SUNY Morrisville

Catalog from Word Docs

The College

Located in scenic Central New York, SUNY Morrisville is a model of innovative applied education — a place where students begin crafting exciting careers through real-world experiences.

Morrisville's 3,000 students, who hail from diverse backgrounds across the state and around the globe, choose from more than 60 bachelor's and associate degree programs that embrace agriculture, technology, business, social sciences and the liberal arts. Among them are strong programs in specialized areas such as renewable energy and resources, aquaculture, automotive technology, equine science, dairy management, nursing, wood technology, resort and recreation management, and information technology.

The college's Norwich Campus, located 30 miles south of Morrisville, also offers associate degree programs in industrious career and technical areas, as well as liberal arts transfer programs.

As home of the Mustangs, SUNY Morrisville boasts 17 intercollegiate athletics programs which compete at the NCAA Division III level.

Established in 1908 as a college of agriculture, the institution became a founding member of the State University of New York (SUNY) in 1948 under the name New York State Agricultural and Technical Institute at Morrisville. The college underwent various name changes as it expanded its offerings throughout the following decades, before undergoing a new brand identity and establishing the name SUNY Morrisville in 2018.

The SUNY Morrisville Campus

The Morrisville campus stretches over 150 acres of bucolic land in Morrisville, NY. More than 48 buildings, athletics fields, service roads, parking facilities and more than 1,000 acres of farm and woodland create an original instructional environment.

Emphasizing a hands-on approach of learning by doing, SUNY Morrisville features action-oriented learning labs and true-to-life facilities — many of which are rare or one-of-a-kind in higher education. This commitment to applied education includes a wide array of campus-based enterprises and institutes which are run by students. These operations are campus-supported and integrated into aligned academic programs, with course outcomes requiring that students become engaged in the plans, operations and sustainability of these enterprises.

The college's 10 on-campus residence halls offer a range of lifestyle options, including a "quiet" dorm, single and double rooms, split-double and split-triple rooms, and suite-style apartments. Special housing accommodations also can be arranged through the Office of Residence Life.

The campus also boasts a Student Activities Center, Fitness Center, Recreation Center, IcePlex and numerous dining options.

SUNY Morrisville is located in the Village of Morrisville on Route 20, 30 miles southeast of Syracuse and 30 miles southwest of Utica, while being a half-hour drive from the New York State Thruway to provide easy access to Albany (two hours), Rochester (two hours), Buffalo (three hours) and New York City (four hours). Travel connections to the college by air are made at Hancock International Airport in Syracuse and train connections are made in both Syracuse and Utica. The college is serviced directly by Chenango Valley Bus Lines on a daily basis, with connecting service from Utica or Binghamton via Shortline Bus Lines.

The Norwich Campus

https://www.morrisville.edu/norwich/programs

The Norwich Campus offers quality, personalized education and training to residents and employers of Chenango County and south central New York. The campus is located 30 miles south of Morrisville in downtown Norwich, NY, in the state-of-the-art Roger W. Follett Hall.

Currently serving approximately 600 commuter students, the campus offers a supportive and technologically infused learning environment that complements a variety of associate degree programs and features “smart” classrooms, computer and science laboratories, a library, a bookstore, a café and other campus services.

SUNY Morrisville began its commitment to Norwich and Chenango County in 1968, when an agreement was reached between the SUNY Morrisville Office of Continuing Education and the Norwich City School District to offer courses at Norwich Senior High School. SUNY Morrisville operated as an extension site in Norwich until 1988, when branch campus status was attained and provided the opportunity to offer degree programs in their entirety. The Norwich Campus has since served more than 21,000 full- and part-time students.

Syracuse Educational Opportunity Center (EOC)

https://www.morrisville.edu/educational-opportunity-center

The Syracuse Educational Opportunity Center (EOC), administered by SUNY Morrisville, provides the urban community of Syracuse with innovative academic programs leading to higher education, as well as vocational training programs leading to gainful employment and economic self-sufficiency. The Syracuse EOC is part of a statewide network of 10 education opportunity centers and two outreach and counseling centers that function as the 65th campus of the State University of New York (SUNY).

The Syracuse EOC, established in February 1969 by SUNY, was first known as SEEK (Search for Education, Elevation, and Knowledge) and operated through a network or Cooperative College Centers. The center's name was changed to the Educational Opportunity Center in 1973 and administration was assumed by SUNY Morrisville. During its history, the EOC has grown in the number of students served and in the variety of programs offered. Today, EOC offers nine major programs as well as employment services and computer access. Their mission remains the same: to provide qualified and motivated individuals with valuable education and career resources.

The State University of New York

https://www.suny.edu/

SUNY's 64 geographically dispersed campuses bring educational opportunity within commuting distance of virtually all New York citizens and comprise the nation's largest, centrally managed system of public higher education.

Registration & Accreditation

The College is chartered by the Board of Regents of New York State, which has registered all of its degrees and programs. SUNY Morrisville is fully accredited by Middle States Commission on Higher Education. Morrisville also holds specialized program accreditation from the following accreditors:

Accreditation Board for Engineering and Technology

Accreditation Commission for Education in Nursing

Accreditation Council for Business Schools and Programs

Accreditation Council for Education in Nutrition and Dietetics

Society of American Foresters

The National Automotive Technicians Education Foundation

General Policy Information

General Policy Information	Link to URL
ADA	https://www.morrisville.edu/contact/offices/accessibility-services
Title IX Non-discrimination Harassment Complaint Procedure	https://www.morrisville.edu/contact/offices/university-police/title-ix
Consumer Complaint Procedure	
Student Confidentiality (FERPA)	Will be link from registrar's page
Security Information	https://www.morrisville.edu/handbook/policies/annual-security

The College Community

Student Life

The SUNY Morrisville community is representative of many ages, backgrounds, cultures and experiences. The college welcomes and encourages diversity, learning and open communication. A wide range of activities and services for residential and commuter students complement and enhance the educational experience.

Residence Life

As a college of agriculture and technology, SUNY Morrisville is a unique educational institution combining technical and academic offerings in a residential campus setting. Students may live in on of the college's on-campus residence halls. Residence halls provide an opportunity for autonomy and affiliation in a supportive environment and serve as centers for organized social, cultural and educational activities. More information on residence life can be found https://www.morrisville.edu/life-on-campus/residence-life

Student Activities

The Student Activities Office offers a variety of academic. cultural, recreational and social programs, events and opportunities for students to participate in at SUNY Morrisville. The office encourages all students, new and returning, to get involved in clubs and organization and activities, there is something for everyone. https://www.morrisville.edu/contact/offices/student-activities

Student Government Organization

https://www.morrisville.edu/sgo

The Student Government Organization (SGO) is an integral part of Student Activities at SUNY Morrisville, serving the entire student body. SGO's goals are to promote the general welfare of the student body, to stimulate interest in and support activities contributing to cultural, social, educational and physical improvement, and to establish a just college community.

SGO supports dozens of programs and events on campus including the Music and Theatre Departments, Arcadian student yearbook, WCVM Media, Campus Activities Board (CAB), and Open Recreation in STUAC and Hamilton Hall.

SGO funds many educational and social activities during the year such as dances, intramurals, and performers. They achieve this with funds gathered through the Mandatory Student Activity Fee. SGO maintains an off-campus housing list as an alternative to living in the residence halls.

Get involved with SGO and help make your experience here at SUNY Morrisville successful and memorable.

Athletics

https://www.morrisville.edu/life-on-campus/athletics

At SUNY Morrisville, the total college experience should be a balance of activities both in and out of the classroom. For many, sports are as much a part of college as academics. We offer the opportunity for students to get involved in a variety of intercollegiate and intramural activities.

Morrisville is a member of the National Collegiate Athletic Association (NCAA) Division III and administers 17 intercollegiate athletic teams.

The student-athletes who wear green and white for the Morrisville Mustangs are part of a proud tradition of team competition and enjoy a school spirit that fosters a dedicated following, and an equal commitment to a tradition of academic and athletic excellence.

Information	Link to URL
Institutional Diversity Sheila Johnson Institute	https://www.morrisville.edu/contact/offices/diversity-equity-inclusivity
Educational Opportunity Program	https://www.morrisville.edu/contact/offices/educational-opportunity-program
Science Technology Entry Program (CSTEP)	https://www.morrisville.edu/contact/offices/cstep-step/cstepCollege
Liberty Partnership	https://www.morrisville.edu/liberty-partnerships-program

Admission Information

The college considers applicants without reference to race, color, religion, national origin, sex, age, handicap, sexual orientation, martial or parental status. The credentials of each applicant are evaluated on an individual basis and admission is granted to those who have the potential for success i the curriculum of their choice.

SUNY Morrisville does not offer an open enrollment admission policy. Student are admitted to specific curricula rather than to a general program.

Although an interview is not required for admission to the college, students are encouraged to visit the campus during the admission process, meet with program faculty members, and discuss admission and enrollment procedures directly with an admission adviser.

Admission is offered on a space available basis. All of the information provided is reviewed holistically to make the best decision possible for both the applicant and the college. Some programs may attain full enrollment and close throughout the year. A student may be offered admission to an alternate major when the desired major is full or if the admissions committee deems that enhanced academic credentials are required for the requested major.

We know you want to make sure SUNY Morrisville is the right fit for you. Beyond the academic programs, you'll want to know about our campus facilities, student living and programs, faculty excellence, job placement, alumni satisfaction, and much more.

We can provide you with all of that information, and it starts here. https://www.morrisville.edu/contact/offices/admissions/admissions

A.O.E. Educational Opportunity Program (EOP)

https://www.morrisville.edu/contact/offices/educational-opportunity-program/what-eop

The State University of New York's Educational Opportunity Program (EOP) provides access, academic support and financial aid to students who show promise for succeeding in college but who may not have otherwise been offered admission. Available primarily to full-time, matriculated students, the program supports students throughout their college careers within the University. EOP strives to support all students in their efforts to become successful college students thereby progressing to successful professional careers.

Articulation Agreements

https://www.morrisville.edu/articulation-agreements-list

SUNY Morrisville has established partnerships with several high schools and BOCES campuses through the development of articulation agreements. Students who successfully complete and approved Career & Technical Education program will be granted college credts upon ful-time matriculation at SUNY Morrisville, typically after the first semester or year of coursework. Proper documentation from the students high school and./or BOCES campus is required. Proof of program/course completion and a minimum GPA are requirements that must be met in order for credits to be granted. Students must adhere to the requirements specific to each articulation agreement in order ot earn college credit.

College in the High School

Costs and Aid

We know that paying for college is a big deal. We're here to help! Here you'll find what you need to know about tuition, fees, housing and meal costs, as well as great resources for meeting those expenses through scholarships and financial aid. https://www.morrisville.edu/costs-aid

Financial Aid

https://www.morrisville.edu/costs-aid/financial-aid

No matter which college you choose to apply to, there are steps you can take to ensure that you receive assistance in paying for your education.

We've outlined the process for you, both with facts you need to know about financial aid at any college and with details about the different forms of aid that are available at SUNY Morrisville.

1. To receive federal loans or grant money, you'll have to complete a FAFSA (Free Application for Federal Student Aid) form and renew it every year.

2. If you're a New York State resident, you can complete a TAP (Tuition Assistance Program) application at Higher Education Services Corporation to determine whether you are eligible to receive New York State grant money.

3. In addition, a wide variety of scholarships and awards and other forms of assistance are available at SUNY Morrisville. For more information, please go to the Financial Aid office to learn all about them!

SUNY Smart Track. No matter your financial situation, you'll benefit from the SUNY Smart Track Financial Literacy website. Click on the Smart Track link and register to learn how to budget your money, understand credit before you use it, and how to start saving money for an emergency fund.

Housing Costs & Rates

Residence hall life is an integral part of your college experience. You'll have several living options to choose from at SUNY Morrisville.

On-campus residency also includes a dormitory services fee of $415 per semester — this includes laundry, cable and wifi. Please note that all residents are required to have a meal plan.

For more information regarding housing policies and to apply for housing, visit Residence Life.

Meal Plans

https://www.morrisville.edu/costs-aid/meal-plans

You can choose from several meal plans at SUNY Morrisville. If you live on campus, you'll be required to purchase a meal plan that can be used at all campus dining facilities.

Your meal plan purchase includes a number of meals per week, up to 17, and a Dining Points amount, which is a declining-balance account used for additional food purchases at campus dining locations and at the Copper Turret Restaurant & Brewhouse. Meal plans and Dining Points are non-taxable, non-refundable, and can be used only while classes are in session.

The minimum meal plan requirement for Commons residents is the Commons Combo.

Mustang Money is a declining-balance debit account that is separate from meal plans. You can use it to buy food at all dining locations as well as items at campus stores, vending machines, and participating downtown merchants. Mustang Money purchases are taxable, but your balance is refundable at the end of the academic year.

Scholarhsips

Academic Information

Academic Policies	Create link to new page (provost? Registrar?)
Libraries	https://www.morrisville.edu/contact/offices/library
Distance Education	
Lifelong Learning	https://www.morrisville.edu/contact/offices/registrar/center-lifelong-learning
Center for Workforce & Community Development TrainNY Manfacturing Institute Human Services Institute	https://www.morrisville.edu/workforce-development
Environmental Training Center	https://www.morrisville.edu/contact/offices/environmental-training-center

Agricultural Business Development B.B.A., Major #1914

Agricultural Business Development is a ThinkPad University curriculum in which the use of Laptop computers is integrated into courses.

Agribusiness is the coordination of all activities that contribute to the production, processing, marketing, distribution, financing and development of agricultural commodities and resources. This includes food, fiber, wood products, natural resources, horticulture, and other plant and animal products and services. Agribusiness is a high-tech industry that uses satellite systems, computer databases and spreadsheets, biotechnology, and many other innovations to increase efficiency and profitability.

Students enrolled in the program will develop the management skills (both technical and soft) to make effective decisions relating to agricultural labor, finance and markets. The coursework includes a strong agriculture and business based curriculum that emphasizes management application to large and small scale agribusiness as well as non-profit organizations. These business/organizations may include but are not limited to food production, distribution, value added, production agriculture, the United States Department of Agriculture, and non-governmental organizations.

According to the USDA 60,000 high-skilled agricultural job openings are expected annually in the U.S., yet only 35,000 graduates are available to fill the jobs. Expected strong employment opportunities exist for: technical sales representatives, food brokers, accountants, financial managers, market analysts, fruit and vegetable marketing representatives, sales managers, small animal health care distribution and international business specialists.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Create and successfully operate their own agricultural enterprise given the limited resources often available within the rural economy.
- Seek financing and maintain positive relationships with creditors and financial institutions.
- Identify market opportunity and successfully utilize the opportunity to improve farm-level profitability.
- Form, create and maintain effective relationships with the non-agriculture community.

- Develop, manage and maintain and effective interpersonal skills in the corporate and family business setting.
- Question, investigate, analyze, evaluate, and communicate in agribusiness
- Interact with peers toward the accomplishment of effectively collaborating with agribusiness peers
- Adapt to a constantly changing agribusiness environment, and identify realistic goals and inventions for short- and long -term business planning
- Assess the range of one's abilities, accept responsibility for setting realistic goals, and implement a plan for personal and professional well-being

Curriculum Requirements - 120 Credits

COURSE	CREDITS
AGBS 100 - Intro to Agricultural Economics OR AGBS 225 - Environmental Economics	3
AGBS 110 - Introduction to Food and Agribusiness (students who have completed AGBS 240 are not required to enroll in AGBS 110)	3
AGBS 200 - Marketing Agricultural Products	3
AGBS 240 - Farm Management & Finance	3
AGBS 305 - Agricultural Lending & Decisions	3
AGBS 350 - Agricultural Business Development	3
AGBS 400 - Market Distribution of Agricultural Products	4
AGBS 405 - Capstone for Farm Managers & Rural Entrepreneurs	3
AGBS 450 - Agricultural Policy	3
AGBS 480 - Retailing of Agricultural Products	3
RREN 450 - Internship Orientation	1
AGBS 470 - Internship in Agricultural Business	15
ACCT - Accounting as Advised	3

CITA 101 - Principles of Computer Applications OR AGSC 132 - Intro to Computer Applications in Precision Farming OR OFFT 110 - Intro to Spreadsheet Software (1 credit) AND OFFT 100 0r 106 or 109 (1 credit)	2-3
BSAD 221 - Business Statistics OR AGSC 137 - Agricultural Statistics OR MATH 123 - Elementary Statistics OR MATH 141 - Statistics	3-4
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
Foreign Language as Advised	3
Mathematics as Advised (If students do not complete MATH 123 or MATH 141, they must complete through MATH 102)	3
Additional Liberal Arts & Sciences Credits as Advised	18
100-200 Lower Level Credits as Advised*	10
300-400 Upper Level Credits as Advised*	10
Upper or Lower Level Credits as Advised*	9

- Additional Electives Selected from any course with the following subject codes: AGBS/AGEN/AGRO/AGSC/AGNR/ANSC/BIOL/BREW/BSAD/CHEM/DANS/DTEC/ECON/ENSC/ENVT/ERID/ESCI/ESTB/HORT/NATR/RENG/SPPR/NURS/NUTR/RREN/FSAD/EDU/CITA

Suggested Course Sequence

Year 1/Fall – 15 credits	
COURSE	CREDITS
AGBS 100 - Intro to Agricultural Economics	3
MATH - Mathematics as Advised	3
COMP 101 - Composition and Research	3
Liberal Arts & Sciences as Advised	3
100-200 Lower Level Elective as Advised	3
Year 1/Spring – 14 credits	
AGBS 200 - Marketing of Agricultural Products	3
COMP 102 - Writing About Literature	3
OFFT 110 - Introduction to Spreadsheet Software	1
OFFT 100 - Introduction to Word Processing Software	1
100-200 Lower Level Elective as Advised	3
Liberal Arts and Sciences as Advised	3
Year 2/Fall – 13 credits	
AGBS 240 - Farm Management & Finance	4
ACCT - Accounting as Advised	3
100-200 Lower Level Elective as Advised	3
Liberal Arts and Sciences as Advised	3

Year 2/Spring – 15 credits	
AGBS 350 - Agricultural Business Development	3
BSAD Business Course As Advised	3
100-400 Level Electives as Advised	6
Liberal Arts and Sciences as Advised	3
Year 3/Fall – 16 credits	
AGBS 400 Marketing & Distribution of Agricultural Products	4
AGBS 305 Agricultural Lending & Decision Making	3
100-200 Lover Level Elective as Advised	3
300-400 Upper Level Elective as Advised	3
Liberal Arts and Sciences as Advised	3
Year 3/Spring – 17 credits	
AGBS 450 Agricultural Policy	3
AGBS 480 Retailing of Agricultural Products	3
100-200 Lower Level Elective as Advised	2
300-400 Upper Level Elective as Advised	6
Liberal Arts and Sciences as Advised	3
Year 4/Fall – 15 credits	
AGBS 405 Capstone in Agricultural & Rural Entrepreneurship	3

100-200 Lower Level Elective as Advised	3
300-400 Upper Level Elective as Advised	3
Liberal Arts and Sciences as Advised	3
General Elective as Advised	3
Year 4/Spring – 15 credits	
AGBS 470 Internship in Agricultural Business	15

Applied Psychology, B.S. Major #1965

In the Bachelor of Science degree in Applied Psychology program, students will learn how current psychological theories apply to practical concerns such as management, customer service, human services, interpersonal relationships, social problems and general problem-solving. The program will also emphasize hands- on training in information gathering, basic statistics, research methods, effective communication. The program provides students with immediately applicable skills that will be useful across a broad range of situations.

An important aspect of the program is a full-time, semester-long internship in a business or human services related setting, as well as extensive preparation for the internship in a course emphasizing job search and professional skills. This required internship component distinguishes our applied psychology B.S. program from a traditional psychology program and provides students with the type of practical experience potential employers look for in entry-level employees.

Like all Bachelor of Psychology degrees, this is not a clinical degree, and does not train students to treat or administer treatment to clients in any way. The completion of this baccalaureate degree will not qualify the holder to apply for, be hired for, or perform the duties related to, employment which involves the provision of services prohibited by New York State Education Law Article 153, Psychology, Paragraphs 7601 and 7601a. This prohibits graduates from SUNY Morrisville who hold a B.S. in Applied Psychology from performing tasks which only licensed providers are authorized to do under state law, such as providing counseling which is only to be done by licensed psychologists.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Analyze real world situations in terms of relevant psychological theories and predict likely results from potential interventions.
- Show basic understanding of the methods social scientists use to understand the world, including correlations and experiments.
- Perform basic statistical procedures and interpret the results.
- Demonstrate professional writing ability, including skills in various formats such as memos, technical papers, and note taking.

- Demonstrate basic quantitative literacy, including use and critical analysis of statistical concepts as supporting arguments and meaningful choice of visual aids such as graphs, tables, charts, and figures.
- Demonstrate an understanding of different cultures and subcultures, and how cultural standards and norms influence behaviors.

Students will also enhance their skills for self-management and improvement, both through theory and practice. As part of the personal development goal, students will be prepared to apply their knowledge and skills towards employment upon graduation.

