirements for the associate degree. No more than one-half of the major field requirements may be non-residence credits.

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). Courses evaluated as a "*free elective*" may only be used to fulfill the "*free elective*" requirement. The number of free electives required may differ based on the student's curriculum and degree. The transfer of these courses is based on the school dean's recommendation.

2.05 All hours granted under "Cobleskill Equivalent" are *semester* hours. Transfer institutions which use quarter hours are so noted on the evaluation. Quarter hour equivalency is 2/3 that of semester hours.

2.06 **Refusal of Credits -** Cobleskill College 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 his/her educational goals. Cobleskill College has the right to refuse credit which does not meet these considerations.

2.11 **Associate Degree Courses** - The College normally accepts up to 66 credits toward the Bachelors programs and requires a minimum of a 2.00 GPA (grade point average).

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 change of status 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 towards the maximum of 33 credits allowed as transfer credit for an associate 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, provided the dean so recommends to the vice president for academic affairs. 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.

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 is made with the dean or department chair.

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.

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). Approval for such credit is granted by the appropriate dean.

2.51 Credit may be granted by the school dean 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, after consultation with the appropriate dean, will evaluate the scores for CEEB and CLEP. Credits that are granted will be provisional until the student has satisfactorily completed one semester in residence. 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 and History. A minimum score of between 421-500 must be earned in order for students to receive equivalent credit at Cobleskill.

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.

2.60 **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 freshman year with a grade point average of 2.00.

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 his/her program successfully, has matriculated status in that program.

3.01 An individual is eligible for matriculation if s/he holds 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 Student**
An individual enrolled in a course or courses who has not been formally accepted in a degree or certificate program is a non-matriculated student.

3.11 A non-matriculated student is not eligible for a degree or certificate from the College.

3.12 A non-matriculated student may accumulate a maximum of 11 credit hours before being required to apply for admissions to the College as either a full-time or part-time degree student.

3.13 A part-time non-matriculated student who wishes to earn an associate degree from SUNY Cobleskill must apply for the degree prior to earning 33 credits.

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.

Students admitted under EOP guidelines and who desire to maintain their eligibility must also have approval for a change of major from the EOP director.

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.

3.40 **Part-time Student**
A student carrying fewer than 12 credit hours is classified as part-time.

3.42 Matriculated students who wish to enroll in classes part-time must complete the application process designated by the director of admissions.

3.43 Enrollment of non-matriculated students in courses is limited to space available after full-time and part-time matriculated students have been scheduled.

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 with permission from their high school guidance counselors.

3.46 A part-time student need not be matriculated at the College.

3.47 In order to meet degree requirements, part-time students must meet all admissions requirements and request matriculation in a program.

3.50 **Special Student***
The College recognizes the need to provide students the opportunity to explore new programs of study while remaining in their present degree programs. 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.

3.54 A student, graduate or non-graduate, may be in "special student" status for no longer than one semester.

*To review eligibility for financial aid, contact the Financial Aid Office.

SECTION D - ENROLLMENT, WITHDRAWAL, WAIVER POLICIES

4.00 **Registered Student**
A student is considered officially registered when s/he enrolls in classes and has fulfilled all college related financial obligations. Every student must appear in person on semester check-in day to have his/her college I.D. validated..

4.01 Any student who has not paid his/her fall semester tuition by the cut-off date established by the Student Accounts Office (usually the third Friday in August) will have his/her schedule purged. The student will need to schedule classes during the add/drop period. Exceptions to this procedure may be made by notifying the Registrar's Office prior to the cut-off date.

4.02 **Add/Drop (Schedule Adjustment)**
Courses may be added or dropped only during the period so designated and announced by the registrar. These transactions must be approved by the advisor and instructor(s) via signature(s) on the add/drop form which is then turned in to the Registrar's Office to be processed and considered official.

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, as well as requests for fifth semester, course substitutions, waiver of requirements, transfer of off-campus credits, carrying over 19 hours, rebates, repeating courses and changes of major.

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 obtain their signatures to be considered officially enrolled.