Curriculum Requirements - 120 Credit Hours

COURSE	CREDITS	
PSYC 101 - Introduction to Psychology	3	
PSYC 363 - Research Methods in Psychology	3	
PSYC 405 - Internship Orientation	1	
PSYC 406 - Internship in Applied Psychology	12-15	
PSYC 410 - Senior Seminar in Applied Psychology	3	
Three of the following four courses:		
PSYC 221 - Biological Psychology	3	
PSYC 241 - Child Development	3	
PSYC 242 - Adolescent Development	3	
PSYC 251 - Abnormal Psychology	3	
Three of the following five courses:		
PSYC 304 - Industrial/Organizational Psychology	3	
PSYC 325 - Motivation and Behavior	3	
PSYC 381 - Personality	3	
PSYC 384 - Group Behavior	3	
PSYC 386 - Social Psychology	3	

Diversity Course - one of the following courses:		
PSYC 291 - Diversity of Human Context (recommended)	3	
ANTH 101 - Introduction to Anthropology	3	
GEOG 101 - Introduction to World Regional Geography	3	
HIST 225 - Women in the United States	3	
PSYC 284 - Psychology of Gender	3	
COMP 101 - Composition and Research	3	
COMP 102 - Writing About Literature	3	
COMP 310 - Advanced Technical Communication	3	
COMM 111 - Introduction to Speech	3	
CITA 101 - Principles of Computer & Applications	3	
MATH 123 or 141 - Statistics as Advised	3	
SOCI 101 - Introduction to Sociology	3	
WELL 101 - Stress and Wellness	3	
SUNY General Education Science w/ Lab	3-4	
Foreign Language as Advised	3	
SUNY General Education courses in Other World Civilizations, American History or Western Civilization as Advised	6	
Required Options: Complete 12 credits in one of the following		
Business Option	12 Credits	
BSAD 116 - Business Organization & Management	3	
BSAD 411 - Leadership in Organizations	3	
BSAD 215 - Human Resource Management	3	
OR		

BSAD 310 - Human Resource Management	3	
Business Elective as Advised	3	
Human Services Option	12 Credits	
HUMS 101 - Introduction to Human Services	3	
HUMS 201 - Counseling and Case Management	3	
PHIL 311 - Professional Ethics	3	
OR		
SOCI 360 - Social Movements	3	
Human Services Elective as Advised	3	
Additional Elective Credits as Advised (minimum of 12 credits must be upper level)	28-29	
Suggested Course Sequence		
Year 1/Fall Semester - 15 Credits		
COMP 101 - Composition and Research	3	
PSYC 101 - Introduction to Psychology	3	
MATH 123 or 141 Statistics as Advised	3	
History as Advised	3	
Foreign Language as Advised	3	
Year 1/Spring Semester - 16 Credits		

COMP 102 - Writing About Literature	3	
SOCI 101 - Introduction to Sociology	3	
History as Advised	3	
SUNY General Education Science w/lab ad Advised	4	
PSYC - 200 Level Psychology as Advised	3	
Year 2/Fall Semester - 15 Credits		
PSYC - 200 Level Psychology as Advised	3	
COMM 111 - Introduction to Speech	3	
PSYC 363 - Research Methods in Psychology	3	
CITA 101- Principles of Computers & Applications	3	
WELL 101 - Stress and Wellness	3	
Year 2/Spring Semester - 15 Credits		
PSYC - 300 Level Psychology as Advised	3	
Course in Concentration as Advised	3	
PSYC 291 - Diversity of Human Context	3	
PSYC - 200 Level Psychology as Advised	3	
300 Level Elective Credits as Advised	3	
Year 3/Fall Semester - 16 Credits		
PSYC - 300 Level Psychology as Advised	3	
Course in Concentration as Advised	3	

Elective Credits as Advised	7	
300 Level Elective Credits as Advised	3	
Year 3/Spring Semester - 15 Credits		
PSYC - 300 Level Psychology as Advised	3	
Course in Concentration as Advised	3	
Elective Credits as Advised	6	
300 Level Elective Credits as Advised	3	
Year 4/Fall Semester - 16 Credits		
PSYC 410 - Senior Seminar in Psychology	3	
PSYC 405 - Internship Orientation	1	
COMP 310 - Advanced Technical Communications	3	
Course in Concentration as Advised	3	
300 Level Elective Credits as Advised	6	
Year 4/Spring Semester - 12-15 Credits		
PSYC 406 - Internship in Applied Psychology	12-15	

Automotive Technology, B.TECH. Major #1611

Automotive Technology, B. Tech. is a ThinkPad University curriculum in which the use of Laptop computers is integrated into courses.

The Bachelor of Technology Degree in Automotive Technology at SUNY Morrisville will prepare students for entry into the automotive industry at the technical or supervisory level where technical knowledge of all aspects of the automotive industry is necessary. This course of study goes beyond the technical automotive education provided by a traditional Associate in Applied Science Degree, adding a business management emphasis at the baccalaureate level.

Students will take courses in traditional automotive areas such as chassis analysis as well as the latest technologies in the automotive field. Students in the degree program will be able to take advantage of SUNY Morrisville's state of the art Automotive Technology Building. The facility provides a technologically sophisticated environment with nine state-of-the-art laboratories including chassis, electrical, emissions, engines, Ford ASSET (Automotive Student Service Educational Training), fuel diagnostics/drivability and performance, R and R (remove and replace), and transmissions. There is a showroom, three classrooms and a chassis dynamometer room where horsepower, torque, emissions and engine data measurements can be taken from a vehicle and transmitted electronically into a classroom. The bays in each laboratory have wireless and hard-wired access into the college's computer network and computerized manual systems gives students quick access to automotive related information. Much like a modern dealership, the building provides students with a professional working environment.

The Automotive Technology B Tech Program prepares students for technical or supervisory level positions in the automotive industry.

Graduation Requirements: All BT and BBA programs require a minimum of 120 credit hours including 30 credit hours from SUNY general education courses with courses in seven of the ten SUNY general education categories. SUNY requires that all Bachelor degree programs must have at least 45 credit hours of upper-division courses with 24 credit hours of upper-division courses in the major. To fulfill these requirements along with the required courses for this program, 123 credits are required for this program. An overall GPA of 2.0 or higher is required for graduation.

Program Requirement: Students are required to have a tool set and roll around tool box.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Communicate effectively both in writing and in presentations in areas of the Automotive Industry
- Evaluate strategies for solving automotive business related problems
- Perform diagnosis, service and repair of base automotive systems
- Diagnose and repair advanced technology applications
- Demonstrate computer competency for accessing data and documenting automotive repair records
- Identify an automotive related research problem, develop research questions, collect and analyze data and draw conclusions

Curriculum Requirements - 123 Credits

COURSE	CREDITS
AUTO 102 - Metals	3
AUTO 103 - Internal Combustion Engines I	3
AUTO 104 - Basic Auto Electrical Systems	3
AUTO 109 - Chassis Analysis I	4
AUTO 110 - Summer Work Experience	3
AUTO 138 - Career Awareness	1
AUTO 155 - Intermediate Auto Electricity & Electronics	3
AUTO 171 - Automotive Drivetrains	3
AUTO 202 - Auto Body Fundamentals	3
AUTO 204 - Automotive Electronic Systems	3
AUTO 205 - Electronic Fuel Systems	3
AUTO 209 - Chassis Analysis II	4
AUTO 255 - Drivability & Performance Problems OR AUTO 259 - Auto Body Nonstructural Repair Refinishing	5
AUTO 261 - Automotive AC and Heating	3

AUTO 309 - Advanced Automotive Chassis	4
AUTO 355 - Advanced Auto Diagnostics	3
AUTO 359 - Collision & Business Mgt	3
AUTO 360 - Auto Shop Mgt & Supervision	3
AUTO 371 - Advanced Powertrain Mgt	3
AUTO 380 - Auto Parts Management	3
AUTO 400 - Automotive Fleet Management	3
AUTO 420 - Auto Industry Internship Orientation	1
AUTO 421 - Automotive Industry Internship	12
BSAD 112 - Marketing	3
BSAD 116 - Business Organization & Mgt	3
BSAD 300 - Management Communication	3
BSAD 400 - Production & Operation Mgt	3
BSAD 310 - Human Resource Management OR	3
RENG 306 - Alternative Fuel Vehicles	2
COMP 101 - Composition and Research	3
COMP 110 - Technical Communication	3
SUNY GER MATH as Advised	3
SUNY GER Natural Science as Advised (3 credits minimum)	3
PSYC 101 - Introduction to Psychology	3
PSYC 304 - Industrial & Org Psychology	3
Additional SUNY General Education (Elective Credits in three of the following): American History, Humanities, Other World Civilization, The Arts, or Western Civilization	12
Suggested Course Sequence	

Year 1/Fall - 14 Credits	
AUTO 102 - Metals	3
OR	
AUTO 103 - Internal Combustion Engines I	3
AUTO 104 - Basic Auto Electrical Systems	3
AUTO 109 - Chassis Analysis I (fall only)	4
AUTO 138 - Career Awareness	1
MATH as Advised	3
Year 1/Spring - 16 Credits	
AUTO 102 - Metals	3
OR	
AUTO 103 - Internal Combustion Engines I	3
AUTO 155 - Intermediate Auto Electricity & Electronics (spring only)	3
AUTO 209 - Chassis Analysis II (spring only)	4
PSYC 101 - Introduction to Psychology	3
COMP 101 - Composition and Research	3
Year 2/Fall - 18 Credits	
AUTO 110 - Summer Work Experience	3
AUTO 202 - Auto Body Fundamentals (fall only)	3
AUTO 204 - Automotive Electronics (fall only)	3
AUTO 205 - Electronic Fuel Systems (fall Only)	3

SUNY General Education Natural Science as Advised (3 credits minimum)	3
SUNY General Education Elective as Advised	3
Year 2/Spring - 17 Credits	
AUTO 171 - Automotive Drive Trains	3
AUTO 255 or AUTO 259 (Spring Only)	5
AUTO 261 - Automotive AC and Heating	3
SUNY General Education Credits as Advised	6
Year 3/Fall - 16 Credits	
AUTO 309 - Advanced Automotive Chassis (fall only)	4
BSAD 112 - Marketing	3
BSAD 116 - Business Organization and Management	3
COMP 110 - Technical Communication	3
PSYC 304 - Industrial Organizational Psychology	3
Year 3/Spring - 14-15 Credits	
AUTO 355 - Advanced Automotive Diagnostics (spring only)	3
AUTO 359 0 Collision Business and Management	3
AUTO 360 - Auto Management and Supervision	3
RENG 306 (spring only) or BSAD 310	2-3
BSAD 300 - Management Communication	3

Year 4/Fall - 16 Credits	
AUTO 371 - Advanced Powertrain Management	3
AUTO 380 - Auto Parts Management	3
AUTO 400 - Automotive Fleet Management	3
AUTO 420 - Auto Industry Internship Orientation	1
BSAD 400 - Production Operation and Management	3
SUNy General Elective Credits as Advised	3
Year 4/Spring - 12 Credits	
AUTO 421 - Automotive Industry Internship	12

Automotive Management, B.B.A., Major #1656

The Bachelor of Business Administration Degree in Automotive Management will prepare students for entry level into the industry at the supervisory or management level with technical knowledge of automotive construction and operation. Courses combine an emphasis in automotive and business management in the first two years. In the junior and senior years, students will continue with business management with a heavy concentration of automotive management. These courses will consist of: automotive shop management, automotive fleet management and automotive parts management and merchandising. The spring semester will culminate with an internship in an automotive or transportation- related business.

Students in this degree program will be able to take advantage of SUNY Morrisville's Automotive Technology Building. Set up like a dealership, it provides students with a technologically sophisticated environment with nine state-of-the- art laboratories. There is a showroom where students can hone their sales and management skills, three classrooms and a chassis dynamometer room. The bays in each laboratory are connected to the college's computer network in order to utilize the computerized manual and management system. This gives students quick access to automotive-related information.

The Automotive Management program prepares students for supervisory or management-level positions in the automotive industry.

Graduation Requirements: All BT and BBA programs require a minimum of 120 credit hours including 30 credit hours from SUNY general education courses with courses in seven of the ten SUNY general education categories. SUNY requires that all Bachelor degree programs must have at least 45 credit hours of upper-division courses with 24 credit hours of upper-division courses in the major. To fulfill these requirements along with the required courses for this program, 121 credits are required for this program. An overall GPA of 2.0 or higher is required for graduation.

Program Requirement: Students are required to have a tool set and roll around tool box. Automotive Management (B.B.A.) is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Communicate effectively both in writing and in presentations in areas of the Automotive Industry
- Evaluate strategies for solving automotive business related problems

- Assess and evaluate the impact of developing technologies
- Identify technology and workforce strategies to enhance overall productivity and effectiveness in automotive business operations
- Demonstrate computer competency for accessing data and documenting automotive repair records

Curriculum Requirements - 121 Credits

	CREDITS
AUTO 102 - Metals	3
AUTO 103 - Internal Combustion Engines I	3
AUTO 104 - Basic Auto Electrical Systems	3
AUTO 109 - Chassis Analysis I	4
AUTO 138 - Career Awareness	1
AUTO 202 - Auto Body Fundamentals	3
AUTO 204 - Automotive Electronic Systems	3
AUTO 205 - Electronic Fuel Systems	3
AUTO 209 - Chassis Analysis II	4
AUTO 359 - Collision & Business Mgt	3
AUTO 360 - Auto Shop Mgt & Supervision	3
AUTO 380 - Auto Parts Inventory Management & Merchandising	3
AUTO 400 - Automotive Fleet Management	3
AUTO 420 - Auto Industry Internship Orientation	1
AUTO 421 - Automotive Industry Internship	12
ACCT 101 - Principles of Accounting I	3
ACCT 102 - Principles of Accounting II	3
BSAD 108 - Business Law I	3
BSAD 112 - Marketing	3

BSAD 116 - Business Organization & Mgt	3
BSAD 221 - Business Statistics	3
BSAD 300 - Management Communication	3
BSAD 310 - Human Resource Management	3
BSAD 325 - Analytic Marketing	3
BSAD 350 - Production & Operation Mgt.	3
BSAD 449 - Management Policies and Issues	3
CITA 101 - Principles of Computers and Applications	3
CITA 405 - Project Management	3
COMP 101 - Composition and Research	3
COMP 110 - Technical Communication	3
ECON 100 or ECON 140	3
SUNY GER MATH as Advised	3
SUNY GER Natural Science as Advised (3 credits minimum)	3
PSYC 101 - Introduction to Psychology	3
PSYC 304 - Industrial & Org Psychology	3
Additional SUNY General Education (Elective Credits in three of the following): American History, Humanities, Other World Civilization, The Arts, or Western Civilization	9

Suggested Course Sequencing

Year 1/Fall - 14 Credits

COURSE	CREDITS
AUTO 102 - Metals OR AUTO 103 - Internal Combustion Engines I	3

AUTO 104 - Basic Automotive Electrical Systems		3
AUTO 109 - Chassis Analysis I (Fall Only)		4
AUTO 138 - Career Awareness		1
MATH - SUNY General Education MATH as advised		3
Year 1/Spring - 16 Credits		
AUTO 102 - Metals OR AUTO 103 - Internal Combustion Engines I		3
AUTO 209 - Chassis Analysis II (Spring Only)		4
CITA 101 - Principles of Computers and Applications		3
COMP 101 - Composition and Resaerch		3
PSYC 101 - Introduction to Psychology		3
Year 2/Fall - 18 Credits		
ACCT 101 - Principles of Accounting I		3
AUTO 202 - Auto Body Fundamentals (Fall Only)		3
AUTO 204 - Automotive Electronics (Fall Only)		3
AUTO 205 - Electronic Fuel Systems (Fall Only)		3
SUNY General Education Elective as Advised		3
SUNY General Education Natural Science as Advised		3

Year 2/Spring - 18 Credits		
ACCT 102 - Principles of Accounting II		3
BSAD 108 - Business Law I		3
BSAD 116 - Business Organization and Management		3
COMP 110 - Technical Communication		3
ECON 100 or ECON 140 - Economics		3
SUNY General Education Elective as advised		3
Year 3/Fall - 15 Credits		
AUTO 360 - Auto Management and Supervision		3
BSAD 112 - Marketing		3
BSAD 221 - Business Statistics		3
BSAD 300 - Management Communication		3
SUNY General Education Elective as advised		3
Year 3/Spring - 15 Credits		
AUTO 359 - Collision Business and Management		3
BSAD 310 - Human Resources Management		3
BSAD 325 - Analytic Marketing		3
BSAD 449 - Management Policies and Issues		3
PSYC 304 - Industrial Organizational Psychology		3

Year 4/Fall - 13 Credits		
AUTO 380 - Auto Parts Management		3
AUTO 400 - Automotive Fleet Management		3
AUTO 420 - Auto Industry Internship Orientation		1
BSAD 350 - Principles of Corporate Finance		3
CITA 405 - Project Management		3
Year 4/Spring - 12 Credits		
AUTO 421 - Automotive Industry Internship		12

BUSINESS ADMINISTRATION, B.B.A. Major #0280

Business Administration is a ThinkPad University curriculum using laptop computers integrated into courses. This degree program is offered only at the Morrisville Campus.

SUNY Morrisville's bachelor degree in Business Administration provides students with the opportunity to develop the business practices and skills necessary for planning and directing the management, business, and financial activities of business, government and other organizations. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

Graduates are prepared to coordinate, support and perform a broad range of duties that promote organizational efficiency. The mission of the program is to give students the opportunity to graduate with the ability to identify new opportunities, solve business problems and improve operational optimization. Combining both theoretical and applied teaching, emphasis is placed on concepts, skills and techniques that are immediately transferable in the workplace.

The New York State Department of Labor maintains employment estimates and projections for more than 700 different occupations in each of 10 regions statewide. For management occupations overall (NAICS 551), the projections indicate an anticipated 17.3 percent plus growth for the 10-year period ending in 2022.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- To communicate effectively through both oral and written means of communication
- To design, implement and evaluate strategies for identifying new business opportunities
- To design, implement and evaluate strategies for solving contemporary business problems
- To recognize and promote ethical and responsible business practices
- To effectively meld technical knowledge with information technology proficiency
- To plan and direct the management, business and financial activities of business, government and other organizations
- To utilize quantitative analysis to evaluate operational efficiency, market segment

opportunities and business profitability

- To identify technology and workforce strategies to enhance overall productivity
- To prepare a competitive industry analysis in support of strategic decision making

Curriculum Requirements - 120 Credits

COURSE	CREDITS	
BSAD 100 - Business in the 21st Century	3	
BSAD 108 - Business Law I	3	
BSAD 116 - Business Organization & Management	3	
BSAD 140 - Business Communications	4	
BSAD 203 - Business Law II	3	
BSAD 221 - Business Statistics	3	
BSAD 300 - Management Communications	3	
BSAD 310 - Human Resources Management	3	
BSAD 320 - Entrepreneurship	3	
BSAD 325 - Marketing Management	3	
BSAD 350 - Principles of Corporate Finance	3	
BSAD 375 - Management Information Systems	3	
BSAD 380 - International Business	3	
BSAD 400 - Responsible Business Ownership	3	
BSAD 411 - Leadership	3	
BSAD 470 - Strategic Management	3	
ACCT 101 - Principles of Accounting I	3	
ACCT 02 - Principles of Accounting II	3	
CITA 101 - Principles of Computer Applications	3	
ECON 140 - Principles of Microeconomics	3	
ECON 100 - Principles of Macroeconomics	3	

300 -400 Upper Level Credits as Advised	12	
OR		
Optional Concentration as Advised		
COMP 101 - Composition and Research	3	
COMP 102 - Writing About Literature	3	
MATH 155 - Business Calculus	3	
Additional Liberal Arts and Sciences as Advised	6	
Additional General Electives as Advised	15	

Accounting Studies Concentration

COURSE	CREDITS
ACCT 301 - Intermediate Accounting	3
ACCT 302 - Intermediate Financial Accounting II	3
ACCT 303 - Cost Accounting	3
ACCT 401 - Auditing	3

Entrepreneurship Concentration

COURSE	CREDITS
BSAD 330 - Leading Managing the Family Business	3
BSAD 391 - Internship in Business	3
ENTR 327 - Guerrilla Marketing Tactics for Small Business	3
ENTR 342 - Innovation & New Venture Creation	3

Marketing Concentration

COURSE	CREDITS
BSAD 327 - Adverting Management	3
BSAD 329 - Consumer Behavior	3
BSAD 353 - Sport Marketing-Strategic Application	3
BSAD 391 - Internship in Business	3
BSAD 419 - Global Marketing	3
ENTR 327 - Guerrilla Marketing Tactics-Small Business	3

Sports Management Concentration

COURSE	CREDITS
BSAD 343 - Introduction to Sports Management	3
Three of the following courses:	9
BSAD 353 - Sport Marketing	3
BSAD 391 - Internship in Business	3
BSAD 418 - Sport Law	3
BSAD 443 - Strategic Sports Business	3

Suggested Course Sequence

Year 1/Fall - 15 Credits

COURSE	CREDITS
BSAD 100 - Business in the 21st Century	3
BSAD 108 - Business Law I	3
CITA 101 - Principles of Computers & Applications	3
COMP 101 - Composition and Research	3
ELECTIVE - Lower division – As Advised	3

Year 1/Spring - 15 Credits

COURSE	CREDITS
BSAD 116 - Business Organization & Management	3
BSAD 140 - Business Communications	3
COMP 102 - Writing about Literature	3
MATH 102 - Intermediate Algebra w/Trigonometry–SUNY GER	3
ELECTIVE - Lower division – As Advised	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
ACCT 101 - Principles of Accounting I	3
ECON 100 - Principles of Macroeconomics	3
MATH 153 - Business Calculus	3
ELECTIVE - Lower division – As Advised	3
ELECTIVE - SUNY GER –As Advised	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
ACCT 102 - Principles of Accounting II	3
BSAD 203 - Business Law II	3
BSAD 221 - Business Statistics	3
ECON 140 - Principles of Microeconomics	3
ELECTIVE - SUNY GER – As Advised	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
BSAD 310 - Human Resource Management	3
BSAD 325 - Marketing Management	3
BSAD 350 - Principles of Corporate Finance	3
ELECTIVE - Lower/Upper division – As Advised	3
ELECTIVE - SUNY GER – As Advised	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
BSAD 300 - Management Communications	3
BSAD 320 - Entrepreneurship	3
BSAD 375 - Management Information Systems	3
BSAD 380 - International Business	3
ELECTIVE - Lower/Upper division – As Advised	3

Year 4/Fall - 15 Credits

COURSE	CREDITS
BSAD 400 - Production and Operations Management	3
BSAD 408 - Responsible Business Ownership	3
BSAD 411 - Leadership	3
ELECTIVE - Upper division – As Advised	3
ELECTIVE - SUNY GER – As Advised	3

Year 4/Spring - 16 Credits

COURSE	CREDITS
BSAD 470 - Strategic Management	3
ELECTIVES - Upper division – As Advised	9
ELECTIVE - SUNY GER – As Advised	3

Criminal Justice B.TECH., Major #0287

The bachelor of technology in Criminal Justice is designed to give students a thorough hands-on preparation for employment in the field, either as public safety officials or in the private sector. Students are challenged by courses that address practical and current issues in law enforcement. In addition to courses in the Criminal Justice area, students will work with advisors to complete a technological sequence with a minimum of nine credits. Examples of technological sequence disciplines include Information Technology, Natural Resources, Economics and White Collar Crime, Adolescents and the Criminal Justice System, and Public Safety and Security. The program also includes a 15-credit full-time internship to give students extensive experience in a real-world Criminal Justice setting.

As a result of new technologies, including forensic sciences, DNA, new evidence collection equipment, crime scene investigation advances, surveillance expertise, computers, and the specialty services instituted since 9/11, the need for a higher level of training and education in the criminal justice field is essential. We have drawn on advances in all areas of the protective services to create this technologically- based academic degree program to support the criminal justice fields with highly qualified personnel.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify, collect, and preserve evidence according to standard police practice utilizing traditional, current, and technological methods in a manner that is mutually beneficial to all of the stakeholders in the criminal justice system.
- Recognize and evaluate essential criminal justice-related skills including computer and network threats and vulnerabilities within public and private sectors, competent construction of emergency plans and mutual aid agreements to assist with the interagency cooperation necessary to ensure the public's safety in accordance with nationally accepted procedures.
- Identify and describe diversity and cultural influences in human behavior, particularly in stressful events.
- Assess the effectiveness of nationally accepted procedures and concepts in emergency preparedness.
- Critique the varying goals and priorities of the many disciplines in the criminal justice system.