4.05 **Enrollment Priorities**
Matriculated students are given enrollment priorities in required and elective courses which are determined by class standing at the College; seniors first, then sophomores, juniors and freshmen. Non-matriculated part-time students may enroll in courses on a space available basis.

4.06 **Registration of Part-Time Students**
New part-time non-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.

4.08 **Late Payment**
A fee is charged if payment (by check, payment plan, or credit card) of college related financial obligations is not made 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. This occurs during the period so designated by the registrar, via procedures described by the registrar. The advisor's approval is required in this procedure.

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 must receive approval via signature from their advisor in order to carry more than 19 credits.

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". "W" may be the grade of record at this time only if there are documented extenuating circumstances. These must be stated in writing and they require the signature of the advisor, the dean of the school in the degree program in which the student is majoring, and vice president for academic affairs.

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/VP 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 Section 4.11.) Students may not initiate a withdrawal from a developmental course. Developmental courses are those with a course number below 100, for example 098.

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.

A student may be assigned an "F" grade when dismissed from a course as a result of violation of academic integrity.

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 dean's letter of notification. 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.

4.30 **Auditing Courses**

Any interested person may audit a course with the consent of the instructor. Audit is permitted on a space-available basis, but may not include courses which have laboratory or studio activities.

There is no tuition charge, however, a registration fee of $50 will be charged. This registration fee will not be assessed to course auditors who are already enrolled as students.

By definition, auditors merely "sit in" on courses, are not officially enrolled or listed on course rosters. Auditors attend without credit or formal recognition and are not required to meet the requirements of the course.

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 school dean in the degree program in which the student is enrolled based on recommendations from the college nurse, Physical Education Department chairperson, or a physician with appropriate documentation. If waived, a like number of liberal arts and sciences credits must be substituted. An approved change of status form must be filed.

4.70 **Fifth Semester**
Students in the Educational Opportunity Program have five semesters in which to meet degree requirements.

SECTION E - STUDENT RESPONSIBILITIES

5.00 **Degree Requirements**
Responsibility rests with the student to know the requirements of the program in which s/he is 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, free withdrawal.

5.10 **Course Requirements**
The student is expected to fulfill course requirements as specified in course outlines.

5.20 **Attendance**
Registration in a course assumes full participation in that course. Therefore, a student is expected to attend class sessions regularly.

5.21 Individual instructors shall define "excessive absences" in their respective course policy statements. In no instance may the definition of "excessive absence" exceed being absent for two consecutive weeks or more, or for a total of three weeks or more in a semester. These limitations shall be pro-rated for modules.

5.22 Excessive absence may result in cancellation of the student's course registration. The course instructor requests such cancellation from the dean of the school in the degree program which is responsible for the course. This written cancellation results in grades of "W" or "F."

If the student wishes to appeal (see 4.26), s/he must do so in writing to the dean of the school in the degree program which is responsible for the course within seven days of the cancellation notice.

5.23 All academic work must be made up regardless of the reason(s) for absences from class(es).

5.24 The instructor's attendance policy, as stated in the course outline, determines how absences will be treated in that course.

Any anticipated absence should be brought to the instructor's attention as soon as the student is aware of it, so that appropriate accommodations regarding completion of work may be made.

Illness should be reported as soon as possible. (Proof required at the discretion of the instructor.)

5.25 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.

5.40 **Advisor Consultation**

Students are expected to consult with their advisors about academic matters, and obtain the signatures required on academic forms.

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
5. 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 breech of academic integrity.
6. 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 file of the alleged offence along with any additional supporting documentation must be submitted by the faculty member and placed on file with the Dean. The Dean reviews the case with the faculty member and arrives at a decision.

- 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.

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**
Students who prefer not to have grades posted by student number must so request in writing to the instructor by the end of the first week of classes.

5.80 **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.

5.90 **Academic Progress**
Students are responsible for being aware of their academic progress/standing in courses.

SECTION F - STUDENT RIGHTS

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 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.

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.

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, s/he may forward his/her 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 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.

6.40 **Withdrawal from Courses by Instructor: Appeal**
(See Section 4.26)

SECTION G - RESPONSIBILITIES OF TEACHING FACULTY

7.00 **Insuring an Appropriate Educational Environment**
Faculty members have the responsibility of insuring 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.