- Integrate and convey concepts through the application of critical thinking, writing, and communication.

Curriculum Requirements - 122 Credits

COURSE	CREDITS
CJUS 101 Introduction to Criminal Justice	3
CJUS 201 Corrections	3
CJUS 202 Policing	3
CJUS 220 Criminal Investigation I	3
CJUS 221 Criminal Investigation II	3
CJUS 230 Penal Law	3
CJUS 231 Criminal Procedure Law	3
CJUS 301 Crime Scene Investigation and Management	3
CJUS 311 Interviewing Techniques in Criminal Justice	3
CJUS 414 Investigation of Staff Misconduct & Workplace Violence	3
CJUS 449 Criminal Justice Internship Preparation	1
CJUS 450 Criminal Justice Internship	15

Upper Level Electives

COURSE	CREDITS	
Select twelve credits the following:		
CJUS 310 Serial Murders and Criminal Justice	3	
CJUS 312 Victimization	3	
CJUS 313 Sex Offenses	1	
CJUS 314 Diversity within Criminal Justice Systems	1	
CJUS 315 White Collar Crime	3	
CJUS 316 Animal Abuse Investigations	1	
CJUS 401 Emergency Planning and Response	3	
CJUS 402 Terrorism and Law Enforcement	3	
CJUS 403 Private Security	3	
CJUS 404 Use of Force Continuums	1	
CJUS 405 Crime Scene Photography	1	
CJUS 412 Arson and Bomb Investigation	3	
CJUS 498 Special Topics Criminal Justice	3	
Technical Sequence Courses as Advised Students will consult with their advisor and faculty in the technical area and will select 9 credits that best meet their needs and career plans.	9	

Required Liberal Arts Courses

COURSE	CREDITS
COMP 101 Composition and Research	3
COMP 102 Writing about Literature	3
COMP 310 Advanced Technical Writing	3
Foreign Language as Advised	6
Mathematics as Advised	3
History as Advised	3
Natural Science as Advised	3
PHIL 311 Professional Ethics	3
POLI 113 American Judiciary System	3
PSYC 101 Introduction to Psychology	3
PSYC 304 Industrial/Organizational Psych OR PSYC 384 Group Behavior OR PSYC 386 Social Psychology	3
SOCI 101 Introduction to Sociology	3
CITA 101 Computer Applications I	3
WELL 101 Stress and Wellness OR PHED Physical Education as advised	3
GNED 100 First Year Experience	2
Additional General Elective Credits Required	8

Sample Technical Sequences

Information Technology

COURSE	CREDITS
CITA 120 Computer Concepts & Op Sys	3
CITA 140 Introduction to Programming	3
CITA 150 Data Management Techniques	3
CITA 190 Intro to LINUX/UNIX Operating Systems	3
CITA 200 Data Comm. & Networking	3
CITA 201 Visual Programming & Development	3
CITA 260 Photograph & Digital Imaging	3
CITA 270 Fund Network Security	3
CITA 305 Computer Crimes and Digital Forensics	3
STS 316 Investigating Cyberculture	3

Natural Resources

COURSE	CREDITS
ENSC 106 Pesticide Use and Handling	3
ENVT 100 Intro to Environ. Technology	3
NATR 110 Natural Resources Measurements	3
NATR 120 Intro to Recreation Area Mgt	3
RENG 102 Renewable Energy Resources	3
RREN 303 Fundamentals of GPS/GIS	3
RREN 305 Renewable Resources Law & Regulations	3

Economics/White Collar Crime

COURSE	CREDITS
ECON 100 Introduction to Macroeconomics	3
ECON 140 Introduction to Microeconomics	3
ECON 300 Money, Banking, & Financial Markets	3
ECON 370 International Economics	3
CJUS 315 White Collar Crime	3
BSAD 101 Business in 21st Century	3
BSAD 116 Business Org & Management	3

Adolescents and Criminal Justice

COURSE	CREDITS
CJUS 235 Juvenile Delinquency	3
COMM 131 Small Group Discussion	3
COMM 121 Theories Interpersonal Communication	3
PSYC 242 Adolescent Development	3
SOCI 201 Social Problems 21st Century	3
SOCI 220 Marriage and the Family	3

Public Safety/Security

COURSE	CREDITS
BSAD 107 Legal & Regulatory Aspects of Gaming	3
CAS 103 Casino Security	3
CAS 311 Surveillance & Security Technologies	3
RRMT 450 Facilities Safety & Security	3
SOCI 390 Urban Sociology	3
STS 316 Investigating Cyberculture	3

Policing

COURSE	CREDITS
CJUS 316 Animal Abuse Investigation	1
CJUS 405 Crime Scene Photography	1
CJUS 314 Diversity in CJ System	1
CJUS 313 Sex Offences	1
CJUS 404 Use of Force Continuums	1
COMM 131 Interpersonal Communication	3
PHED 150 Self Defense	1
PSYC 242 Adolescent Development	3
RREN 303 Fundamentals of Geospatial Systems	3

Suggested Course Sequence

Year 1/Fall - 17/18 Credits

COURSE	CREDITS
CJUS 101 - Introduction to Criminal Justice	3
POLI 113 - American Judiciary System	3
COMP 101 - Composition and Research	3
GEND 100 - First Year Experience	2
WELL 101 - Stress and Wellness OR PHED - Physical Education	3
SUNY General Education Science as Advised	3/4

Year 1/Spring - 15 Credits

COURSE	CREDITS
CJUS 201 - Corrections	3
CJUS 202 - Policing	3
COMP 102 - Writing About Literature	3
MATH - SUNY General Education Math as Advised	3
PSYC 101 - Introduction to Psychology	3

Year 2/Fall - 15 Credits

COURES	CREDITS
CJUS 220 - Criminal Investigation I	3
CJUS 230 - Penal Law	3
CITA 101 - Computer Applications I	3
Foreign Language as Advised	3
SOCI 101 - Introduction to Sociology	3

Year 2/Spring - 18 Credits

COURSES	CREDITS
CJUS 221 - Criminal Investigation II	3
CJUS 231 - Criminal Procedure Law	3
Foreign Language as Advised	3
HIST - History as Advised	3
PSYC 304 - Industrial/Organizational Psychology OR PSYC 384 - Group Behavior OR PSYC 386 - Social Psychology	3
Technical Sequence Course	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
CJUS 301 - Crime Scene Investigation and Management	3
CJUS 311 - Interviewing Techniques in Criminal Justice	3
PHIL 311 - Professional Ethics	3
Criminal Justice Elective	3
General Elective	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
CJUS 414 - Workplace Violence and Employee Misconduct	3
COMP 310 - Advanced Technical Writing	3
Criminal Justice Elective	3
Technical Sequence Course	3
General Elective	3

Year 4/Fall - 12 Credits

COURSE	CREDITS
CJUS 449 - Criminal Justice Internship Orientation	1
Criminal Justice Electives	6
General Electives	2
Technical Sequence Course	3

Year 4/Spring - 15 Credits

COURSE	CREDITS
CJUS 450 - Criminal Justice Internship	15

Dairy Management, B.TECH., Major #1605

Dairy Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Program Description

Students are admitted to the baccalaureate program as freshmen with a B- or higher high school average and two units of math and science. SAT or ACT scores are required. Transfer students are admitted to the baccalaureate program by several means that offer flexibility to the student to meet the requirements of the degree. The student may successfully complete an A.A.S. agricultural degree program in agriculture, where required courses could transfer in the B.Tech. Dairy Management program. The student may also enter the program after completing transferable, college-level course work in either general education or technology- based courses, or transfers from other accredited institutions. A minimum grade point average of 2.0 is required. All bachelor degree programs must complete the State University of New York Board of Trustees mandated general education requirements. Consult your academic adviser for specific details.

The Northeast Dairy Industry has many advantages that are causing growth and creating greater profitability. The resulting growth of the Northeast Dairy Industry is generating a need for qualified people trained in the management of dairy farms and related businesses. Dairy farms, like other businesses, are really about people. The B.Tech. in Dairy Management is designed to prepare students to enter this very dynamic and rewarding industry. The program focuses on enhancing management and herdsmanship skills, emphasizing three areas: interpersonal skills such as communication, animal science and business management. The program is very practical and student-oriented, giving students many opportunities to experience working with dairy animals and managing dairy enterprises.

The facilities include a free-stall complex milking around 200 registered Holsteins, an electronically enhanced milking parlor and student-managed computer systems and a modern calf and heifer facility, all of which provides a tremendous learning environment for dairy and agricultural students.

Students will be required to complete the *Dairy Management Experience* course at the end of their career at Morrisville, which will include one of the following:

1. A directed dairy-related internship
2. A one semester residency in the W. H. Miner Agricultural Research Institute's Advanced Dairy Management Program

3. A one semester residency at Cornell that allows students to take upper level courses in animal science and farm business management

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- The ability to utilize and demonstrate effective time and human resource management
- The ability to develop problem-solving and critical thinking skills
- The ability to utilize practical knowledge and skill sets pertinent to the dairy and agriculture industries

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
DANS 100 Dairy Nutrition	3
DANS 110 Dairy Breeding	3
DANS 120 Anatomy and Physiology of the Diary Cow	3
DANS 140 Dairy Cattle Judging	1
DANS 150 Dairy Farm Practicum	1
DANS 151 Dairy Techniques	1
DANS 160 Introduction to Dairy Science	3
DANS 210 Dairy Health	3
DANS 220 Dairy Herd Management	3
DANS 225 Dairy Production & Management	3
DANS 240 Dairy Farm Data Management	1
DANS 301 Dairy Management Experience	16
DANS 305 Dairy Heifer Replacement and Management	3

DANS 340 Advanced Diary Reproduction	3
DANS 450 Advanced Dairy Herd Mgt.	4
AGBS 100 Agricultural Economics OR AGBS 225 Environmental Economics	3
AGBS 200 Marketing Agricultural Products	3
ABGS 240 Farm Management and Finance	4
AGBS 305 Agricultural Financial Decision Making	3
AGBS 405 Capstone for Farm Managers & Rural Entrepreneurs	3
AGRO 110 Soil Science	3
AGRO 210 Field Crop Management	3
AGRO 310 Pasture Management	3
300 - 400 Level BSAD or AGBS as advised	3
BSAD or AGBS as advised	3
AGSC 137 Analysis and Interpretation of Agricultural Data	3
AGSC 350 Animal Genetics	3
AGSC 132 Introduction to Computer Applications in Farming OR OFFT 110 Intro to Spreadsheet Software AND OFFT 100, 106 or 109	2
ACCT as advised	3

Liberal Arts and Sciences Requirements

COURSE	CREDITS
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
COMP 102 Writing about Literature	3
COMP 310 Advanced Technical Communications	3
MATH as advised (must meet SUNY GER)	3
SPAN Spanish as Advised	3
Additional SUNY GER (6 credits from 2 of the remaining categories)	6
Additional General Elective Credits	6

Total Program Credits: 120

Suggested Course Sequence

Year 1/Fall - 16 Credits

COURSE	CREDITS
DANS 100 - Dairy Nutrition	3
DANS 160 - Introduction to Dairy Science	3
DANS 150 - Dairy Farm Practicum	1
AGBS 100 - Agricultural Economics	3
AGRO 110 - Soil Science	3
COMP 101 - Composition & Research	3

Year 1/Spring - 15 Credits

COURSE		CREDITS
DAN 110 - Dairy Breeding		3
DANS 120 - Anatomy & Physiology		3
DANS 140 - Dairy Cattle Judging		1
DANS 151 - Dairy Techniques		1
DANS 240 - Dairy Farm Data Management		1
AGBS 200 - Marketing of Agricultural Products		3
MATH		3

Year 2/Fall - 16 Credits

COURSE	CREDITS
DANS 210 - Dairy Health	3
DANS 220 - Dairy Herd Management	3
AGBS 240 - Farm Management & Finance	4
AGRO 210 - Field Crop Management	3
Elective (GAH, GA, GOC, GSS, GWC)	3

Year 2/Spring - 14 Credits

COURSE	CREDITS
DANS 225 - Dairy Production & Management	3
COMP 102 - Writing About Literature	3
OFFT 100 - Intro to Spreadsheet Software	1
OFFT 10X - Computer Applications Course	1
ACCT 101 - Principles of Accounting I	3
Elective (GAH, GA, GOC, GSS, GWC)	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
DANS 340 - Advanced Dairy Reproduction	3
AGBS 305 - Agricultural Financial Decision Making	3
AGRO 310 - Pasture Management	3
SPAN 101 - College Spanish I	3
AGBS/BSAD Elective	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
DANS 305 - Dairy Heifer Replacement & Management	3
AGBS 405 - Capstone for Farm Mgmt & Rural Entrepreneurs	3
COMP 310 - Advanced Technical Communications	3
AGSC 137 - Ag. Statistics	3
General Elective	3

Year 4/Fall - 13 Credits

COURSE	CREDITS
AGSC 350 - Animal Genetics - Dairy	3
DANS 450 - Advanced Dairy Herd Management	4
AGBS/BSAD Upper Elective	3
General Elective	3

Year 4/Spring- 16 Credits

COURSES	CREDITS
DANS 301 - Internship in Dairy Management	16

ENTREPRENEURSHIP & SMALL BUSINESS MANAGEMENT, B.B.A., Major #1936

Entrepreneurship and Small Business Management is a ThinkPad University curriculum using laptop computers integrated into courses.

Program Description

This degree will provide students with the opportunity to learn and apply business practices necessary to becoming an entrepreneur and opening their own business. The mission of the program is to afford graduating students with the opportunity to graduate with a diploma, a laptop, and the knowledge to create a business. The program will provide students with technical and business expertise through classroom and hands-on field experiences. The features of this program align with the College's mission of offering baccalaureate degrees with a business nature and a strong emphasis on entrepreneurship and lifelong learning. This program is an "upper division" program for the Junior and Senior years. Accepted students will have an associate degree or 60 hours of lower division course work prior to joining the program.

This degree will provide students with the opportunity to learn and apply business practices necessary to becoming an entrepreneur and opening their own business.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- To communicate effectively in written and oral form in a professional manner with appropriate style;
- To seek, identify seize and defend realistically opportunities in order to take calculated risks based on gathered information;
- To formulate successfully an effective business plan that contains key areas of marketing, management, finance, and operations as a basis for decision-making;
- To present essential data for an original idea using appropriate technology by translating all gathered data into a succinct recommendation; and
- To identify, procure and organize effectively the needed resources to create and/or operate their own business or aid in transforming other businesses.

Curriculum Requirements - 120 Credits

COURSES	CREDITS
BSAD 116 Business Organization & Mgt.	3
BSAD 221 Business Statistics OR MATH 123 Elementary Statistics	3
BSAD 300 Management Communications	3
BSAD 310 Human resource Management	3
BSAD 325 Marketing Management	3
ENTR 317 The Entrepreneurial Process OR BSAD 320 Entrepreneurship	3
ENTR 320 Accounting for Entrepreneurs OR ACCT 102 Principles of Accounting II	3
ENTR 335 Entrepreneurial Finance OR BSAD 350 Corporate Finance	3
ENTR 342 Innovation & New Venture Creation	3
ENTR 352 Entrepreneurial Value Chain Management OR BSAD 400 Production & Operation Mgt.	3
ENTR 338 Legal Issues for the Entrepreneur OR BSAD 108 Business Law I AND BSAD 203 Business Law II	3-6
ENTR 327 Guerrilla Marketing Tactics for Small Businesses	3
ENTR 417 Creating the Business Venture	3
ENTR 474 Preparation for Field Study	1
ENTR 475 Practicum in Entrepreneurship/ Business Consulting	15
COMP 101 Composition & Research	3

COMP 102 Writing About Literature	3
MATH 102 Intermediate Algebra w/ Trig	3
ECON 100 Principles of Macroeconomics OR ECON 140 Principles of Microeconomics	3
Additional Liberal Arts & Sciences	18
General Electives	30

Suggested Course Sequence

Year 1/Fall - 18 Credits

COURSE	CREDITS
ENTR 317 or BSAD 320 - The Entrepreneurial Process OR Entrepreneurship	3
ENTR 320 or ACCT 102 - Accounting for Entrepreneurs OR Principles of Accounting II	3
BSAD 325 - Marketing Management	3
ECON 140 - Principles of Microeconomics	3
BSAD 116 - Business and Organizations Management	3
BSAD 221 or MATH 123 - Business Statistics or Elementary Statistics	3

Year 1/Spring - 15-18 Credits

COURSE	CREDITS
ENTR 335 or BSAD 350 - Entrepreneurial Finance OR Corporate Finance	3
ENTR 342 - Innovation & New Venture Creation	3
ENTR 352 or BSAD 400 - Entrepreneurial Value Chain Management OR Production & Operations Management	3
ENTR 338 or BSAD 108 and 203 - Legal Issues for the Entrepreneur OR Business Law I and II	3-6
ELECTIVE - SUNY GER – As Advised	3

Year 2/Fall - 16 Credits

COURSE	CREDITS
ENTR 417 - Creating the Business Venture	3
ENTR 327 - Guerrilla Tactics for Small Business Marketing	3
BSAD 300 - Management Communications	3
BSAD 310 - Human Resource Management	3
ELECTIVE - Professional Elective – As Advised	3
ENTR 474 or TECH 395 - Preparation for Field Study OR Preparation for Field Study	1

Year 2/Spring - 15 Credits

COURSE	CREDITS
ENTR 475 - Practicum in Entrepreneurship/Business Consulting	15

EQUINE SCIENCE, B.TECH.

Major #1321

Equine Science is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

This degree offering focuses on enhancing the management and horsemanship skills at the upper division level. Students must select one of the following options as a specialization: equine science and management (hunt seat, western, or draft concentration); breeding management; racing management (harness racing or thoroughbred racing); equine rehabilitation and therapy or equine business management. A semester of work internship or international exchange program is mandated to complete the degree requirements.

The strengths of the equine science and management program are mainly twofold: first in the range of courses, which offer practical experience in handling horses. The program provides the student with the opportunity to concentrate on breeding, training, nutrition, and management specifically with horses, rather than with a generalized group of livestock. The second strength of the program is the quality of the faculty, staff and facilities available to the student. The college has two new 100-foot by 200-foot indoor arenas, An 80-foot by 264-foot indoor riding arena, two 100-foot by 200-foot outdoor arenas, a half-mile racing track, three horse barns, a 34,000 square foot breeding and training facility, four hot walkers, Eurociser, paddocks, and all of the associated equipment and supplies necessary for a suitable educational experience. Additionally, there are more than 300 horses on site.

The SUNY Morrisville Equine Rehabilitation Center (SUNY Morrisville ERC) facility includes a 22,000 square foot rehabilitation center building with classroom and administrative offices, a large rehabilitation treatment area, and ten stalls. A 31-stall barn for the Thoroughbred Racing Program and a 140 by 300 foot indoor riding arena are also located at this facility. Therapeutic modalities available at the Equine Rehabilitation Center include aquatic therapies (underwater treadmill, cold salt water spa therapy, indoor swimming pool), therapeutic ultrasound, laser therapy (Class IIIB), cold compression therapy, solariums, and therapeutic exercises.

Faculty and staff have a broad range of industry experience, including licensure by the United States Trotting Association and/or New York State Racing and Wagering Board as trainers and/ordrivers, certification for specific technical areas, and are carded judges for various breed organizations including AQHA, NRHA, APHA, ApHC, NSBA, and NRCHA. The college also has intercollegiate riding teams (hunt seat and western) and state-of-the-art equipment in all facets of the program.

All of the above provide for an industry-ready and quality equine education.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate safe procedures, sound judgment and critical thinking skills in human and horse interactions when handling on the ground, astride or driving.
- Further develop and be able to evaluate proper body position and effective use of seat, leg, hands and/or voice aids for ground-handling, riding or driving.
- Conduct the necessary research, analysis, evaluation, and critical thinking skills required of equine management and demonstrate the ability to develop a well-organized approach to address common problems related to equine training and management.
- Utilize an understanding of equine behavior and to develop trained responses in project horses.
- Develop a balanced ration by evaluating potential feedstuff and utilize the principles of nutrition to meet the needs of horses that is commensurate with varied uses and workloads.
- Apply the principles and techniques of modern equine reproduction and evaluate current breeding management practices to improve breeding efficiency.
- Utilize a systematic method of evaluating conformation and observing performance to accurately gauge individual improvement and to make qualified comparisons between horses.
- Develop and implement health management practices and skills to recognize signs of lameness and a fundamental understanding of treatment therapies.
- Develop a positive, confident outlook and a responsible work ethic that is likely to attract success as an equine professional.
- Develop sound ethical principles and judgment when dealing with employers, employees, and clients.
- Demonstrate the ability to develop and implement a business plan for a small to moderate-sized horse establishment.

Curriculum Requirements

Major Field Requirements:

COURSE	CREDIT
ACCT 100 Accounting Information and Management Decisions OR ACCT 101 Principles of Accounting I OR AGBS 250 Decision Making for Agricultural Managers	3
AGRO 310 Pasture Management and Forage Production	3
ESCI 310 Applied Equine Nutrition	3
ESCI 315 Equine Business Management	3
AGSC 350 Animal Genetics	3
RREN 450 Internship Orientation	1
ESCI 420 Equine Internship	15

Options

Select one of the following options (must complete 12 Credits):

Equine Science & Management

COURSE
ERID 300 Advanced Equine Specialization I
ESTB 350 Advanced Equine Specialization II
ESTB 400 Advanced Equine Specialization III

Equine Racing Management

COURSE
ESTB 300 Advanced Equine Specialization I
ESTB 350 Advanced Equine Specialization II
ESTB 400 Advanced Equine Specialization III

Equine Breeding Management

COURSE
ESCI 320 Equine Youngstock Management
ESCI 340 Equine Promotion and Sales
ESCI 350 Advanced Equine Specialization II
ESCI 400 Advanced Equine Specialization III

Equine Rehabilitation & Therapy

COURSE
ESCI 335 Equine Aquatic Therapies
ESCI 345 Advanced Equine Anatomy
ESCI 370 Concepts for Diagnosis in Rehabilitation
ESCI 380 Equine Rehabilitation Therapies
ESCI 430 Clinical Application of Equine Rehabilitation

Equine Business Management

COURSE
Choose 12 credits of upper division coursework from the following subject codes: AGBS, BSAD, CITA

Liberal Arts & Sciences

COURSE	CREDITS
BIOL/CHEM with Lab As Advised	8
COMP 310 Advanced Technical Communication	3
Additional Liberal Arts & Sciences	19

Total Credits: 120

Suggested Course Sequence – Equine Science Management Option

Year 1/Fall - 17 Credits

COURSE	CREDITS
ERID 300 - Advanced Specialization I	4
AGRO 310 - Pasture Mgmt. and Forage Production	3
ESCI 310 - Applied Equine Nutrition	3
ESCI 315 - Equine Business Management	3
BIOL/CHEM - GenEd – As Advised	4

Year 1/Spring - 15 Credits

COURSE	CREDITS
ERID 350 - Advanced Specialization II	4
AGSC 350 - Animal Genetics	3
RREN 450 - Internship Orientation	1
MATH 102 - Intermediate Algebra w/Trig or Higher	3
BIOL/CHEM - GenEd – As Advised	4

Year 2/Fall - 20 Credits

COURSE	CREDITS
ERID 400 - Advanced Specialization III	4
ACCT 100 - Accounting Information & Mgmt. Decisions OR ACCT 101 - Principles of Accounting I OR AGBS 250 - Decision Making for Ag Managers	3
COMP 310 - Advanced Technical Communications	3
ESCI 315 -Equine Business Management	3
SOCIAL SCIENCE - GENED – AS ADVISED	3
ELECTIVE - GenEd – As Advised	4

Year 2/Spring - 15 Credits

COURSE	CREDITS
ESCI 420 - Equine Internship	15

Suggested Course Sequencing – Equine Racing Management Option

Year 1/Fall - 17 Credits

COURSE	CREDITS
ESTB 300 - Advanced Specialization I	4
AGRO 310 - Pasture Mgmt. and Forage Production	3
ESCI 310 - Applied Equine Nutrtion	3
ESCI 315 - Equine Business Management	3
BIOL/CHEM - GenEd – As Advised	4

Year 1/Spring - 15 Credits

COURSE	CREDITS
ESTB 350 - Advanced Specialization II	4
AGSC 350 - Animal Genetics	3
RREN 450 - Internship Orientation	1
MATH 102 - Intermediate Algebra w/Trig or Higher	3
BIOL/CHEM - GenEd – As Advised	4

Year 2/Fall - 20 Credits

COURSE	CREDITS
ESTB 400 Advanced Specialization III	4
ACCT 100 - Accounting Info & Mgmt. Decisions OR ACCT 101 - Principles of Accounting I OR AGBS 250 - Decision Making for Ag Managers	3
COMP 310 - Advanced Technical Communications	3
ESCI 315 - Equine Business Management	3
SOCIAL SCIENCE - GenEd – As Advised	3
ELECTIVE - GenEd – As Advised	4

Year 2/Spring - 15 Credits

COURSE	CREDITS
ESCI 420 - Equine Internship	15

Suggested Course Sequencing – Equine Breeding Management Option

Year 1/Fall - 17 Credits

COURSE	CREDITS
ESCI 320 - Equine Young stock Management	1
ESCI 340 - Equine Promotion and Sales	3
AGRO 310 - Pasture Mgmt. and Forage Production	3
ESCI 310 - Applied Equine Nutrition	3
ESCI 315 - Equine Business Management	3
BIOL/CHEM - GenEd – As Advised	4

Year 1/Spring - 15 Credits

COURSE	CREDITS
ESCI 350 - Advanced Specialization II	4
AGSC 350 - Animal Genetics	3
RREN 450 - Internship Orientation	1
MATH 102 - Intermediate Algebra w/Trig or Higher	3
BIOL/CHEM - GenEd – As Advised	4

Year 2/Fall - 20 Credits

COURSE	CREDITS
ESCI 400 - Advanced Specialization III	4
ACCT 100 - Accounting Info & Mgmt. Decisions OR ACCT 101 - Principles of Accounting I OR AGBS 250 - Decision making for Ag Managers	3
COMP 310 - Advanced Technical Communications	3
ESCI 315 - Equine Business Management	3
SOCIAL SCIENCE - GenEd – As Advised	3
ELECTIVE - GenEd – As Advised	4

Year 2/Spring - 15 Credits

COURSE	CREDITS
ESCI 420 - Equine Internship	15

Suggested Course Sequencing – Equine Rehabilitation and Therapy Option

Year 1/Fall - 18 Credits

COURSE	CREDITS
ESCI 335	2
ESCI 345	2
ESCI 370	1
AGRO 310	3
ESCI 310	3
ESCI 315	3
BIOL/CHEM	4

Year 2/Spring - 14 Credits

COURSE	CREDITS
ESCI 380 - Equine Rehabilitation Therapies	3
AGSC 350 - Animal Genetics	3
RREN 450 - Internship Orientation	1
MATH 102 - Intermediate Algebra w/Trig or Higher	3
BIOL/CHEM - GenEd – As Advised	4

Year 2/Fall - 22 Credits

COURSE	CREDITS
ESCI 430 - Clinical Applications of Equine Rehabilitation	4
ESCI405 - Problems and Diseases in Equine Rehabilitation	2
ACCT 100 - Accounting Info. & Mgmt. Decisions OR ACCT 101 - Principles of Accounting I OR AGBS 250 - Decision Making for Ag Managers	3
COMP 310 - Advanced Technical Communications	3
ESCI 315 - Equine Business Management	3
SOCIAL SCIENCE - GenEd – As Advised	3
ELECTIVE - GenEd – As Advised	4

Year 2/Spring - 15 Credits

COURSE	CREDITS
ESCI 420 - Equine Internship	15

Horticulture Business Management, B.TECH., Major #1941

In combining the study of plant science and commercial business management at the baccalaureate level, the Horticulture Business Management degree program is the first of its kind in New York State. The purpose of this program is to provide students entering the horticulture industry with the necessary knowledge, skills, and training to own, manage or work in a commercial horticulture business operation.

Both nationwide and within New York State, horticulture is a healthy and dynamic industry that includes several divisions and branches such as Floriculture; Viticulture; Specialty Crop Production; Organic Fruit and Vegetable Production; Greenhouse and Nursery Production; Controlled Environment Agriculture (CEA); Landscape Development and Management; and Landscape Design. The educational objectives of the Horticulture Business Management are to ensure that successful BT candidates acquire all the scientific, technical, critical thinking, and managerial knowledge and skills pertaining to the field of horticulture.

The BT in Horticulture Business Management is consistent with the overall mission of SUNY Morrisville to cultivate the entrepreneurial context of education and to prepare its graduates for career opportunities in existing and emerging areas of agriculture and technology.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Secure entry-to mid-level professional positions in the horticulture industry including retail and wholesale nursery/greenhouse firms, retail garden centers, landscape businesses, food crop production, horticultural product development, and marketing firms.
- Assume leadership and supervisory positions in project management of horticultural and landscape endeavors.
- Establish and operate a business such as a garden center, farm, nursery, flower shop, landscape contracting or similar business.
- Apply problem-solving skills in greenhouse operations, crop production, flower shop operations, and landscape installation
- Utilize current technology, products and services to maximize business efficiency and success

Curriculum Requirements - 122 Credits

COURSE	CREDITS
AGRO 110 Soil Science	3
BIOL 102 Botany	3
BSAD 108 Business Law I or as advised	3
BSAD 112 Marketing or as advised	3
BSAD 116 Business Org & Management	3
ENSC 107 Integrated Pest Management	1
HORT 101 Plant Materials	3
HORT 103 Landscape Planning & Design I	3
HORT 106 Floral Design	3
HORT 108 Herbaceous Plant Materials	2
HORT 109 Landscape & Turf Management	3
HORT 110 Horticulture Practices I	2
HORT 150 Fruit and Vegetable Production	3
HORT 200 Greenhouse Management	3
HORT 201 Plant Propagation	3
HORT 202 Greenhouse Production	3
HORT 206 Sustainable Landscapes	3
HORT 210 Horticulture Practices II	2
HORT 241Plant Protection	3
HORT 310 Horticulture Practices III	2
HORT 320 Hort. Internship Orientation	1
HORT 403 Planting Design	4
HORT 430 Hort. Business Development	3
HORT 440 Hort. Business Internship	15

Upper division electives as advised	20
Basic Communication as Advised	3
Mathematics as Advised	3
Additional credits as Advised	11
General Electives as Advised	8

Suggested Course Sequencing

Year 1/Fall - 14 Credits

COURSE	CREDITS
HORT 101 - Plant Materials	3
HORT 109 - Landscape and Turf Management	3
BIOL 102 - Botany, Form and Function	3
HORT 110 - Horticulture Practices I	2
ELECTIVE - GenEd – Basic Communication – As Advised	3

Year 1/Spring - 16 Credits

COURSE	CREDITS
HORT 108 - Herbaceous Plant Materials	2
HORT 210 - Horticulture Practices II	2
HORT 103 - Landscape Planning and Design I	3
BSAD 116 - Business Organization & Mgmt. OR As Advised	3
HORT 150 - Fruit and Vegetable Production	3
ELECTIVE - SUNY GenEd – As Advised	3

Year 2/Fall - 16 Credits

COURSE	CREDITS
HORT 201 - Plant Propagation	3
HORT 200 - Greenhouse Management	3
ENSC 107 - Integrated Pest Management	1
HORT 106 - Floral Design	6
ELECTIVE - SUNY GenEd – As Advised	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
HORT 241 - Plant Protection	3
HORT 202 - Greenhouse Production	3
AGRO 110 - Soil Science	3
BSAD 108 - Business Law or As Advised	3
HORT 206 - Sustainable Landscapes	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
HORT 310 - Horticulture Practices III	2
MATH - As Advised	3
BSAD 112 - Marketing or As Advised	3
ELECTIVE - General Elective As Advised	5
ELECTIVE - Upper Division General Elective As Advised	2

Year 3/Spring - 16 Credits

COURSE	CREDITS
HORT 430 - Horticulture Business Development	3
ELECTIVE - SUNY GenEd As Advised	2
ELECTIVES - Upper Division General Electives As Advised	11

Year 4/Fall - 15 Credits

COURSE	CREDITS
HORT 320 - Horticulture Internship Orientation	1
HORT 403 - Planting Design	4
ELECTIVES - Upper Division General Electives As Advised	7
ELECTIVE - General Elective As Advised	3

Year 4/Spring - Credits

COURSE	CREDITS
HORT 440 - Horticulture Business Internship	15

Human Performance & Health Promotion, B.S., Major #1930

The Human Performance and Health Promotion degree will prepare students for fitness positions in wellness facilities, as well as in general fitness facilities and gyms. Towards this end, the curriculum will include a strong foundation in math and science, along with basic fitness-related classes in general fitness and wellness, sport psychology, motor learning, strength and conditioning, exercise physiology, exercise appraisal and programming, biomechanics and fitness program administration. Specialized classes will include introduction to exercise field work, emergency response procedures, cardiopulmonary assessment, exercise physiology for special populations, and kinesiology.

The baccalaureate program culminates in two internships designed to provide the student with significant hands-on training and experience in the field of Human Performance and Health Promotion. The first internship involves direct participation in the daily operations of the college-run wellness center. The students will be responsible for all aspects of the operation including administration, management, and exercise programming. The Capstone Internship involves a practical off-campus learning experience immersing students in the day-to-day operations of approved agencies. Sites for internships will include corporate fitness centers, wellness clinics, and community-based health clubs.

The Human Performance and Health Promotion degree will prepare students for preventative and rehabilitative fitness positions in cardiac rehabilitation and wellness facilities, cardiology offices, hospitals and nursing homes, as well as in general fitness facilities and gyms.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Lead, supervise, and effectively guide and motivate individuals in an exercise program.
- Administer fitness assessments, develop and implement prescriptions based on those assessments
- Conduct experiments and collect data related to exercise science, and then interpret how this data relates to physiological adaptations.
- Describe how disease negatively affects health and quality of life and how exercise can mitigate effects
- Apply principles discussed within the HPHP curriculum in a practical, professional environment

- Describe the influence of psychological principles in sport, exercise, and other performance related contexts
- Present and organize information in a manner than is consistent with the principles of scientific writing

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
HPHP 100 Intro to Wellness & Fitness	4
HPHP 101 Fieldwork in HPHP (45 hours)	1
HPHP 200 Exercise Physiology I	4
HPHP 201 Exercise Physiology II	4
HPHP 300 Sports and Exercise Psychology	3
HPHP 301 Kinesiology	4
HPHP 304 Community Service in Exercise and Sports Science	1
HPHP 305 Fitness Assessment and Exercise Programming	4
HPHP 400 Application of Strength & Conditioning Principles	3
HPHP 401 Cardiopulmonary Assessment for Exercise	3
HPHP 402 Wellness Center Internship	3
HPHP 403 Exercise Physiology for Special Populations	3
HPHP 404 Fitness Leadership and Administration	3
HPHP 405 Capstone Internship	6
NUTR 110 Nutrition I	3
NUTR 250 Sports Nutrition	3
MAST 100 CPR for Health Professionals	1

Liberal Arts and Sciences

COURSE	CREDITS
PHYS 107 Introductory Physics I	4
BIOL 120 General Biology I	4
BIOL 150 Human Anatomy & Physiology I	4
BIOL 151 Human Anatomy & Physiology II	4
COMP 101 Composition and Research	3
COMP 310 Advanced Technical Communication	3
COMM 111 Introduction to Speech	3
MATH 141 Statistics	3
MATH 151 General Calculus A	3
SOCI 250 Social Gerontology	3
PHIL 201 Introduction to Philosophy	3
PHIL 311 Professional Ethics	3
PSYC 101 Introduction to Psychology	3
PSYC 384 Group Behavior	3
PSYC 386 Social Psychology	3
Electives as Advised	11

General Electives as Advised: 7

Program Total: 120

Suggested Course Sequencing

Year 1/Fall - 19 Credits

COURSE	CREDITS
HPHP 100 - Introduction to Wellness and Fitness	4
BIOL 120 - General Biology I	4
NUTR 110 - Nutrition I	3
COMP 101 - Composition and Research	3
GNED 100 - First Year Experience	2
MATH 151 - General Calculus A	3

Year 1/Spring - 14 Credits

COURSE	CREDITS
HPHP 101 - Fieldwork in HPHP	1
COMM 111 - Introduction to Speech	3
PHYS 107 - Introduction to Physics	4
General Education (as advised)	3
Elective (as advised)	3

Year 2/Fall - 17 Credits

COURSE	CREDITS
BIO 150 - Human Anatomy & Physiology I	4
PSYC 101 - Introduction to Psychology	3
HPHP 200 - Exercise Physiology I	4
General Education (as advised)	3
Elective (as advised)	3

Year 2/Spring - 18 Credits

COURSE	CREDITS
MATH 141 - Statistics	3
BIOL 151 - Human Anatomy & Physiology II	4
HPHP 201 - Exercise Physiology II	4
SOCI 250 - Social Gerontology	3
PHIL 201 - Introduction to Philosophy	3
MAST 100 - CPR for Health Professionals	1

Year 3/Fall - 13 Credits

COURSE	CREDITS
HPHP 301 - Applied Kinesiology	4
HPHP 300 - Sport & Exercise Psychology	3
PHIL 311 - Professional Ethics	3
PSYC 384 - Group Behavior	3

Year 3/Spring - 14 Credits

COURSE	CREDITS
HPHP 305 - Fitness Assessment and Exercise Prescription	4
HPHP 304 - Community Service in HPHP	1
COMP 310 - Advanced Technical Communication	3
NUTR 250 - Sports Nutrition	3
Elective (as advised)	3

Year 4/Fall - 12 Credits

COURSE	CREDITS
HPHP 400 - Application of Strength and Conditioning	3
HPHP 401 - Cardiopulmonary Assessment	3
HPHP 402 - Wellness Center Internship	3
HPHP 403 - Exercise Physiology for Special Populations	3

Year 4/Spring - 15 Credits

COURSE	CREDITS
HPHP 404 - Fitness Leadership & Administration	3
HPHP 405 - Capstone in HPHP	6
PSYC 386 - Social Psychology	3
Elective (as advised)	3

Information Technology: Application Software, B.TECH.

Major #1502

Enterprises need information to create competitive advantages in today's dynamic business environment. Business people require tools like the Internet, the World Wide Web, laptops, smart phones, cloud computing, wireless technology, multimedia, social media, and e-commerce. Typically, business people do not need to understand how the technology works; they simply want it to do the job for them. Information Technology (IT) builds on the foundation of Computer Information Systems, but it has a broader scope. IT seeks to facilitate the business processes of the organization. The information technologist not only knows how technology work but is equally interested in people and their applied use of technology to increase productivity.

Your educational experience will be supported by a robust information technology infrastructure that support the latest software applications for game development, gaming, graphics, animation, web development, databases, voice and data communications, programming, server administration, multimedia development, virtualization, cloud computing, and information security. Students receive practical hands-on experience in the design and development of computer systems and applications using relevant programming languages, tools, and methodologies in an excellent academic lab environment.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Implement scalable, multi-tier, object-oriented relational database driven application as member of a team.
- Utilize formal development methodologies to design and develop software applications.
- Utilize a formal project management methodology to plan and track development progress.
- Analyze economic feasibility of an IT product

Curriculum Requirements -120 Credits

COURSE	CREDITS
CITA 110 - Intro to Information Technology	3
CITA 120 - Computer Concepts and OS	3
CITA 140 - Introduction to Programming	3
CITA 150 - Data Management Techniques	3
CITA 200 -Data Communications Networking	3
CITA 210 - Visual Programming and Development Tools	3
CITA 220 - Systems Analysis	3
CITA 340 - Database Concepts	3
CITA 350 - Object Oriented Systems	3
CITA 395 - Internship Orientation Seminar	3
CITA 405 - Project Management	3
CITA 450 - Applied Database Management	3
CITA 460 - Organization & End-User Info Systems	3
CITA 480 - Information Tech Internship	12
CITA 300-400 Electives (as advised)	6
BSAD 116 -Business Organization & Mgt.	3
BSAD 300 -Management Communications	3
CITA, ACCT, or BSAD 300-440 as advised	9
CITA, ACCT, or BSAD 100-200 as advised	6
COMP 101 Composition and Research	3
COMP 310 Advanced Technical Communications	3
MATH As Advised	3
Liberal Art & Science Elective (as advised)	21

Suggested Course Sequencing

Year 1/Fall - 17 Credits

COURSE	CREDITS
CITA 110 - Introduction to Information Technology	3
CITA 140 - Introduction to Programming	3
CITA elective (as advised)	3
COMP 101 - Composition and Research	3
MATH - As advised to meet SUNY General Education	3
GNED 100 - First Year Experience	2

Year 1/Spring - 15 Credits

COURSE	CREDITS
CITA 120 - Computer Concepts & Operating Systems	3
CITA 150 - Data Management Techniques	3
BSAD 116 - Business Organization & Management	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
CITA 200 - Data Communication Networking	3
CITA 210 - Visual Programming & Development Tools	3
CITA 220 - Systems Analysis	3
CITA, ACCT or BSAD-Lower Level	3
Liberal Art & Science Elective (as advised)	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
CITA 340 - Database Concepts	3
CITA, ACCT or BSAD-Lower Level	3
COMP 310 - Advanced Technical Communications	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Fall - Credits

COURSE	CREDITS
CITA-Upper Level	3
Management Communications	3
ACCT, BSAD OR CITA-Upper Level	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Spring - Credits

COURSE	CREDITS
CITA 350 - Object Oriented Systems	3
ACCT, BSAD OR CITA-Upper Level	3
ACCT, BSAD OR CITA-Upper Level	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Fall - 16 Credits

COURSE	CREDITS
CITA 395 - Internship Orientation Seminar	1
CITA 405 - Project Management	3
CITA 450 - Applied Database Management	3
CITA 460 - Organizations & End User Info Systems	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Spring - 12 Credits

COURSE	CREDITS
CITA 480 - Information Technology Internship	12

Information Technology: End-User Support, B.TECH., Major #1504

Businesses and organizations need information to create competitive advantages in today's dynamic business world. As an End User Support specialist, you will be an integral part of a successful business operation. Specialized software, intricate network designs, and mission critical hardware help to keep the pace of business moving. An End User Support specialist will provide appropriate level response and support for the end user. Often times an End User Support specialist is the first line of defense when customers face problems or defects with software, network or hardware infrastructure. As an End User Support specialist, you will need to have good judgment, clear communication skills and the ability to solve complex problems.

Duties and tasks that are required of an End User Support specialist will include diagnosing computer hardware and networking devices, troubleshooting software programs accurately and quickly. The End User Support degree program here at SUNY Morrisville provides students with the skills to build troubleshoot and repair computer hardware, networking infrastructure and software programs. Students will develop a strong base in problem solving skills with live lab simulations and a hands-on approach to learning. You will gain a solid foundation in hardware components, operating systems, networked environments, and commonly used software packages. Your educational experience will be supported by a robust information technology infrastructure. Students receive practical hands-on experience in their field of study using client and server machines in a high-speed networked environment. These systems support the latest software packages for graphics, animation, web development, databases, voice and data communications, programming, server administration, multimedia development and information security.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Analyze needs and develop an appropriate and effective training program(s) for adult learners.
- Identify, assess, utilize and/or deploy the various tools of the trade relative to support professionals.
- Demonstrate computer software and hardware maintenance skills.

Curriculum Requirements - 120 Credits

COURSE	CREDITS
CITA 110 - Intro to Information Technology	3
CITA 120 - Computer Concepts and OS	3
CITA 140 - Introduction to Programming	3
CITA 190 - Introduction to Linux / UNIX Operating Systems	3
CITA 200 -Data Communications Networking	3
CITA 210 - Visual Programming and Development Tools	3
CITA 220 - Systems Analysis	3
CITA 300 -Computer System Support and Maintenance	3
CITA 360 - Operating Systems and Software Deployment	3
CITA 395 - Internship Orientation Seminar	1
CITA 405 - Project Management	3
CITA 440 -Designing and Managing Organizational Training	3
CITA 460 - Organization & End-User Info Systems	3
CITA 480- Information Tech Internship	12
BSAD 116 – Business Organization & Mgt	3
BSAD 300 – Management Communications	3
CITA – 300-400 Electives (as advised)	6
CITA, ACCT, or BSAD 300-400 as advised	9
CITA, ACCT or BSAD 100-200 as advised	6
COMP 101 Composition and Research	3
COMP 310 Advanced Technical Communications	3
MATH as Advised	3
Liberal Art & Science Elective (as advised)	21
General Electives as Advised	12

Suggested Course Sequencing

Year 1/Fall - 17 Credits

COURSE	CREDITS
CITA 110 - Introduction to Information Technology	3
CITA 140 - Introduction to Programming	3
CITA elective (as advised)	3
COMP 101 - Composition and Research	3
MATH - As advised to meet SUNY General Education	3
GNED 100 - First Year Experience	2

Year 1/Spring - 15 Credits

COURSE	CREDITS
CITA 120 - Computer Concepts & Operating Systems	3
CITA 190 - Introduction to Linux / UNIX Operating Systems	3
BSAD 116 - Business Organization & Management	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
CITA 200 - Data Communication Networking	3
CITA 210 - Visual Programming & Development Tools	3
General Electives (as advised)	3
General Electives (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
CITA 220 - Systems Analysis	3
CITA, ACCT or BSAD-Lower Level	3
COMP 310 - Advanced Technical Communications	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
CITA 300 - Computer System Support and Maintenance	3
BSAD 300 - Management Communications	3
ACCT, BSAD OR CITA-Upper Level	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
CITA 360 - Operating Systems and Software Deployment	3
ACCT, BSAD OR CITA-Upper Level	3
ACCT, BSAD OR CITA-Upper Level	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Fall - 16 Credits

COURSE	CREDITS
CITA 395 - Internship Orientation Seminar	1
CITA 405 - Project Management	3
CITA 440 - Designing and Managing Organizational Training	3
CITA 460 - Organizations & End User Info Systems	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Spring - 12 Credits

COURSE	CREDITS
CITA 480 - Information Technology Internship	12

Information Technology: Network Administration, B.TECH., Major #1505

Enterprises need information to create competitive advantages in today's dynamic business environment. Business people require tools like the Internet, the World Wide Web, laptops, smart phones, cloud computing, wireless technology, multimedia, social media, and e-commerce. Typically, business people do not need to understand how the technology works; they simply want it to do the job for them. Information Technology (IT) builds on the foundation of Computer Information Systems, but it has a broader scope. IT seeks to facilitate the business processes of the organization. The information technologist not only knows how technology work but is equally interested in people and their applied use of technology to increase productivity. Your educational experience will be supported by a robust information technology infrastructure. Students receive practical hands-on experience in their field of study using the latest network technologies in a top-notch academic lab environment. These systems support the latest software applications for gaming, graphics, animation, web development, video production, databases, voice and data communications, programming, server administration, multimedia development, virtualization, cloud computing, and information security.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Manage, maintain, troubleshoot, install, and configure enterprise network infrastructure.
- Manage, maintain, troubleshoot, install, and configure network operating systems.
- Configure computer system security, network security, access control, and physical security.
- Design networked solutions to facilitate business processes.