7.01 **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 forwarded by faculty to school offices on official forms provided by the registrar, within deadlines established by the registrar.

7.20 **Final Examinations -** Faculty members are expected to inform their dean whether or not they will give final examinations. Faculty members will be expected to state their final examination policies in their course outlines. Final examinations are to be administered during the period so designated.

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**	**Percentages**
A	4.00	92.1 or higher
A-	3.67	89.5 - 92.0
B+	3.33	86.9 - 89.4
B	3.00	82.1 - 86.8
B-	2.67	79.5 - 82.0
C+	2.33	76.9 - 79.4
C	2.00	72.1 - 76.8
C-	1.67	69.5 - 72.0
D+	1.33	66.9 - 69.4
D	1.00	59.5 - 66.8
F	0	Less than 59.5 (Fail)
I	0	Incomplete
S	0	Satisfactory
U	0	Unsatisfactory
W	0	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 or grade mailers 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.)

8.30 **F Grades**

"F" grades are assigned when performance is below minimal standards, course registration is canceled after the course "W" deadline, or "I" 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.

8.40 **I Grades**

"I" grades indicate the student did not complete course work during the regular semester due to extenuating circumstances. "I" grades must be completed by the seventh week of the following semester for those courses which meet for the full 15-week semester and by pro-ration for modular courses. These deadlines may be extended 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 converted to "F" grades.

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 school dean cancels a student's course registration on or before these deadlines. A faculty member may assign a grade of “W” on or before the last day of classes.

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.

SECTION I - GRADE TRANSACTIONS

9.00 **Final Grades**

All students will receive grades for all courses in which they are enrolled. Final grades are available on-line. Final grades will not be issued if a student has any financial obligation to the College.

9.10 **Transcripts (Students' Academic Records)**

One academic transcript will be mailed to a prospective employer or academic institution without charge for currently enrolled students. Thereafter, a fee of $5.00 will be charged for each additional transcript. The $5.00 fee

must accompany the request for the transcript. A transcript will not be issued if the student has any financial obligation to the College.

9.20 **Mid-Term Grade Report**
Students will receive mid-term grade reports on-line from the Registrar's office. "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**
Official grades can be changed only by the instructor who originally submitted the grade, or on the recommendation of the Academic Policies Committee in those cases involving a grade appeal as outlined in 6.20 of the academic code (change of grade form).

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.

9.50 **Course Repeat Policy**
Students may repeat a course, in which they earned a "C-"or below, one time only unless special permission is granted by the vice president for academic affairs. An approved change of status form must be filed.

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 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 Financial Aid 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 Associate Degree**
A student who has successfully completed:
19 or fewer credits is considered a first semester student;
20-38 credits is considered a second semester student;
39-57 credits is considered a third semester student;
58 or more credits is considered a fourth semester student.

10.10 **Academic Standing Needed for Practicums**
Early Childhood majors must possess a 2.00 cumulative average and a 2.00 major average in order to be assigned to practicums ECHD 232, ECHD 233, and ECHD 234 and ECHD 235.

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 VPAA.

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. (Early Childhood majors, see Academic Code, Section K, 11.30.)

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 his/her 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 full-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 VPAA 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 his/her school within the time limits stated in his/her notification.

10.60 **Dean's List**
Matriculated students achieving a semester average of 3.50 or better, with no failing (C- or lower), 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 failing (C- or lower), 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 are Honors Students.

10.80 **Graduation: Honors**
A student whose GPA is 3.00 - 3.49 (inclusive) at the time of graduation is graduated with honors.

10.81 **Graduation: High Honors**
A student whose GPA is at or above 3.50 at the time of graduation is graduated with high honors.

SECTION K - GRADUATION REQUIREMENTS

11.00 Student Responsibility (approved 6/10)
Students are responsible for understanding college requirements for graduation specific to their school and program of study. Such information can be obtained through the College Registrar.

11.01 **Associate Degree Requirements *(approved 6/10)***
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 his/her 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. ***Specific program/degree requirements should be obtained through the Registrar's Office***. TWO ASSOCIATES DEGREES CANNOT BE AWARDED IN THE SAME SEMESTER.