Curriculum Requirements - 120 Credits

COURSE	CREDITS
CITA 110 - Intro to Information Technology	3
CITA 120 -Computer Concepts and OS	3
CITA 140 Introduction to Programming	3
CITA 190 Introduction to Linux / UNIX Operating Systems	3
CITA 200 Data Communications Networking	3
CITA 210 Visual Programming and Development Tools	3
CITA 230 Network Technology	3
CITA 320 Network Administration	3
CITA 370 Network Design Concepts	3
CITA 395 Internship Orientation Seminar	1
CITA 405 Project Management	3
CITA 430 Computer Integration and Interoperability	3
CITA 460 Organization & End-User Info Systems	3
CITA 480 Information Tech Internship	12
BSAD 116 – Business Organization & Mgt	3
BSAD 300 – Management Communications	3
CITA – 300-400 Electives (as advised)	6
CITA, ACCT, or BSAD 100-200 as advised	6
CITA, ACCT, or BSAD 300-400 as advised	9
COMP 101 Composition and Research	3
COMP 310 Advanced Tech Communications	3
MATH as Advised	3
Liberal Art & Science Electives as Advised	21
General Electives as Advised	14

Suggested Course Sequencing

Year 1/Fall - 17 Credits

COURSE	CREDITS
CITA 110 - Introduction to Information Technology	3
CITA 140 - Introduction to Programming	3
CITA elective (as advised)	3
COMP 101 - Composition and Research	3
MATH - As advised to meet SUNY General Education	3
GNED 100 - First Year Experience	2

Year 1/Spring - 15 Credits

COURSE	CREDITS
CITA 120 - Computer Concepts & Operating Systems	3
CITA 190 - Introduction to Linux / UNIX Operating Systems	3
BSAD 116 - Business Organization & Management	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
CITA 200 - Data Communication Networking	3
CITA 210 - Visual Programming & Development Tools	3
General Electives (as advised)	3
General Electives (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
CITA 230 - Network Technology	3
CITA, ACCT or BSAD-Lower Level	3
COMP 310 - Advanced Technical Communications	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
CITA 320 - Network Administration	3
BSAD 300 - Management Communications	3
ACCT, BSAD OR CITA-Upper Level	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
CITA 370 - Network Design Concepts	3
ACCT, BSAD OR CITA-Upper Level	3
ACCT, BSAD OR CITA-Upper Level	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Fall - 16 Credits

COURSE	CREDITS
CITA 395 - Internship Orientation Seminar	1
CITA 405 - Project Management	3
CITA 430 - Computer Integration and Interoperability	3
CITA 460 - Organizations & End User Info Systems	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Spring - 12 Credits

COURSE	CREDITS
CITA 480 - Information Technology Internship	12

Information Technology: Web Development, B.TECH., Major #1506

Businesses and organizations need information to create competitive advantages in today's dynamic business environment. Business people require tools like the Internet, the World Wide Web, laptops, smart phones, cloud computing, wireless technology, multimedia, social media, and e-commerce. Typically, they do not need to understand how the technology works; they simply want it to do the job for them. Within industry, there is a great need for specialists who can effectively use the latest technologies to design and develop professional interactive web sites. Web developers have become a great addition to every organization of every size.

Web development degree at SUNY Morrisville combines front-end web design and coding with the back-end server scripting and database skills required by employers of full-stack web developers. Students have the opportunity to gain practical experience in the latest techniques and frameworks used in web development and the skills needed to design and develop dynamic web applications. These techniques including XHTML, PHP, CSS, JavaScript and everything in between. Students also receive practical hands-on experience in their field of study using client and server machines in a high-speed networked environment.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Create server environment.
- Apply design principles to web publishing.
- Build a client-server software framework to separate data, view, and controller logic.
- Create dynamic, database driven web applications.

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
CITA 110 Intro to Information Technology	3
CITA 120 Computer Concepts and OS	3
CITA 140 Introduction to Programming	3
CITA 190 Introduction to Linux / UNIX Operating Systems	3
CITA 200 Data Communications Networking	3
CITA 210 Visual Programming and Development Tools	3
CITA 240 Web and E-Commerce Development	3
CITA 310 Web Server Administration	3
CITA 330 Web Publishing	3
CITA 395 Internship Orientation Seminar	1
CITA 405 Project Management	3
CITA 450 Applied Database Management	3
CITA 460 Organization & End-User Information Systems	3
CITA 480 Information Tech Internship	12
CITA – 300-400 Electives (as advised)	6
BSAD 116 – Business Organization & Management	3
BSAD 300 – Management Communications	3
CITA, ACCT, or BSAD 100-200 as advised	6
CITA, ACCT or BSAD 300 -400 as advised	9
COMP 101 Composition and Research	3
COMP 310 Advanced Technical Communications	3
MATH as Advised	3
Liberal Art & Science Elective as Advised	21
General Electives as Advised	14

Suggested Course Sequencing

Year 1/Fall - 17 Credits

COURSE	CREDITS
CITA 110 - Introduction to Information Technology	3
CITA 140 - Introduction to Programming	3
CITA elective (as advised)	3
COMP 101 - Composition and Research	3
MATH - As advised to meet SUNY General Education	3
GNED 100 - First Year Experience	2

Year 1/Spring - 15 Credits

COURSE	CREDITS
CITA 120 - Computer Concepts & Operating Systems	3
CITA 190 - Introduction to Linux / UNIX Operating Systems	3
BSAD 116 - Business Organization & Management	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
CITA 200 - Data Communication Networking	3
CITA 210 - Visual Programming & Development Tools	3
CITA 240 - Web and E-Commerce Development	3
CITA, ACCT or BSAD-Lower Level	3
Liberal Art & Science Elective (as advised)	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
CITA 310 - Web Server Administration	3
CITA, ACCT or BSAD-Lower Level	3
COMP 310 - Advanced Technical Communications	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
CITA 330 - Web Publishing	3
BSAD 300 - Management Communications	3
ACCT, BSAD OR CITA-Upper Level	3
Liberal Art & Science Elective (as advised)	3
Liberal Art & Science Elective (as advised)	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
CITA-Upper Level	3
ACCT, BSAD OR CITA-Upper Level	3
ACCT, BSAD OR CITA-Upper Level	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Fall - 16 Credits

COURSE	CREDITS
CITA 395 - Internship Orientation Seminar	1
CITA 405 - Project Management	3
CITA 450 - Applied Database Management	3
CITA 460 - Organizations & End User Info Systems	3
General Electives (as advised)	3
General Electives (as advised)	3

Year 4/Spring - 12 Credits

COURSE	CREDITS
CITA 480 - Information Technology Internship	12

Journalism & Communication for Online Media, B.S., Major #2017

Journalism and Communication for Online Media is a ThinkPad University curriculum in which the use of Laptop computers is integrated into courses.

SUNY Morrisville has a long history of excellence in journalism education. The field of public communication comprises journalism, marketing, advertising, corporate and public relations, publishing, broadcasting, photography, and related disciplines. Online communication relies heavily on a strong background in writing—for print and broadcast—adapted to meet the demands of today's communication technologies. It requires knowledge of elements of broadcasting and photojournalism, including audio and video editing.

This program endows students with a strong background in journalism, including advanced writing and reporting techniques. At the same time, it prepares them to work in digital video, audio, and still-photography production. It provides specialized technical instruction in the application of mass communication and journalism concepts to the World Wide Web. Graduates will be prepared to enter either Web or print communication and journalism. They will be well-prepared to provide content for print or online publications and to design and produce those publications.

Graduates of this program are fully prepared to work both in the world of journalism and beyond. News agencies—especially newspapers—have a continuing need for Web content providers who can write news content. Marketing and advertising firms also rely on writers who can create Web sites and update them on a regular basis while supplying the content as well. Large corporations maintain sophisticated intranet sites as part of their internal communications programs, relying increasingly on content providers who can transfer their writing to the Web quickly and maintain daily and weekly updates. Students may work in any of these areas or for magazines, television and other media.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Be familiar with, and prepared to work in, fields related to journalism and public communication in Web-based media
- Be able to gather information from diverse sources and summarize that information in straight-news or feature-news formats, or in formats related to public relations or marketing, in Web-based media

- Be able to read, write, understand, analyze, and discuss complex issues and topics and to contribute to small- and large-group activities and initiatives in a diverse workplace
- Understand the relationship between print and online journalism and broadcasting, desktop publishing, and photojournalism
- Demonstrate an understanding of the laws and ethics pertaining to various public communication professions

Curriculum Requirements - 122 Credits

COURSE	CREDITS
JOUR 111 - News Writing and Editing	3
JOUR 112 - Advanced News Writing and Reporting	3
JOUR 121 - Principles Press Photography	3
JOUR 185 - Production Laboratory I	1
JOUR 186 - Production Laboratory II	1
JOUR 214 - Specialized Writing	3
JOUR 220 - Mass Media and Society	3
JOUR 285 - Production Laboratory III	1
JOUR 286 - Production Laboratory IV	1
JOUR 315 - Online Writing and Production	3
JOUR 401 - Legal & Ethical Issues of Mass Communication	3
JOUR 409 - Pre-Internship Seminar	1
JOUR 410 - Internship in JCOM	12
JOUR 411 - Capstone Course in JCOM	3
CITA 101 - Principles of Computer Apps	3
CITA 260 - Photography & Digital Imaging	3
PHIL 311 - Professional Ethics	3
COMP 310 - Advanced Technical Comm	3

COMM 300 - Visual Communication	3
Three Credits From the Following Two Courses:	3
JOUR 270 - Desktop Publishing	3
JOUR 272 - Public Relations	3
6 Credits from the 3 courses below:	6
PSYC 304 - Industrial/Organizational Psychology	3
PSYC 384 - Group Behavior	3
PSYC 386 - Social Psychology	3
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
SOCI 101 Introduction to Sociology	3
PSYC 101 Introduction to Psychology	3
MATH Elective SUNY GER Math	3
Additional SUNY General Education	9
Upper Level Electives (300-499)	9
Additional Liberal Arts & Sciences	24

Suggested Course Sequence

Year 1/Fall - 16 Credits

COURSE	CREDITS
COMP 101 - Composition and Research	3
JOUR 111 - News Writing and Editing	3
JOUR 185 - Production Laboratory I	1
SOCI 101 - Introduction to Sociology	3
MATH 102 - Intermediate Algebra with Trig	3
PSYC 101 - Introduction to Psychology	3

Year 1/Spring - 16 Credits

COURSE	CREDITS
COMP 102 - Writing About Literature	3
JOUR 112 - Advanced News Writing and Reporting	3
JOUR 186 - Production Laboratory II	1
CITA 101 - Principles of Computer Applications	3
PSYC 304 - Industrial/Organizational Psychology	3
ART 110 - Introduction to Visual Arts	3

Year 2/Fall - 16 Credits

COURSE	CREDITS
CITA 260 - Photography and Digital Imaging	3
JOUR 214 - Specialized Writing	3
JOUR 285 - Production Laboratory III	1
COMM 300 - Visual Communication	3
COMP 310 - Advanced Technical Communication	3
SUNY General Education as Advised	3

Year 2/Spring - 16 Credits

COURSE	CREDITS
HIST 151, 152 - History as Advised	3
JOUR 121 - Principles of Press Photography	3
JOUR 220 - Mass Media and Society	3
JOUR 286 - Production Laboratory IV	1
SUNY General Education Foreign Language as Advised	3
General Education as Advised	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
HIST 161, 162 History as Advised	3
JOUR 315 Online Writing and Production	3
JOUR 270 - Desktop Publishing OR JOUR 272 - Public Relations	3
Liberal Arts Electives as Advised	6

Year 3/Spring - 16 Credits

COURSE	CREDITS
JOUR 401 - Legal & Ethical Issues of Mass Communication	3
JOUR 409 - Pre-Internship Seminar	1
JOUR 411 - Capstone Course in JCOMM	3
General Education as Advised	3
Liberal Art Electives as Advised	6

Year 4/Fall - 15 Credits

COURSE	CREDITS
PHIL 311 - Professional Ethics	3
PSYC 384 - Group Behavior OR PSYC 386 - Social Psychology	3
Upper Division Liberal Arts Electives	9

Year 4/Spring - 12 Credits

COURSE	CREDITS
JOUR 410 - Internship in JCOMM	12

Nursing, B.S., Major #0291

The nursing baccalaureate program provides RN's the opportunity to enhance their nursing practice in five core concepts: Patient-Centered Care, Evidence-based Practice, Nursing Informatics, Leadership and Professionalism. Courses Emphasize: public, family and community nursing, advanced health assessment, health promotion, nursing theory, ethics, organizational communications, systems theory, leadership and management. Students engage in a required service learning activity in selected non-clinical nursing courses to combine formal learning with reflection to strengthen a community.

In addition to increasing career opportunities and meeting the expectations of many healthcare areas, graduates of the BS Nursing program will be able to transfer to masters' level programs in nursing to specialize as a clinical nurse specialist, nurse anesthetist, nurse midwife, nurse practitioner, administrator or nurse educator. BS nurses are also sought for graduate programs in informatics and business, and healthcare administration.

Background Checks

Students enrolled in the nursing program must conform to the rules, policies, and procedures of the clinical affiliates in order to participate in practical experiences, which may include background checks. The cost of the background check will be the responsibility of the student. Failure to consent to and submit the appropriate background screening findings will prohibit the student from continuing in the nursing program.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Incorporate theories and concepts from the arts, humanities, and sciences into the professional nursing role.
- Assess leadership principles in the provision of quality nursing care.
- Integrate evidence-based practice to guide care in a variety of health settings.
- Discuss the role of information technology systems in delivery of safe patient care.
- Analyze the implications of policy on healthcare disparities.
- Analyze methods to improve health outcomes for populations.
- Analyze dimensions of communication related to health care environments.

- Promote population-focused interventions based on identified gaps in a healthcare setting.
- Extend professional identity to practice in a multicultural environment.

CURRICULUM REQUIREMENTS - 121 Credits

Major Field Requirements

COURSE	CREDITS
NURS 305 Informatics	3
NURS 310 Conceptual Foundations for Professional Practice	3
NURS 330 Health Assessment across the Lifespan	3
NURS 361 Health Promotion across the Lifespan	3
NURS 381 Leadership & Management for Professional Practice	3
NURS 430 Nursing Research and Evidence-Based Practice	3
NURS 431 Healthcare Policy Issues & Trends	3
NURS 450 Public, Community and Family Health Nursing Clinical experiences are required in NURS 450 (67.5 clinical hours)	5
NURS 481 Clinical Practicum in Professional Nursing Clinical experiences are required in NURS 481 (90 clinical hours)	4
COMP 310 Advanced Tech Communications	3
MATH 123 Elementary Statistics or equivalent statistics course	3
BIOL Pathophysiology	3
BIOL 302 Epidemiology	3
PSYC 386 Social Psychology	3
PSYC 304 Industrial/Organizational Psych	3
PHIL 311 Professional Ethics	3
Foreign Language as Advised	3
Additional SUNY General Education	6

Suggested Course Sequence

Year 1/Fall - 15 Credits

COURSE	CREDITS
NURS 305 - Nursing Informatics	3
NURS 310 - Conceptual Foundations for Professional Practice	3
NURS 330 - Health Assessment Across the Lifespan	3
BIOL 301 - Pathophysiology	3
MATH 123 - Elementary Statistics	3

Year 1/Spring - 12-15 Credits

COURSE	CREDITS
NURS 361 - Health Promotion Across the Lifespan	3
NURS 381 - Leadership & Management for Professional Practice	3
BIOL 302 - Epidemiology	3
PSYC 386 - Social Psychology	3
General Education Credits as Advised	3

Year 2/Fall 17 Credits

COURSE	CREDITS
NURS 430 - Nursing Research & Evidence-based Practice	3
NURS 450 - Public, Community & Family Health Nursing	5
PSYC 304 - Industrial/Organizational Psychology	3
COMP 310 - Advanced Technical Communication	3
Foreign Language as Advised	3

Year 2/Spring - 13 Credits

COURSE	CREDITS
NURS 431 - Healthcare Policy, Issues & Trends	3
NURS 481 - Clinical Practicum in Professional Nursing	4
PHIL 311 - Professional Ethics	3
General Education as Advised	3

Renewable Energy, B.TECH., Major #2398

The Renewable Energy Bachelor of Technology (RE B.Tech.) degree provides students with advanced technical education in the rapidly growing field of renewable energy. The RE B.Tech. program focuses on developing skilled graduates who are prepared to enter the job market as system designers, project managers, installation crew leaders, and operations and maintenance technicians for renewable energy systems including grid-tied solar photovoltaic, solar thermal, small wind, micro hydroelectric and multiple renewable bioenergy systems.

Students have the flexibility to customize their area of focus for the RE B.Tech. degree by selecting core and technical electives to suit their personal interests and career objectives through consultation with their academic advisor.

An internship is a recommended course option (3-15 credit hours) in the program that places students in a supervised work environment with a cooperating employer. This provides students with opportunities to gain valuable experience, make professional contacts and build their resumes in preparation for future employment and career decisions. Many placement sites are available in New York State, but students who wish to travel can find opportunities in other parts of the country or abroad. Successful internships have included experiences in solar and wind energy, cellular communications, geothermal/HVAC, bioethanol production, and bioenergy systems.

Required tools/equipment: Laptop, clipboard, safety glasses, work gloves, work boots (steel/safety toe), waterproof rubber boots (recommended), hard hat, rain gear (coat and pants/bibs), and cold weather gear (insulated clothing).

Graduates from the RE B.Tech. have been successfully employed in the wind, solar, geothermal, and bioenergy fields as system designers, installation and maintenance technicians, quality control supervisors, and project managers. Graduates are currently working within their chosen renewable energy field in several states across the country and abroad.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Describe basic social, political, economic and ecological factors impacting renewable energy resources and systems regionally, nationally and abroad.
- Demonstrate problem-solving skills and critical thinking in both hands-on and written technical environments.

- Assess renewable energy resources for residential, commercial, and industrial renewable energy systems in wind, solar PV, solar thermal, micro hydroelectricity and/ or bioenergy for a wide range of sites and client objectives.
- Design renewable energy systems, including wind, solar PV, solar thermal, micro hydroelectricity and/or bioenergy, based on thorough resource assessment and client requirements.
- Install, maintain, and troubleshoot renewable energy systems.Perform an energy site assessment and develop a comprehensive energy system proposal for a prospective client and defend the proposal rationale in written and verbal discussion.
- Work safely and responsibility in groups with diverse individuals

Curriculum Requirements - 120 Credits

Major Field Requirements

COURSE	CREDITS
RENG 101 Electrical Theory for Renewable Energy	4
RENG 102 Renewable Energy Resources	3
RENG 103 Renewable Energy Seminar	1
RENG 150 Analysis Techniques for Renewable Energy	1
RENG 221 Intro to Small Wind Systems	3
RENG 231 Intro to Solar Photovoltaics	3
RENG 310 Biomass Energy Resources	3
RENG 460 Systems Integration	3
AGEN 125 Residential Electrification	3
AGEN 151 Applied Hydraulics for Hydropower Generation	3
NATR 213 Basics of Geospatial Technology OR CAD 181 Intro to Computer-Aided Drafting	1
CITA 101 Principles of Computers and App	3

Upper-Division Major Electives

(24 credits from following courses)

COURSE	CREDITS
DTEC 325 Electrical Power Generation	3
RENG 306 Alternative Fuel Vehicles	2
RENG 315 Biomass Energy Resources II	3
RENG 321 Intro to Micro Hydroelectricity	3
RENG 331 Intro to Solar Thermal Systems	3
RENG 410 Biomass Energy Conversions – Biochemical	3
RENG 415 Biomass Energy Conversions – Thermochemical	3
RENG 420 Small Wind Systems	3
RENG 430 Solar Photovoltaics Systems	3
RENG 435 Advanced Topics in Solar Photovoltaics	3
RREN 450 Internship Orientation	1
RENG 490 Renewable Energy Internship	3-15
Natural Sciences (as advised)	12
COMP 101 Composition and Research	3
COMP 102 Writing about Literature	3
MATH 123 or 141 Statistics	3
Additional General Education as Advised	9

Recommended Technical Electives - 25 credits required

Lower Division:

COURSE	CREDITS
AGRO 110 Soil Science	3
AGRO 210 Field Crops	3
AUTO 102 Metals (welding)	3
AGEN 161 Basic Hydraulics	3
BSAD 116 Business and Organization Mgt	3
CAD 181 Intro to CAD	1
CAD 183 Architectural CAD	3
CITA 120 Computer Concepts & Operating Systems	3
CITA 140 Introduction to Programming	3
CITA 200 Data Communications and Networking	3
DTEC 150 Diesel Systems	3
ENSC 101 Agricultural Science	3
ENSC 106 Pesticide Use and Handling	2
ENSC 107 Integrated Pest Management	1
MECH 101 Machine Tools	3
MECH 211 Analytical Mechanics (Statics)	3
NATR 103 Natural Resources Equipment Operation	2
NATR 213 Basics of Geospatial Technology	1
RENG 225 Tower Climbing and Rescue	2
RENG 251 Anaerobic Digester Design and Operation	3
RESC 130 Light Framing	3
RESC 221 Plumbing	3
RESC 260 Heating and Energy Systems	3

Upper Division

COURSE	CREDITS
AGRO 310 Pasture Management and Forage Production	3
BSAD 300 Management Communications	3
BSAD 310 Human Resources Management	3
BSAD 320 Accounting for Entrepreneurs	3
BSAD 400 Production and Operations Mgt	3
CITA 405 Project Management	3
RREN 303 Fundamentals of GPS/GIS	3
RREN 305 Renewable Resources Laws & Regulations	3
RREN 332 Environ. Planning and Natural Resource Management	3
STS 301 Humans vs. Nature	3

Suggested Course Sequencing

Year 1/Fall - 17 Credits

COURSE	CREDITS
RENG 101 - Electrical Theory for Renewable Energy	4
RENG 102 - Renewable Energy Resources	3
RENG 103 - Renewable Energy Seminar	1
MATH - GenEd – As Advised	3
COMP 101 - Composition and Research	3
CITA 101 - Principles of Computers and Applications	3

Year 1/Spring - 16 Credits

COURSE	CREDITS
RENG 150 - Analysis Techniques for Renewable Energy	1
AGEN 151 - Applied Hydraulics for Hydropower Generation	3
AGEN 125 - Residential Electrification	3
NAT. SCIE - GenEd–Natural Science As Advised (e.g.CHEM 110)	4
COMP 102 - Writing about Literature	3
ELECTIVE - Lower Division As Advised (e.g. NATR 103)	2

Year 2/Fall - 16 Credits

COURSE	CREDITS
RENG 310 - Biomass Energy Resources	3
RENG 231 - Introduction to Solar Photovoltaics	3
NAT. SCIE - GenEd–Natural Science As Advised (e.g. PHYS 127)	4
ELECTIVE - As Advised (e.g. Social Science)	3
ELECTIVE - Lower Division As advised (e.g. RESC 221)	3

Year 2/Spring - 16 Credits

COURSE	CREDITS
CAD 181 - Intro to Computer – Aided Drafting	1
RENG 221 - Introduction to Small Wind Systems	3
NAT. SCIE - GenEd –Natural Science As Advised (e.g. BIOL 120)	4
ELECTIVE - Lower Division As Advised (e.g. RENG 225)	2
ELECTIVE - GenEd As Advised (e.g. HIST)	3
ELECTIVE - Lower Division As Advised (e.g. RESC 260))	3

Year 3/Fall - 12 Credits

COURSE	CREDITS
RENG 430 - Solar Photovoltaics Systems	3
RENG 331 - Intro to Solar Thermal Systems	3
ELECTIVE - GenEd – As Advised (e.g. Western Civ)	3
DTEC 325 - Electrical Power Generation	3

Year 3/Spring - 14 Credits

COURSE	CREDITS
RENG 415 - Biomass Energy Conversions – Thermochemical	3
RENG 435 - Advanced Topics in Solar Photovoltaics	3
RENG 306 - Alternative Fuel Vehicles	2
ELECTIVE - As Advised (e.g. COMP 310)	3
ELECTIVE - As Advised (e.g. BSAD400)	3

Year 4/Fall - 16 Credits

COURSE	CREDITS
RENG 321 - Intro to Micro Hydroelectricity	3
Elective as Advised (e.g. BSAD 300)	3
RENG 490 - Renewable Energy Internship	9
RREN 450 - Internship Orientation	1

Year 4/Spring - 13 Credits

COURSE	CREDITS
RENG 460 - Systems Integration	1
RENG 410 - Biomass Energy Conversions – Biochemical	3
RENG 420 - Small Win Systems	3
ELECTIVE - Upper Division As Advised (e.g. RREN 332)	3
ELECTIVE - As Advised (e.g. CITA 405)	3

Renewable Resources Technology, B.TECH., Major #1610

The focus of the bachelor of technology (B.Tech.) degree in Renewable Resources Technology is to provide students with advanced technical education in natural resources highlighting the communication and business skills needed for graduates in the 21st century.

A full-semester internship is a unique course requirement that places students in a supervised work environment with a cooperating agency. This provides students with opportunities to gain valuable experience, make professional contacts, and build their resumes in preparation for future employment and career decisions.

Most internships are paid. Opportunities exist nationwide in both the public and private sectors. Many placement sites are available in New York State, but students who wish to travel can find opportunities in other parts of the country. Successful internships have included experiences in environmental education, forestry, arboriculture, outdoor recreation management, GIS (geographic information system) mapping, wetlands delineation and management, and wildlife management studies.

An A.S., A.A.S. or equivalent degree with a minimum 2.2 grade point average is a prerequisite for admittance. A student who does not meet this requirement may be admitted on conditional basis. A major in Natural Resources, Environmental Science, Environmental Technology, Aquaculture and Aquatic Science or a closely related field is strongly recommended. An individual seeking to enroll in the Renewable Resources B.Tech. program with an unrelated associate degree may be granted admittance.

The B.Tech. of Renewable Resources Technology is designed to prepare students for entry into public and industrial jobs at the field, supervisory, and management levels where technical, business, and communication skills are necessary. Students completing the B.Tech. of Renewable Resources can pursue jobs in the forest products industry; the aquatic resources industry, including sport and commercial fisheries, wetland management, and aquaculture; the recreation and tourism industry and environmental technology including water treatment and brownfield reclamation.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Students will utilize their developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues in natural resource management.

- Students will become independent, self-motivated professionals with the ability to recognize problems in their renewable resources technical field of expertise and formulate solutions to such problems.
- Students will conduct themselves in a manner consistent with an embodied sense of conservation stewardship.
- Students will assess, analyze, synthesize, and evaluate information objectively and deal professionally and ethically with clients, the public, and agency personnel.
- Students will communicate clearly and effectively using appropriate verbal, visual, electronic, and written techniques necessary to interact in the profession.
- Students will recognize and interpret natural resource laws and policies.
- Students will demonstrate hands-on experience in natural resource sampling, inventory, and measurement techniques.
- Students will recognize and interpret natural resource problems and opportunities across spatial scales from local to global through the implementation and management of geospatial technologies (Global Positioning System -- GPS, Geographic Information System -- GIS, and remote sensing).
- Students will apply critical thinking and problem-solving skills in formulating and evaluating alternative solutions to complex problems in natural resource management and recommending and defending best alternatives.
- Students will anticipate, analyze, and evaluate natural resource issues and opportunities and utilize an integrated approach to ecosystem impact assessment and adaptive management.
- Students will exercise life-long learning and management skills developed before graduation and utilize existing technology, products, and services to maximize work efficiency and success.
- Students will seek the input and perspectives of diverse stakeholders regarding natural resource issues and practice a collaborative spirit in team efforts and project coordination

Curriculum Requirements - 120 Credits

COURSE	CREDITS
ENVT 345 Surface & Ground Water Mgt	3
RREN 302 Riparian Ecology & Wetland Mgt	3
RREN 303 Fundamentals of Geospatial Systems	4
RREN 305 Renewable Resource Laws and Regulations	3
RREN 312 Aquatic Sampling Design & Techniques	3
RREN 332 Environmental Planning & Natural Resource Mgt	3
RREN 412 Ecosystem Adaptive Mgt	3
RREN 420 Geospatial Technology Applications I	1
RREN 421 Geospatial Technology Applications II	2
RREN 450 Renewable Resource Internship Orientation	1
RREN 470 Renewable Resource Internship	15
BSAD 116 Business Organization & Mgt	3
BSAD 300 Management Communications	3
RENG 3xx Renewable Energy Elective OR CITA 405 Project Management	3
PHIL 311 - Professional Ethics	3
BSAD 221 Business Statistics	3
OR	
Math 123 - Elementary Statistics	3
Lower-level Credits as Advised	64

Suggested Course Sequencing

Year 1/Fall - 15 Credits

COURSE	CREDITS
RREN 312 - Aquatic Sampling Design & Techniques	3
RREN 302 - Riparian Ecology & Wetland Management	3
BSAD 116 - Business Organization & Management	3
MATH 123 - Elementary Statistics OR BSAD 221 - Business Statistics	3
General Education Electives as Advised	3

Year 1/Spring - 16 Credits

COURSE	CREDITS
ENVT 345 - Surface and Groundwater Management	3
RREN 303 - Fundamentals of Geospatial Systems	4
RREN 305 - Renewable Resources Laws and Regulations	3
RREN 332 - Environmental Planning & Natural Resource Mgt	3
RREN 420 - Geospatial Technology Applications I	1
RREN 450 - Renewable Resource Internship Planning	1
General Education Elective as Advised	1

Year 2/Fall - 14 Credits

COURSE	CREDITS
BSAD 300 - Management Communications	3
PHIL 311 - Professional Ethics	3
RREN 412 - Ecosystem Adaptive Management	3
RREN 421 - Geospatial Technology Applications II	2
RREN - 300 Level Renewable Energy Elective as Advised OR CITA 450 - Project Management	3
General Education Electives as Advised	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
RREN 470 - Renewable Resource Internship	15

Technology Management: Resort & Recreation Service Management, B.B.A. Program Code #1627

Resort and Recreation Service Management: Technology Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

This program, which builds on associate degrees in Hotel Management, Restaurant Management, Culinary Arts Management, Gaming and Casino Studies, Business Management, Recreation Studies and Resort Management, prepares students for rewarding careers in the global service economy. The curriculum combines resort and recreation management theory, evolving technology applications, business management and operational services. The program includes a semester where seniors fulfill an internship at resort and recreation facilities.

Career Opportunities: Management-level positions worldwide at resorts, attractions, vacation excursion companies, hotels, restaurants, sports and entertainment complexes, theme parks, commercial recreation establishments, casinos and cruise lines, world professional associations and travel-related companies.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Appraise situations and make strategic decisions from a top manager's viewpoint.
- Critically evaluate a strategic plan for an organization.
- Discuss ethical, regulatory, environmental, social, political and technological issues related to human resource management.
- Demonstrate methods to motivate staff to maximize revenues, reduce turnover and increase customer satisfaction.
- Develop approaches for training a diverse staff.
- Explain current technology applications in Resort and Recreation facilities and select software applications appropriate for operational challenges.
- Complete needs assessment, design, and implementation training program at the property or corporate level.

- Explain the principles of “Hospitality Law” and be able to practically apply the basic legal theory and prevention techniques.
- Describe factors that have contributed to globalization and global economy as well as their impact on resorts.
- Describe and implement qualitative and quantitative research methodologies.
- Collect, synthesize and analyze customer satisfaction data and present findings using various methodologies.
- Recognize and explain the liability and compliance issues associated with resort security and safety.
- Communicate effectively both in written and oral presentations.
- Research and analyze the work environment in large, medium and small organizations as well as investigate an employer’s expectations in order to secure an ideal job placement
- To develop an appreciation of various cultures and global hospitality business practices and discuss the intricacies of particular regions of the world.

Curriculum Requirements - 120 Credits

A minimum of 2.0 GPA required in all RRMT courses

COURSE	CREDITS
ACCT Accounting as Advised	3
FSAD 153 Fundamentals of Hospitality Mgt OR BSAD 116 Business Organization and Mgt	3
CAS 240 Hospitality Sales & Marketing OR BSAD 112 Marketing	3
TOUR 106 Intro to the Hospitality Industry	3
TOUR 153 Hotel Operations	3
FSAD 257 Career Seminar	1
100 level Credits from the following: CAS 102, 103; CUL 101, 111; FSAD 100, 101, 154; TOUR 101, 151, 152	6

200 Level Credits from the following: CAS 230, 251, 280; CUL 201, 211, FSAD 201, 255, 258, 259; TOUR 250, 252, 253, 255	10
RRMT 398 Hospitality Analytics & Revenue Marketing OR BSAD 221 Business Statistics OR MATH 141 Statistics	3
BSAD 310 Human Resource Management	3
BSAD 449 Management Policies and Issues	3
RRMT 320 Legal Implications in the Resort & Recreation Industry	3
RRMT 425 Training Design and Implementation – Hospitality	3
RRMT 430 Assessment of Customer Satisfaction	3
RRMT 440 Tech Applications for Resort and Recreation Management	3
RRMT 470 Capstone Experience Orientation	2
RRMT 480 Resort and Recreation Service Management Internship	12
300 – 400 Level Electives in RRMT, BSAD, ENTR or BREW	6
COMP SUNY General Education as Advised	3
MATH SUNY General Education as Advised	3
Additional SUNY General Education Credits	24

Suggested Course Sequence

Year 1/Fall - 15 Credits

COURSE	CREDITS
ACCT 100/ ACCT 101 - Accounting Information & Mgmt/ Principles of Accounting I	3
COMP 101 - Composition and Research	3
MATH 102 - Intermediate Algebra with Trig	3
TOUR 106 - Intro to Hospitality	3
100 level core requirement	3

Year 1/Spring - 15 Credits

COURSE	CREDITS
FSAD 153/ BSAD 116 - Fundamentals of Hospitality Management/ Business Organization & Mgmt	3
TOUR 153 - Hotel Operations	3
100 level core requirement	3
SUNY GER	3
SUNY GER	3

Year 2/Fall - 17 Credits

COURSE	CREDITS
CAS 240/ BSAD 112 - Hospitality Sales & Marketing/ Marketing	3
FSAD 201 - Summer Cooperative Employment	2
200 level core requirement	3
SUNY GER	3
SUNY GER	3
Elective	3

Year 2/Spring - 16 Credits

COURSE	CREDITS
BSAD 107/ BSAD 108 - Legal & Regulatory Aspects of Gaming/ Business Law I	3
FSAD 257 - Career Seminar	1
200 core level requirement	6
CITA 101 - Principles of Computer Applications	3
SUNY GER	3

Year 3/Fall - 15 Credits

COURSE	CREDITS
RRMT 320 - Legal Implications in the RRMT Industry	3
RRMT - 300-400 level RRMT	6
Foreign Language (SUNY GER)	3
SUNY GER	3

Year 3/Spring - 15 Credits

COURSE	CREDITS
BSAD 310 - Human Resource Management	3
BSAD 449 - Management Policy and Issues	3
RRMT 425 - Training & Implementation	3
RRMT 430 - Assessment of Customer Service	3
300-400 level school elective	3

Year 4/Fall - 15 Credits

COURSE	CREDITS
RRMT 440 - Technology Applications	4
RRMT 470 - Internship Orientation Seminar	2
RRMT 398 - Hospitality Analytics & Revenue Marketing	3
300-400 level elective	3
SUNY GER	3

Year 4/Spring - 12 Credits

COURSE	CREDITS
RRMT 480 - Resort & Recreation Internship	12

Technology Management, B.TECH. , Major #1318

Technology Management is a ThinkPad University curriculum using laptop computers integrated into courses.

The Technology Management degree program allows graduates in specialized A.A.S. program areas to combine their technical expertise with a firm understanding of fundamental business functions. By combining business education with enhanced technical skill sets, graduates will be prepared to assume the role of supervisor or management trainee in a contemporary, technology- driven environment.

This program provides students with technical and business expertise through classroom and hands-on field experiences. These features align with the college's mission of offering baccalaureate degrees with a business nature and a strong emphasis on technology and lifelong learning. While maintaining course flexibility, the program prepares professionals who identify and implement effective approaches to solving business problems and improve specialized business operation processes.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Communicate effectively both in writing and in presentation.
- Evaluate strategies for solving business problems.
- Recognize and promote ethical and responsible business practices.
- Utilize quantitative analysis to evaluate current and future market segment opportunities
- Apply quantitative analysis to evaluate business profitability
- Assess and evaluate the impact of developing technologies
- Identify technology and workforce strategies to enhance overall productivity
- Prepare a competitive industry analysis in support of strategic decision making

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
ACCT 100 Accounting Information & Mgmt. OR ACCT 101 Principles of Accounting I	3
CITA 101 Principles of Computer Apps OR OFFT 100, 109 and 110	3
BSAD 116 Business Organization & Mgt OR AGBS 230 Agricultural Business Management AND AGBS 240 Farm Management and Finance	3-7
BSAD 221 Business Statistics	3
BSAD 300 Management Communications	3
BSAD 408 Responsible Business Ownership OR PHIL 311 Professional Ethics	3
CITA 395 Internship Orientation Seminar OR ENTR 474 Preparation for Field Study OR AUTO 420 Auto Industry Internship Orientation	1
TECH 480 Internship	15
300-400 Business/Technology Electives	12
Two of the Following Four BSAD 310 Human Resource Management BSAD 320 Entrepreneurship BSAD 325 Marketing Management BSAD 400 Production & Operations Mgt	6
ECON 140 Intro to Microeconomics OR ECON 101 Intro to Macroeconomics	3

Required Option

(Select 12 credits from one of the following options)

Diesel Technology Option

COURSE	CREDITS
AUTO 360 Automotive Shop Management and Supervision	3
DTEC 325 Electrical Power Generation	3
DTEC 350 Advanced Diesel Fuel Systems	3
AUTO 380 Automotive Parts Inventory Mgt & Merchandising	3
AUTO 400 Automotive Fleet Maintenance	3
RENG 305 Renewable Energy Systems	3

General Management Option

COURSE	CREDITS
BSAD 320 Entrepreneurship	3
BSAD 327 Advertising Management	3
BSAD 350 Principles of Corporate Finance	3
BSAD 375 Management Information Systems	3
BSAD 380 International Business	3
BSAD 400 Production and Operations	3
BSAD 411 Leadership in Organizations	3
BSAD 415 International Human Resources Management	3
BSAD 419 Global Marketing	3
BSAD 449 Management Policy and Issues	3
CITA 405 Project Management	3
ENTR 317 Entrepreneurial Process	3
ENTR 342 Innovation and New Venture Creation	3
ENTR 327 Guerrilla Tactics for Small Business Marketing	3

Medical Office Technology Option

COURSE	CREDITS
OFFT 301 Advanced Medical Coding	3
OFFT 335 Advanced Medical Transcription	3
PSYC 304 Industrial/Organization Psychology	3
PSYC 384 Group Behavior	3
PSYC 386 Social Psychology	3
BSAD 320 Entrepreneurship	3
ENTR 327 Guerrilla Marketing Tactics for Small Business	3
COMP 310 Advanced Technical Comm	3
BSAD 411 Leadership in Organizations	3

Renewable Energy Option (Select 12 Credits)

COURSE	CREDITS
RENG 306 Alternative Fuel Vehicles	3
RENG 310 Biomass Energy Resources	3
RENG 315 Biomass Energy Resources II	3
RENG 321 Introduction to Micro Hydroelectricity	3
RENG 331 Introduction to Solar Thermal Systems	3
RENG 420 Small Wind Systems	3
RENG 430 Solar PV Systems	3
RENG 410 Biomass Energy Conversions I. Bio-chemical	3
RENG 415 Biomass Energy Conversions II. Thermo-chemical	3
RENG 460 Systems Integration	1

Sports Management Option

COURSE	CREDITS
BSAD 343 Sport Management	3
BSAD 353 Sport Marketing	3
BSAD 418 Sport Law	3
BSAD 443 Sport Strategy	3

Additional Credits as Advised: 30

Total Program credits: 121

Suggested Course Sequencing

Year 1/Fall - 18 Credits

COURSE	CREDITS
ACCT 100 - Accounting Info & Mgmt. Decisions	3
BSAD 116 - Business and Organizations Management	3
BSAD 221 - Business Statistics	3
BSAD 300 - Management Communications	3
ECON 140 - Principles of Microeconomics	3
ELECTIVE - SUNY GER – As Advised	3

Year 1/Spring - 18 Credits

COURSE	CREDITS
CITA 101 - Principles of Computer Applications	3
ELECTIVE - 300-400 Level As Advised	3
ELECTIVE - 300-400 Level As Advised	3
ELECTIVE - 300-400 Major Core As Advised	3
ELECTIVE - 300-400 Major Core As Advised	3
ELECTIVE - SUNY GER – As Advised	3

Year 2/Fall - 16 Credits

COURSE	CREDITS
BSAD 408 - Responsible Business Ownership	3
ENTR 474 - Internship Orientation Seminar	1
ELECTIVE - 300-400 Level Major Core As Advised	3
ELECTIVE - 300-400 Level Major Core As Advised	3
ELECTIVE - 300-400 Level Free or GER As Advised	3
ELECTIVE - 300-400 Level FREE or GER As Advised	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
TECH 480 -Internship in Tech Management OR ENTR 475 - Practicum in Entrepreneurship	15

Videojournalism, B.S. , Major #2096

The bachelor degree in Videojournalism provides students with the skills and hands-on experience in the classroom and in the field that will allow them to secure jobs and succeed in the dynamic world of contemporary media. Students acquire and reinforce basic skills in broadcast news writing and scripting, investigative research methods, video producing strategies, audio and video editing. The program is housed in a newly redesigned classroom and studio area that was designed to replicate industry working conditions.

The ever increasing number of media outlets seeking professionals who can quickly and effectively bring well-crafted video stories to air means that the job market for videojournalists or content producers who can take a story from conception through writing, shooting, editing and broadcast is strong. The B.S. in Videojournalism is designed to provide students with state-of-the-art technical instruction, based on a solid foundation of writing, editing and business skills. Graduates spend several semester creating a portfolio of work that will give them a strong advantage in entering the job market in whatever aspect of the communications field that they choose, either as part of an existing organization or as free-lancers. Students also have a full-time internship chosen in conjunction with their advisor to allow them to get business experience in the area of communications in which they will seek their first job.