11.02 Bachelor Degree Requirements (approved 6/10)
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 his/her 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. Specific program/degree requirements should be obtained through the Registrar's office. Only one Bachelor degree or Associate degree can be awarded in the same semester.

11.03 Bachelor Degree Internship (approved 6/10)
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.

11.05 **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).

11.20 **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.

11.30 **Early Childhood Department Academic Policy**
To qualify for the A.A.S. or A.S. 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.

11.40 **Culinary Arts, Hospitality, and Tourism Department Policy**
To qualify for the A.A.S or A.O.S. degree in any Culinary Arts, Hospitality, and Tourism Department program, candidates must complete all required and elective courses with prefixes of CAHT, HOTL, MKHT, and TRAV with a minimum GPA of 2.00.

11.50 **Residence Credit**
Courses completed successfully while enrolled as a degree seeking student at this College constitute residence credit. Students who successfully challenge courses may not use these credits towards residency requirements. Successful challenge credit is applied toward degree requirements as transfer credit.

11.51 **Residence Credit Requirements - Associate Degree *(approved 6/10)***
Associate degree requirements include a minimum of ***50% of the credits required to be completed at SUNY Cobleskill.*** This percentage also applies to certificate programs.

11.52 **Residence Credit Requirements - Bachelor Degree**
Degree requirements include a minimum of 45 hours in residence as an upper-division student. The 12 to 15 credit hour internship is included in these 45 credit hours.

11.60 **Non-Residence Credits**
Credits earned off campus are non-residence credits. No more than 33 such total credits may be applied toward degree requirements for the associate degree. No more than one-half of the major field requirements may be non-residence credits.

11.70 **Financial Obligations**
All financial obligations must be met before a diploma is issued to the student.

11.80 **Courses with 290 Suffix *(approved 6/10)***
No more ***than a total of four (4) credits in 290/390 courses*** will be accepted toward Associate degree requirements.

11.81 **Courses with 390 Suffix**
No more than ***a total of six (6) credits in 290/390 courses*** will be accepted toward a Bachelors degree.

11.82 **Refusal of Credits (See 2.06)**

11.90 **Time Limit to Meet Degree Requirements**
Full-time Associate degree and transfer Bachelor degree students unable to meet their degree requirements within four semesters will be subject to academic review. If granted the privilege to complete the degree beyond four semesters, the student will have no more than two years in which to complete the remaining 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.

12.00 **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.

12.01 **Liberal Arts and Sciences Requirements: Bachelors Degree**
Candidates for the BT and BBA degree must earn 34 credits in liberal arts and sciences of which six (6) must be upper division. Candidates for the BS degree must earn 60 to 65 credits in liberal arts and sciences with a minimum of 12 credits of upper division.

12.10 **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 Bachelors degree students missing a summer degree internship or for students in an associate degree program which, by design, requires a summer internship.*** (***Effective Fall 2011 – updated 3/11)***

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. Students are invited to participate one time only. 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.

12.11 Students are required to apply for graduation in the semester prior to the anticipated degree completion. Students must apply by the dates established by the Registrar's Office. Students who do not apply will not be allowed to participate in the graduation ceremony (See 12.10). (Effective Fall 2011 – updated 3/11)

SECTION L – AWARDING OF DEGREES

13.00 **Two Associate Degrees**
A student cannot be awarded two Associate Degrees in the same semester.

13.05 **Associate and Bachelor Degrees**
A student cannot be awarded an Associate and Bachelor degree in the same semester.

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	20	36	52	68	84	99.5	116	132	148	164	>180
	To	19.5	35.5	51.5	67.5	83.5	99	115.	131.5	147.5	163.5	179.5	
Degree Progress (Minimum Credits Earned After First Semester of Attendance at Cobleskill)		0	15	27	39	50	63 or Associates Degree	71	82	93	104	115	Bachelors Degree
Minimum QPA		0	1.75	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	20.

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 earned *PRIOR* to your enrollment at SUNY Cobleskill *WILL NOT* 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.

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 Financial Aid 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.

Timely Negotiate 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, 518-255-5522.