Program Learning Outcomes

- Upon successful complete of this program, students will be able to:
- Create content appropriate for an appropriate media platform
- Analyze complex issues and topics related to information-gathering and content producing activities
- Demonstrate the technical, managerial and leadership skills necessary to collaboratively work with other industry professionals
- Demonstrate through analytical and crucial thinking strategies an understanding of law and ethics pertaining to various communication professions

Curriculum Requirements - 121 Credits

COURSE	CREDITS
JOUR 126 Broadcast Writing & Editing	3

JOUR 187 Production Lab WCVM Media I	1
JOUR 188 Production Lab WCVM Media II	1
JOUR 280 Broadcast Management, News and Production	3
JOUR 287 Production Lab in WCVM Media III	1
JOUR 288 Production Lab in WCVM Media IV	1
JOUR 313 Broadcast Scriptwriting	3
JOUR 326 Videojournalism I – Producing and Editing	3
JOUR 327 Videojournalism II – Content Producing Across Media Platforms	3
JOUR 387 Production Lab in WCVM Media V	2
JOUR 388 Production Lab in WCVM Media V & VI	2
JOUR 426 Videojournalism IV – Remote Broadcast Production	3
JOUR 427 Video Portfolio	3
JOUR 428 Internship	12
BSAD 108 Business Law	3
BSAD 116 Business & Organizational Mgt	3
BSAD 320 Entrepreneurship	3
CITA As Advised	2
HUMN 210 The Film Experience	3
JOUR 328 – Video III: Legal & Ethical OR JOUR 401 - Legan & Ethical Issues in Mass Communication	3
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
COMM 111 Introduction to Speech	3
PSYC 101 Introduction to Psychology	3
POLI 101 American National Government	3
MATH 102 Intermediate Algebra w/ Trig	3

ART 110 Intro to Visual Arts	3
Foreign Language As Advised	3
GEOG 101 Intro to World Reg. Geography	3
HIST 10x SUNY GER American History	3
HIST 16x SUNY GER Western World Civilization	3
Science As Advised	3
Additional General Electives as Advised	18
Additional General Electives 300-400 Level as Advised	9

Suggested Course Sequence

Year 1/Fall - 15 Credits

COURSE		CREDITS
COMP 101 - Composition and Research		3
JOUR 126 - Broadcast Writing and Editing		3
JOUR 187 - Production Lab WCVM Media I		1
HIST - General Education in American History (as advised)		3
MATH 102		3
CITA - As advised		2

Year 1/Spring - 16 Credits

COURSE	CREDITS
COMP 102 - Writing About Literature	3
JOUR 280 - Broadcast Management, News and Production	3
JOUR 188 - Production Lab WCVM Media II	1
BSAD 108 - Business Law	3
PSYC 101 - Introduction to Psychology	3
HUMN 210 - The Film Experience	3

Year 2/Fall - 16 Credits

COURSE	CREDITS
Foreign Language as Advised	3
JOUR 326 - Videojournalism I – Producing and Editing	3
JOUR 287 - Production Lab in WCVM Media III	1
BSAD 116 - Business & Organizational Management	3
HIST - General Education in West. World Civilization (as advised)	3
POLI 101 - American National Government	3

Year 2/Spring - 16 Credits

COURSE	CREDITS
JOUR 288 - Production Lab in WCVM Media IV	3
JOUR 327 - Videojournalism II – Content Producing Across Media Platforms	1
COMM 111 - Introduction to Speech	3
General Elective Science (as advised)	3
Liberal Arts Electives	6

Year 3/Fall - 17 Credits

COURSE	CREDITS
JOUR 313 - Broadcast Scriptwriting	3
JOUR - 328 or 401 as Advised	3
GEOG 101 - Intro to World Regional Geography	3
JOUR 387 - Production Lab in WCVM Media V	2
ART 110 - Intro to Visual Arts	3
Liberal Arts Elective	3

Year 3/Spring - 14 Credits

COURSE	CREDITS
JOUR 426 - Videojournalism IV – Remote Broadcast Production	3
BSAD 320 - Entrepreneurship	3
Electives as Advised	6
JOUR 388 - Production Lab in WCVM Media V & VI	2

Year 4/Fall - 15 Credits

COURSE	CREDITS
JOUR 427 - Video Portfolio	3
300-400 - General Education as Advised	12

Year 4/Spring - 12 Credits

COURSE	CREDITS
JOUR 428 - Internship	12

CANNABIS INDUSTRY MINOR

The Cannabis Industry minor will provide students with an understanding of the many aspects related to the cannabis industry. This minor is appropriate for students in horticulture, agriculture, and natural science related majors and provides students opportunities for focus on a specific area of interest. This minor requires 16 credit hours, with at least 6 credit hours in the upper-division.

Student Learning Outcomes

Upon successful completion of this minor students will be able to:

- Demonstrate a broad understanding of Cannabis botany
- Explain a variety of production and processing techniques
- Evaluate market trends

Curriculum Requirements

COURSE	CREDITS
CANA 101 - Introduction to Cannabis	3
CANA 301 - Advanced Cannabis Propagation & Production	3
CANA - 300 Level Cannabis Course	3
AGRO 110 - Agricultural Science	3
ENSC 107 - Integrated Pest Management	3
BIOL 102 - Botany - Form and Function of Seed Plant	3

CRAFT BEER & BREWING MINOR

Craft brewing businesses utilize a broad spectrum of disciplines and fields of expertise. Associated industries connected to craft beer range are quite diverse: culinary, hospitality, waste and wastewater management, agriculture, HV/AC, business management and entrepreneurship and much more. This minor, open to all 4-year students at SUNY Morrisville, offers students the opportunity to gain knowledge of the craft brewing industry from both manufacturing and business perspectives catered to their interests and their related area of study. The required courses provide the background in beer history, culture, and manufacturing methods while the advised courses allow students to hone their course of study for specific areas of interest.

Student Learning Outcomes

Upon Successful completion of this minor students will be able to:

- Explain local, state, and federal regulations for food and alcohol processing that govern the manufacture, distribution and sale of food products
- Assess the distinctions in methods and philosophy between Quality Control and Quality Assurance with regards to craft manufacturing
- Link inter-disciplinary content between agriculture, hospitality, culinary, and business knowledge and their implementations and effect on craft beer business and manufacturing.
- Assess the effect of the unit operations of beer manufacturing and the outcomes of these processes on the quality of the final product
- Evaluate the effects of raw materials and manufacturing processes and the resultant outcomes of beer style and flavor development that lead to distinctive.beer styles

Curriculum Requirements

COURSE	CREDITS
BREW 100 - Overview of Brewing Science & Technology	3
BREW 300 - Sensory Evaluation & Beer Styles	3
Credits as Advised from BREW or RRMT 399	6-9
BREW - Brewing Courses as Advised	
RRMT 399 - Study of Wine and Spirits	

CRIMINAL JUSTICE MINOR

The criminal justice minor allows students to get an understanding of criminal justice in addition to other disciplines.

Student Learning Outcomes

Upon successful completion of this minor students will be able to:

- Explain due process and corresponding constitutional and legal rights.
- Name the various police agencies, their specialties and jurisdictions.
- Critique the varying goals and priorities of the many disciplines in the criminal justice system.
- Identify and describe diversity and cultural influences in human behavior, particularly in stressful events.

Curriculum Requirements

COURSE	CREDITS
CJUS 101 - Introduction to Criminal Justice	3
CJUS 202 - Policing	3
CJUS - Upper Level CJUS as Advised	9

CYBERSECURITY MINOR

Cyber security, also referred to as information technology security, focuses on protecting computers, networks, programs, and data from unintended or un- authorized access, change, or destruction. Government agencies, the military, corporations, financial institutions, hospitals, and other groups collect, process, and store a great deal of confidential information on computers and transmit that data across networks to other computers. With the growing volume and sophistication of cyber attacks, ongoing attention is required to protect sensitive business and personal information, as well as safeguard national security. Students wishing to specialize in cybersecurity may complete the Cybersecurity

Student Learning Outcomes

Upon successful completion of this minor students will be able to:

- Describe the functioning and features of the various computer system components as well as their advantages and disadvantages.
- Define and describe the principles of data integrity, security, and encryption. Examine the concept of privacy and its legal protections.
- Design, configure, and deploy defenses against key attacks using key attack tools.
- Define, describe, and implement firewall con-figuration strategies and solutions.

Curriculum Requirements - 15 Credits

COURSE	CREDITS
CITA 120 - Computer Concepts and Operating System	3
CITA 200 - Data Communications and Networking	3
CITA 270 - Fundamentals of Network Security	3
CITA 325 - Network Defense & Countermeasures	3
CITA 375 - Internet & Intranet Firewalls	3

GAME PROGRAMMING MINOR

The Game Programming minor is for students in a bachelor's degree program who want to develop the skills to create software for 2D, 3D and VR (Virtual Reality) video games. The minor provides students with courses that cover game design concepts, user interface design, and software development of video games. Students wishing to specialize in game programming may complete the Game Programming Minor by taking 15 credits (five CITA courses).

Student Learning Outcomes

Upon successful completion of this minor students will be able to:

- Apply the principles of game development, from concept to final product
- Apply concepts of Object-Oriented Programming (OOP) in a game design context
- Create the software for a multi-player 2D, 3D, or VR game suitable for distribution
- Demonstrate the ability to generate prototypes for game interfaces

Curriculum Requirements - 15 Credits

COURSE	CREDITS
CITA 112 Introduction to Game Development	3
CITA 212 Fundamentals of Game Design	3
CITA 312 Intermediate Computer Game Design & Applications	3
CITA 385 User Interface Design	3
CITA 412 Advanced Game Design and Applications	3

HISTORY MINOR

The history minor is for students in a bachelor's degree program who also want to gain a better understanding of human societies through the study of the discipline of history.

Student Learning Outcomes

Upon successful completion of the minor, students will be able to:

Demonstrate college-level research and writing skills

- Identify and explain the significance of key people, ideas, and events in the history of a period or region
- Explain the development of distinctive institutions of western civilization and the impact of the Western world on other world regions
- Explain key points in the history of a period of world history or non- Western/US region that demonstrates the nature change over time.
- Demonstrate a knowledge of the basic narrative of American history including key American institutions, the effect of these institutions on different groups, and the evolving relationship of the US with the world

Curriculum Requirements

The minor requires 15 credits (five HIST courses) with at least one HIST course from each of the three general education areas covered by the discipline: American History, Other World Civilization, and Western Civilization. At least two HIST courses must be at the 300-level or higher.

Courses regularly offered: (See the rest of the catalog for a complete list of HIST courses).

American History

COURSE	CREDITS
HIST 101 United States History to 1800	3
HIST 102 United States History 1800 - 1900	3
HIST 103 United States History 1900-Present	3
HIST 225 Women in the United States	3
HIST 320 History of New York State	3

Western Civilization

COURSE	CREDITS
HIST 161 European History to 1648	3
HIST 162 European History from 1500	3
HIST 182 History of Technology from 1750	3
HIST 371 The World Wars	3
HIST 372 The Cold War	3

Other World Civilization

COURSE	CREDITS
HIST 151 World History to 1600	3
HIST 152 World History from 1500	3
HIST 171 Environmental History	3
HIST 181 History of Technology to 1800	3
HIST 351 The World Since 1914	3

PSYCHOLOGY MINOR

The psychology minor is for students in a bachelor's degree program who also want to gain an understanding of the scientific study of human thought and behavior. The minor provides enough structure for students to learn about the breadth and depth of the field while also allowing students to select from a variety of courses to focus on specific areas of interest.

Student Learning Outcomes

Upon successful completion of the minor, students will be able to:

- Explain how psychologists evaluate and use evidence to support theories.
- Identify current major theories and findings in various areas of psychology.

Curriculum Requirements

COURSE	`CREDITS
PSYC 101 Introduction to Psychology	
PSYC 251 Abnormal Psychology	
One course from the following:	
PSYC 221 Biological Psychology	3
PSYC 241 Child Development	3
PSYC 242 Adolescent Development	3
PSYC 243 Adult Development	3
PSYC 284 Psychology of Gender	3
PSYC 291 Human Diversity in the Social Context	3
MATH 123 Elementary Statistics	3
MATH 141 Statistics	3
Two Courses from the following:	
PSYC 304 Industrial & Organizational Psyc	3
PSYC 325 Motivation	3
PSYC 381 Personality	3
PSYC 384 Group Behavior	4
PSYC 386 Social Psychology	4

SCIENCE, TECHNOLOGY & SOCIETY MINOR

The Science, Technology and Society minor is designed to provide students with an understanding of how science and technology interact with the wider world – how the knowledge claims of science and the developments in technology both influence and reflect social conventions, historical trends and ethical values. STS offers an inter disciplinary approach to a complex world, and enables students to analyze and act in that world

Student Learning Outcomes

Upon successful completion of the minor, students will be able to;

- Comprehension of the interdisciplinary nature of STS, as measured by ability to analyze specific problems, translate knowledge into new contexts (activism or policy contexts, for example), interpret facts, and predict consequences;
- Ability to synthesize scientific and technological ideas within cultural contexts, taking into mind specific social values and meanings (such as the role of expertise in policy making and the value of social movements in technological decision-making processes) of particular sciences and technologies;
- The enhancement of information literacy skills, defined as competency in seeking information that is available in any format, ability to critically evaluate information, and to effectively utilize the information that is found.

Curriculum Requirements

Lower Division Courses (6 credit hours required)

COURSE	CREDITS
STS 101 The Values of Science and Society	3
HIST 181 History of Technology to 1800 OR HIST 182 History of Technology from 1800	3
SOCI 201 Social Problems	3

Upper Division Courses (at least 6 credit hours required)

COURSE	CREDITS
STS 301 Humans v. Nature	3
STS 302 History of Science	3
STS 316 Investigating Cyberculture	3
STS 401 Advanced Topics in STS	3

SOCIOLOGY MINOR

The sociology minor is for students in a bachelor's degree program who want to develop an understanding of the scientific study of group behavior and society. The minor provides enough structure for students to learn about the breadth and depth of the field while also allowing students to select from a variety of courses which focus on specific areas of interest.

Student Learning Outcomes

Upon successful completion of the minor, students will be able to;

- Describe the major perspectives of sociological insight, including structural, conflict, and interaction perspectives;
- Demonstrate an understanding sociological methods and how they can be applied to the study of social problems;
- Demonstrate the ability to describe the relationship between modern society and sociological ideas;
- Apply the sociological concepts to the analysis of social groups, class, gender, race and ethnicity, and deviance;

Curriculum Requirements

The minor requires 15 credit hours. It requires at least 6 of the credit hours to be lower division courses (including SOCI 101) and at least 6 credit hours to be upper division courses. It requires at least 12 of the credits to come from courses with a SOCI prefix

Lower Division Courses (at least 6 credit hours required)

COURSE	CREDITS
SOCI 101 Introduction to Sociology (required)	3
Additional Courses can be chosen from:	
SOCI 201 Social Problems	3
SOCI 221 Death and Dying	3
SOCI 250 Social Gerontology	3
SOCI 270 Drugs, Society, and Behavior	3
PSYC 291 Human Diversity in Social Context	3
STS 101 Values of Science and Technology	3
ANTH 101 Introduction to Anthropology	3
GEOG 101 Introduction to World/Regional Geography	3
HIST 225 Women in United States	3

Upper Division Courses (at least 6 credit hours required)

COURSE	CREDITS
SOCI 360 Social Movements and Community Change	3
SOCI 390 Urban Sociology	3
PSYC 384 Group Behavior	3
PSYC 386 Social Psychology	3
STS 316 Investigating Cyberculture	3

Accounting, A.A.S., #0630

Accounting is a ThinkPad University curriculum using laptop computers integrated into courses. This program is also offered at the Norwich Campus.

The accounting program design offers the interested student a sound basis for professional development with a minimum of sacrifice to educational mobility.

The curriculum contains requirements for a minimum of 15 semester hours in accounting and includes supporting courses in law, statistics, business organization, and computer information systems. Students contemplating transfer are advised to utilize free course electives in areas other than accounting and specialized subjects. Students planning to enter accounting or business immediately upon graduation are advised to take as many accounting courses as possible. Students who wish to diversify their accounting program may use free electives to build a supplemental field in computer information systems or management by selecting the courses indicated in the section titled Special Features. The successful completion of the programs will provide the educational requirements for employment as indicated in the career opportunities section of this catalog. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Comprehend and apply accounting knowledge required of entry-level positions in management and industry
- Utilize the accounting cycle both manually and electronically to record transactions, process information, and prepare financial statements for a business
- Research, analyze and evaluate various types of business, events, industries & institutions
- To communicate effectively through both oral and written means of communication

Curriculum Requirements - 60 Credits

COURSE	CREDITS
ACCT 101 -Principles of Accounting I**	3
ACCT 102 - Principles of Accounting II	3
ACCT 201 - Intermediate Accounting	3
ACCT 201 - Intermediate Accounting	3
ACCT 205 - Cost Accounting	3
ACCT - Accounting Elective	3
BSAD 100 - Business in the 21st Century	3
BSAD 102 - Business Mathematics	3
BSAD 108 - Business Law	3
BSAD 116 - Business Organization & Mgmt.	3
BSAD 140 - Business Communications	3
BSAD 221 - Business Statistics	3
BSAD 295 - Business Management & Decision Making	3
CITA 101 - Principles of Computer Apps	3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
MATH 102 - Intermediate Algebra with Trig	3
Additional SUNY General Education as Advised	12

Suggested Course Sequencing

Year 1/Fall - 15 Credits

COURSE	CREDITS	
BSAD 100 - Business in the 21st Centruy	3	
BSAD 102 - Business Mathematics	3	
CITA 101 - Principles of Computer Applications	3	
COMP 101- Composition and Research	3	
MATH 102 - Intermediate Algebra with Trig	3	

Year 1/Spring - 15 Credits

COURSE	CREDITS	
ACCT 101 - Principles of Accounting 1	3	
BSAD 108 - Business Law 1	3	
COMP 102 - Writing About Literature	3	
SUNY General Education Courses as Advised	6	

Year 2/Fall - 15 Credits

COURSE	CREDITS	
ACCT 102 - Principles of Accounting II	3	
BSAD 116 - Business Organization & Management	3	
BSAD 140 - Business Communications	3	
BSAD 221 - Business Statistics	3	
ACCT - Accounting Elective as Advised	3	

Year 2/Spring - 15 Credits

COURSE	CREDITS	
ACCT 201 - Intermediate Accounting I	3	
ACCT 205 - Cost Accounting	3	
BSAD 295 Business Management & Decision Making	3	
ECON 100/140 - Economics as Advised	3	

Accounting, A.S., #1129

Accounting is a ThinkPad University curriculum using laptop computers integrated into courses. This program is also offered at the Norwich Campus.

The A.S. degree program in accounting is designed to prepare students for the accounting profession in the 21st century. This program prepares students to continue their education in bachelor degree programs and to take eventually the C.P.A. exam. Articulation agreements allow SUNY Morrisville graduates to transfer with junior status. Students have access to state-of-the-art software through a campus-wide computer network and laptop computers. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Comprehend and apply accounting knowledge required of entry-level positions in management and industry
- Utilize the accounting cycle both manually and electronically to record transactions, process information, and prepare financial statements for a business
- Research, analyze and evaluate various types of business, events, industries & institutions
- To communicate effectively through both oral and written means of communication

Curriculum Requirements - 60 Credits

COURSE	CREDITS
ACCT 101 - Principles of Accounting I**	3
ACCT 102 - Principles of Accounting II	3
ACCT 105 - Managerial Accounting	3
ACCT Accounting Elective	3
BSAD 100 - Business in the 21st Century	3
BSAD 108 - Business Law	3
BSAD 116 - Business Organization & Mgmt.	3
BSAD 221 - Business Statistics	3
BSAD 295 - Business Management & Decision Making	3
CITA 101 - Principles of Computer Apps	3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
MATH - 147 - Selected Topics in Precalculus	3
ECON 100 - Introduction to Macroeconomics	3
ECON 140 - Introduction to Microeconomics	3
Natural Science as Advised	3-4
Additional SUNY General Education Credits as Advised	12

Suggested Course Sequencing

Year 1/Fall - 15 Credits

COURSE	CREDITS
BSAD 100 - Business in the 21st Century	3
ACCT 101 - Principles of Accounting I	3
CITA 101 - Principles of Computer Applications	3
COMP 101 - Composition and Research	3
MATH 147 - Selected Topics in Precalculus	3

Year 1/Spring - 15 Credits

COURSE	CREDITS
BSAD 108 - Business Law I	3
COMP 102 - Writing About Literature	3
ACCT 102 - Principles of Accounting II	3
SUNY GER	3
SUNY GER	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
BSAD 116 - Business Organization & Mgmt	3
BSAD 221 - Business Statistics	3
ECON 100 - Principles of Macroeconomics	3
ACCT - Accounting Elective	3
SUNY GER	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
ECON 140 - Principles of Microeconomics	3
ACCT 105 - Managerial Accounting	3
SUNY GER	3
BSAD 295 - Business Mgmt & Decision Making	3
SUNY GER	3

Agricultural Business, A.A.S., Major #0511

Agricultural Business is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The curriculum is intended for anyone interested in obtaining an agriculturally oriented business education. The skills and knowledge obtained can be applied in numerous areas of the nation's largest industry, all the way from managing modern farm operations to retail sales of agricultural commodities.

The Agricultural Business major allows the student to tailor his or her curriculum beyond a basic core of required courses. The Marketing option consists of a strong core of agriculturally oriented and marketing courses. The Technology option provides a basic core of agribusiness courses as well as the opportunity for the student to choose a number of courses in an agricultural technical area. A strength of this option is that the student not only will acquire a degree of knowledge in a technical area, but will also acquire good business skills to manage technology. The Transfer option is intended for students that desire to transfer into a bachelor degree program at a later date. It provides for a more generalized curriculum. Career opportunities exist within farm management, farm credit, farm services, banking, agricultural retail store management, farm insurance, agricultural sales, and marketing. One can also transfer into our bachelor degree program in Agricultural Business Development.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Understand consumers' behavior (this is your behavior) and the determination of demand for agricultural commodities and food products;
- Gain an understanding of the United States and the world food marketing system from the point of initial agricultural production until the finished product is in the hands of the consumer;
- Utilize the tools of financial analysis, management, and planning to solve problems in agriculture and in their own personal lives. These tools include budgeting, present value analysis, financial feasibility analysis, financial statements, and methods of risk analysis and management

Curriculum Requirements

Marketing Option - 60 Credits

COURSE	CREDITS
AGBS 100 - Agricultural Economics OR AGBS 225 - Environmental Economics	3
AGBS 110 - Introduction to Food and Agriculture Business	3
AGBS 200 - Marketing Agricultural Products	3
AGBS 240 - Farm Finance and Management	4
AGBS 250 - Decision Making for Agricultural Managers	3
BSAD 209 - Salesmanship	3
ACCT - Accounting as Advised	3
JOUR 272 - Public Relations and Publicity Management OR BSAD 300 - Management Communications	3
CITA Course as Advised OR OFFT 110 -Introduction to Spreadsheet Software AND One of the three following OFFT courses OFFT 100, 106, 109	2- 3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature OR COMM 111 - Introduction to Speech	3
Additional SUNY General Education Credits	14
General Electives as Advised	12-13

Technology Option - 60 Credits

COURSE	CREDITS
AGBS 100 - Agricultural Economics OR AGBS 225 - Environmental Economics	3
AGBS 110 - Introduction to Food and Agriculture Business (Students transferring into Agricultural Business who have completed AGBS 240 are not required to enroll in AGBS 110)	3
AGBS 200 - Marketing Agricultural Products	3
AGBS 240 - Farm Finance and Management	4
AGBS 250 - Decision Making for Agricultural Managers	3
BSAD 209 - Salesmanship	3
ACCT - Accounting as Advised	3
JOUR 272 - Public Relations and Publicity Management OR BSAD 300 - Management Communications	3
CITA Course as Advised OR OFFT 110 - Introduction to Spreadsheet Software AND One of the three following OFFT courses: OFFT - 100, 106, 109	2-3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature OR COMM 111 - Introduction to Speech	3
Additional SUNY General Education Credits	14
General Electives as Advised	19

Transfer Option - 61 Credits

This option meets the needs of students interested in agricultural education, cooperative extension, business or general agriculture. Proper selection of elective courses allows this option to address a wide variety of student interest areas.

COURSE	CREDITS
AGBS 100 - Agricultural Economics	3
AGBS 200 - Marketing Agricultural Products	3
AGBS 240 - Farm Finance and Management	4
AGBS 250 - Decision Making for Agricultural Managers	3
ACCT - Accounting as Advised	3
CITA Course as Advised OR OFFT 110 - Introduction to Spreadsheet Software AND One of the three following OFFT courses: OFFT - 100, 106, 109	2-3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
MATH 102 - Intermediate Algebra with Trigonometry	3
COMM 121 - General College Chemistry (Lecture & Lab)	4
Additional SUNY General Education Credits	7
General Electives as Advised	21-22

Suggested Course Sequence

Agricultural Engineering Technology, A.A.S.

Associates #0512

Agricultural Engineering is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Mechanization and automation in agriculture have created demand for technicians in agricultural engineering and mechanics by the farm equipment industry and by operators of large commercial farms. If a student is interested in mechanical applications and in agriculture, this curriculum can provide many challenging opportunities. The farm equipment industry today serves not only the commercial farmer but also is one of the major suppliers of such equipment as lawn, garden, and small recreational equipment, as well as construction equipment such as backhoes and small bulldozers for industrial uses.

Accreditation: The program is accredited by the Equipment and Engine Training Council.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines and modern agricultural equipment
- Develop a comprehensive understanding of electrical systems and electronic controls used for diesel-powered equipment and modern agricultural equipment
- Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment and modern agricultural equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in diesel-powered equipment and modern agriculture equipment.

Curriculum Requirements

Required Courses

COURSES	CREDITS

OFFT 100 - Introduction to Spreadsheet Software	3
AGEN 100 - Tractor Care and Maintenance	3
AGEN 104 -Principles of Farm Machinery	2
AGEN 115 -Agricultural Engineering Industry Overview	1
DTEC 125 Diesel Electrical Systems	4
DTEC 225 Diesel Electronics	4
AGEN 161 Basic Hydraulics	3
AUTO 102 Metals	3
AGSC 132 Intro to Computer Applications in Precision Farming	2
AGEN 210 Small Power Equipment II	3
AGEN 220 Maintenance, Repair & Performance Tuning of Arctic Cat Equipment	4
AGEN 261 Advanced Hydraulics	4
AGEN 261 Advanced Hydraulics	4
AGEN 131 Fundamentals of Hydraulics	3
AGEN 270 Tractor Overhaul and Repair OR AGEN 300 Internship in Ag Engineering	4-5
AGBS 100 Agricultural Economics OR ACCT 100 Accounting Info & Mgt OR AGBS 210 Farm Management	3
DTEC 150 Diesel Systems	3
COMP 101 Composition and Research	3
COMP 110 Technical Communications	3
MATH as Advised	3
Natural Sciences w/Lab As Advised (Phys 107, CHEM, BIOL)	4
Social Science Elective as Advised (HIST, PHIL, POLI, SOCI)	6
Total Program Credits	64

Suggested Course Sequence	
Year 1/Fall - 18 credits	
AGEN 100 Tractor Care and Maintenance	3
AGEN 105 Principles of Farm Machinery	2
AGEN 131 Fundamentals of Hydraulics	3
AGEN 115 Agricultural Engineering Industry Overview	1
AGSC 132 Intro to Computer Applications in Precision Farming	2
DTEC 125 Diesel Electrical Systems	4
MATH as Advised	3
Year 1/Spring - 17 Credits	
AGEN 161 - Basic Hydraulics	3
AGEN 210 - Small Power Equipment II	3
DTEC 225 - Diesel Electronics	4
AUTO 102 - Metals	3
Natural Science with Lab as Advised	4
Year 2/Fall - 17 Credits	
AGEN 261 - Advanced Hydraulics	4
DTEC 150 - Diesel Systems	3
AGBS 100 - Agricultural Economics	3

OR	
AGBS 201- Farm Management	3
OR	
ACCT 100 - Accounting Information and Management	3
COMP 101 - Composition and Research	3
OFFT 110 - Introduction to Spreadsheet Software	1
Social Science Elective as Advised	3
Year 2/Spring - 16-17 Credits	
AGEN 270 - Tractor Overhaul and Repair	5
OR	
AGEN 300 - Internship in Agricultural Engineering	4
AGEN 220 - Maintenance, Repair & Performance Tuning of Arctic Cat Equipment	4
COMP 110 - Technical Communication	3
Social Science Elective as Advised	3

Agricultural Science, A.A.S., Major #0514

Agricultural Science is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Agricultural Science is a program which provides fundamental training in the basic sciences as applied to agriculture. All students graduating from our Ag-Agricultural Science program have been exposed to a wide breadth of courses, while at the same time allowing enough flexibility to delve deeper into any individual topic. This program offers broad-based training in agriculture preparing students for employment in the agricultural service sector and for technical on-farm work.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Illustrate a broad-based understanding of the scientific principles important in modern agricultural production
- Demonstrate understanding of key practices and technologies used in the area of their chosen agricultural field
- Utilize tools necessary for data collection and analysis relevant to modern agricultural production
- Interpret data necessary for effective management of crop and animal production
- Describe basic social, political, and economic driving forces impacting the agricultural field of their chosen focus regionally, nationally, and globally

Curriculum Requirements - 60 Credits

All students graduating with an agricultural science degree will complete the following required courses: (Courses preceded by an asterisk count as general education electives)

COURSE	CREDITS	
AGBS 110 - Agricultural Economics	3	
*AGRO 110 - Social Science	3	
AGRO 210 - Field Crop Production	3	
AGSC 115 - Agricultural Science in Context	1	
AGSC 132 - Intro to Precision Farming	2	
AGSC 137 - Agricultural Statistics or *MATH 123 Statistics	3	
AGSC 250 - Current Topics In Agricultural Science	3	
ANSC 101 - Introduction to Animal Science	3	
*COMP 101 - Composition and Research	3	
*COMP 102 - Writing About Literature OR *COMM 111 - Introduction to Speech	3	
Social Science, History, Math, Sciences as Advised	6	

Students must complete 27 Credits from the following lists

Fundamental Science - 6 credits

COURSE	CREDITS	
*CHEM 110 - Contemporary Chemistry	4	
*CHEM 121 - General Chemistry I	4	
*CHEM 122 - General Chemistry II	4	
*BIOL 120 - General Biology I	4	
*BIOL 121 - General Biology II	4	
*PHYS 127 - General Physics I	4	
*DANS 100 - Dairy Nutrition	3	
*DANS 110 - Breeding Diary Cattle	3	
*DANS 120 - Anatomy & Physiology of Diary Cow	3	

Agronomy - 6 credits

COURSE	CREDITS	
*BIOL 102 - Botany: Form and Function of Seed Plants	3	
AGRO 115 - Principles of Compost Management	3	
*AGRO 215 - Soil Fertility and Fertilizers	3	
ENSC 106 - Pesticide Use and Handling	2	
ENSC 107 - Integrated Pest Management	1	
*HORT 150 - Fruit and Vegetable Production	3	
*HORT 201 - Plant Propagation	3	

Technology - 3 credits

COURSE	CREDITS	
NATR 103 - Natural Resources Equipment Operation	3	
AGEN 105 - Principles of Farm Machinery	2	
AGEN 115 - Agricultural Engineering Industry Overview	1	

Specialty Focus - 12 credits from any course the following prefixes:

AGBS, AGEN, AGNR, AGRO, AGSC, ANSC, AUTO, BIOL, CANA, CHEM, DANS, DTEC, EDU, ENSC, ESCI, HORT, NATR, PSYC, PHYS, RENG, RREN, SPPR

Animal Science - Dairy, A.A.S., Major #0562

Animal Science - Dairy is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The dairy industry is the largest of all agricultural enterprises in New York, and ranks third in the nation in the production of milk. Today's New York dairy industry is exciting and challenging. The industry needs qualified young people trained in the management of modern dairy farms, as well as the areas of nutrition, reproduction, herd health and farm supplies, to mention a few.

The Animal Science - Dairy curriculum is a progressive practical program concentrating on dairy cattle management, emphasizing both managerial and hands-on experiences. This curriculum is based on dairy courses that provide a science and business background. A strong emphasis is placed on application of these principles with our 200-cow free-stall dairy herd of registered Holsteins. Student-management programs are enhanced with a dairy complex which features a milking parlor and classrooms hooked up to dairy cattle management software.

Upon completion, students may enter the bachelor of technology program in Dairy Management, or another bachelor degree program that fits their specific interests. In addition to the academic program, students have the opportunity to participate in related activities such as Dairy Club, Collegiate FFA, Dairy Judging Team, Autumn Review Sale, National Agriculture Day, Showmanship Contest, and The Northeast Dairy Challenge. Students who plan to transfer to a four-year program should elect appropriate science courses such as biology and/or chemistry, and mathematics.

Career opportunities exist in dairy production management, dairy nutrition, artificial insemination, reproductive management, agri-business employment and many others.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Employ sound judgment, problem-solving and critical thinking skills when working with dairy cattle.
- Conduct the necessary research, analysis, evaluation, and critical thinking skills required of dairy management.
- Provide training and practical hands on skills for a career in dairy management.

Curriculum Requirements

Major Field Requirements

COURSES	CREDITS
DANS 100 Dairy Nutrition	3
DANS 110 Dairy Breeding	3
DANS 115 Dairy Artificial Insemination	1
DANS 120 Anatomy & Physiology of the Dairy Cow	3
DANS 140 Dairy Cattle Judging	1
DANS 150 Dairy Farm Practicum	1
DANS 151 Dairy Techniques (SHARRPS)	1
DANS 160 Introduction to Dairy Science	3
DANS 210 Dairy Health	3
DANS 220 Dairy Herd Management	3
DANS 225 Dairy Production & Management	3
DANS 250 Dairy Perspectives	1
AGBS 100 Agricultural Economics OR AGBS 225 Environmental Economics	3
AGBS 200 Marketing Agricultural Products	3
AGBS 240 Farm Management and Finance	4
AGRO 110 Soil Science	3
AGRO 210 Field Crops	3
ACCT Accounting as advised	3

AGSC 132 Intro to Computer Applications in Precision Farming I OR OFFT 110 Intro to Spreadsheet Software AND 1 of the following 3 OFFT courses: OFFT 100 Intro Word Processing Software 1 OFFT 106 Personal Computer Keyboarding 1 OFFT 109 Intro to Presentation Software 1	2

Liberal Arts and Science

COURSE	CREDITS
COMP 101 Composition and Research	3
COMP 102 Writing About Literature OR COMM 111 Introduction to Speech	3
MATH as Advised	3
Additional SUNY General Education Credits	3
Additional General Elective Credits	3

Total Program Credits: 60

Suggested Course Sequence

Year 1/Fall - 16 Credits

COURSE	CREDITS
DANS 100 - Dairy Nutrition	3
DANS 160 - Introduction to Dairy Science	3
DANS 150 - Dairy Farm Practicum	1
AGBS 100 - Agricultural Economics	3
AGRO 110 - Soil Science	3
COMP 101 - Composition and Research	3

Year 1/Spring - 14 Credits

COURSE	CREDITS
DANS 110 - Dairy Breeding	3
DANS 120 - Anatomy & Physiology	3
DANS 140 - Dairy Cattle Judging	1
DANS 151 - Dairy Techniques	1
AGBS 200 - Marketing of Agricultural Products	3
MATH - Math as Advised	3

Year 2/Fall - 16 Credits

COURSE	CREDITS
DANS 210 - Dairy Health	3
DANS 220 - Dairy Herd Management	3
AGBS 240 - Farm Management & Finance	4
AGRO 210 - Field Crops	3
Elective (GAH, GA, GOC, GSS, GWC)	3

Year 2/Spring - 14 Credits

COURSE	CREDITS
DANS 225 - Dairy Production & management	3
AGSC 132 - Computer Applications in Precision Farming I	2
ACCT - Accounting as Advised	3
DANS 250 - Dairy Perspective	1
Electives as Advised	5

Aquaculture & Aquatic Science, A.A.S., Major #1020

This major provides fundamental training in aquaculture, fisheries biology, limnology, marine biology and aquatic biology. Students receive a broad-based education by exploring diverse subject matter in aquaculture and aquatic sciences. Practical, hands-on experience is emphasized, using an operational aquaculture complex and a wide assortment of laboratory and field equipment.

The Aquaculture and Aquatic Science curriculum prepares students for fish culture and management technology, aquatic ecology, limnology, and marine biology, working as federal, state and private hatchery technicians, aquatic biologists, fisheries technicians and environmental science technicians.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Describe the state of the aquaculture and aquatic science profession and potential career opportunities.
- Utilize the developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues in aquaculture and aquatic science.
- Conduct himself/herself in a manner consistent with an embodied sense of environmental stewardship.
- Assess, analyze, synthesize, and evaluate information objectively and deal professionally and ethically with clients, the public, and agency personnel.
- Utilize oral and computer communication skills necessary to interact in the profession.
- Demonstrate advanced knowledge and competency in taxonomy and natural history of aquatic flora and fauna of the northeast.
- Demonstrate hands-on experience in aquatic sampling inventory and measurement techniques.
- Become an independent, self-motivated professional with the ability to recognize problems in their field of aquaculture and aquatic science and apply critical thinking and problem-solving skills.
- Utilize existing technology, products, and services to maximize work efficiency and

success.

- Practice a collaborative spirit in team-efforts and project coordination.

Curriculum Requirements - 60 Credits

Major Course Requirements

COURSE	CREDITS
NATR 101 - General Ecology	3
NATR 133 - Seminar in Environmental Resources	1
NATR 150 - Aquaculture	3
NATR 152 - Fish Reproduction	2
NATR 250 - Aquatic Ecology	3
NATR 252 - Fish Ecology and Management	3
NATR 254 - Fish Health Management	3
NATR 156 - Aquaculture Practicum I	1
NATR 256 - Aquaculture Practicum II	1
Practicum/Research Elective - two of the following 4 courses:	
NATR 257 - Aquaculture Practicum III	1
NATR 258 - Aquaculture Practicum IV	1
NATR 288 - Research in Aquatic Science I	1
NATR 289 - Research in Aquatic Science II	1
AGEN 110 - Small Power Equipment	2
OR	
NATR 103 - Natural Resources Equipment Operation	2
OR	
AGEN 151 - Applied Hydraulics for Hydropower Generation	3
AGEN 120 - Water Supply Sanitation	3

OR	
ENVT 345 - Surface and Groundwater Management	3
OFFT 110 - Introduction to Spreadsheet Software	1
BSAD - Business Elective as Advised	3
CHEM - Chemistry 101 or 121 as Advised	4
OR	
BIOL 120 - General Biology I	4
OR	
NATR 110 - Natural Resources Measurements	3
Technical Electives as Advised *Technical Elective from subject areas: AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, ENSC, ENVT, HORT, NATR, RENG, RREN	9-10
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
OR	
COMM 111 - Introduction to Speech	3
MATH 102 - Intermediate Algebra with Trignometery	3
BIOL 285 - Microbiology	3
ECON 100 - Introduction to Macroeconomics	3
OR	
ECON 140 - Introduction to Microeconomics	3
OR	
AGBS 225 - Environmental Economics	3

Suggested Course Sequence

Year 1/Fall - 15 Credits

COURSE		CREDITS
COMP 101 - Composition and Research		3
OR		
COMM 111 - Introduction to Speech		3
NATR 101 - Seminar in Environmental Resources		1
NATR 144 - General Ecology		3
NATR 150 - Aquaculture		3
NATR 156 - Aquaculture Practicum I		1
MATH - Mathematics as Advised		3
OFFT 110 - Introduction to Spreadsheet Software		1

Year 1/Spring - 16-17 Credits

COURSE		CREDITS
NATR 110, CHEM 101, 121 or BIOL 120 as Advised		3-4
COMP 102 - Writing About Literature		3
OR		
COMM 111 - Introduction to Speech		3
NATR 158 - Fish Nutrition		3
NATR 252 - Fish Ecology and Management		3
NATR 256 - Aquaculture Practicum II		1
Technical Elective as Advised		3

Year 2/Fall - 15-16 Credits

COURSE		CREDITS
AGEN 110 - Small Power Equipment		2
OR		
NATR 103 - Natural Resources Equipment Operation		2
OR		
AGEN 151 - Applied Hydraulics for Hydropower Generation		3
BIOL 285 - General Microbiology		4
NATR 152 - Fish Reproduction		2
NATR 250 - Aquatic Ecology		3
NATR 257/288 - Practicum/Research Elective as Advised		1
Technical Elective as Advised		3

Year 2/Spring - 15-16 Credits

COURSE		CREDITS
AGEN 120 - Water Supply and Sanitation		2
OR		
ENVT 345 - Surface and Groundwater Management		3
ECON 101 - Introduction to Macroeconomics		3
OR		
ECON 140 - Introduction to Microeconomics		3
OR		
AGBS 225 - Environmental Economics		3
NATR 254 - Fish Health Management		3
NATR 258/289 - Practicum/Research Elective as Advised		1
BSAD - Business Elective as Advised		3
Technical Elective as Advised		3

Architectural Studies and Design, A.S., Major #1755

This hands-on architectural studies and design program is built around a studio centric experience and the use of applied technology. The curriculum engages students with the intention of developing creative, functional, and programmatic problem solving abilities. Students are challenged to learn to make decisions in a culturally and environmentally responsive manner. They develop creative thinking and communication skills needed to explore and research diverse problems that influence architectural discourse. Creative design decisions are informed by historic and social influences as well as sustainable futures. This integrative program is concerned with designing, creating, improving and shaping built environments, and ultimately, celebrating the human condition.

Studio and critique space are located in the Sheila C. Johnson Design Center. This Leadership in Energy and Environmental Design (LEED) Certified building is open to students 24 hours a day, seven days a week. The building has wireless internet access, a computer-aided design lab, a shop, a laser cutter, photography areas, and copying/scanning/plotting machines. Three-dimensional printing is also available. Software used in the architectural profession is easily accessible to students through the college network and in the computer-aided design lab.

This design-based program is intended to prepare students to transfer and succeed in a professional or pre-professional baccalaureate program in architecture. Associate of Science (AS) degrees are designed specifically for transfer. Graduates have transferred into architecture programs at the University at Buffalo, Rensselaer Polytechnic Institute, Cornell University, Syracuse University, and Pratt Institute, to name a few. Some graduates have chosen to continue their education in allied fields such as architectural engineering, architectural engineering technology, civil engineering, construction management, graphic design, interior design, and landscape architecture. Other graduates have chosen to move directly into the architectural and design professions.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Translate abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- Employ at a theoretical level, elements, forms, spatial relationships, examples, organization, circulation, sequence, proportion, scale and ordering principles to make

clear three dimensional architectural ideas and concepts.

- Apply an architectural design logic that accounts for composition, order, analysis, precedent, experimentation, presentation, competition, independence and teamwork.
- Generate an analytical approach to the design process, and concept development, while considering implications for possible responses, problems and architectural outcomes.
- Employ the basic principles utilized in architecture, construction and building technologies, in the use of construction material products, components, and assemblies, based on their traditional and innovative characteristics and performance, including their environmental impact and reuse.
- Synthesize the principles of conceptualization, process, history, exploration, analysis, precedence, place, integration, sustainability, materials, construction compliance, creativity and imagination in response to architecture and architectural design in the natural and built environments.
- Use appropriate representational media such as traditional architectural graphic, modeling and digital technology skills and techniques to delineate, express and convey architectural ideas and concepts.
- Create technically clear architectural drawings and renderings that demonstrate knowledge of the conventional principles of architectural drafting and drawing to illustrate and identify the assembly of materials, systems and components.

Curriculum Requirements - 61 Credits

COURSES	CREDITS
ARCH 102 Introduction to Architecture	2
ARCH 101 Architectural Graphic Comm	2
ARCH 141 Architectural Design I	4
ARCH 142 Architectural Design II	4
ARCH 243 Architectural Design III	4
ARCH 244 Architectural Design IV	4
ARCH 151 Architecture: Prehistory to 1900	3
ARCH 252 Architecture: 1900 to Present	3
ARCH 271 Architectural Technology I	3
ARCH 272 Architectural Technology II	3
CAD 181 Intro to Computer-Aided Drafting	1
CAD 183 Architectural Computer-Aided Drafting & Design	2
MECH 211 Analytical Mechanics (Statics)	3
MECH 213 Strength of Materials	4
COMP 101 Composition and Research	3
COMP 102 Writing about Literature	3
MATH 151 General Calculus A (or higher)	3
PHYS 107 Introductory Physics I (or higher)	4
Liberal Arts (Social Science, American History, Western Civilization, Other World Civilization or Foreign Language (two different courses and prefixes))	6

Suggested Course Sequence

Year 1/Fall - 17 Credits

COURSE	CREDITS
ARCH 102 - Introduction to Architecture	2
ARCH 101 - Architectural Graphic Communications	2
ARCH 141 - Architecture Design I	4
COMP 101 - Composition and Research	3
MATH - Mathematics as Advised *A minimum of MATH 151 General Calculus A is required. Students placed in MATH 102 will require an additional semesters. This outline is based on MATH 103 being taken the first semester followed by MATH 147 then MATH 151 (3 semesters). Preferably a summer semester between years. They should take a Social Science, American History, Western Civilization, Other World Civilization, Foreign Language or mathematics course (as advised) during this additional semester.	3
Liberal Arts and Science as Advised	3

Year 1/Spring - 18 Credits

COURSE	CREDITS
ARCH 142 - Architectural Design II	4
ARCH 151 - Architecture: Prehistory to 1900	3
CAD 181 - Introduction to Computer-Aided Drafting	1
COMP 102 - Writing About Literature	3
MATH - Mathematics as Advised	3
PHYS 107 - Introductory Physics I	4

Year 2/Fall - 15 Credits

COURSE	CREDITS
ARCH 243 - Architecture Design III	4
ARCH 271 - Architectural Technology I	3
CAD 183 - Architectural Computer Aided Design	2
MECH 211 - Analytical Mechanics (Statics)	3
MATH - Mathematics as Advised	3

Year 2/Spring - 16 Credits

COURSE	CREDITS
ARCH 244 - Architectural Design IV	4
ARCH 272 - Architectural Technology II	3
ARCH 252 - Architecture: 1900 to Present	3
MECH 213 - Strength of Materials	3
Liberal Arts and Sciences as Advised	3

Auto Body Technology, A.A.S. #2054

The A.A.S. in Auto Body Technology will prepare graduates for entry into the field of automotive collision repair as specialized technicians in areas such as: tear-down and reassembly, structural realignment, metalwork, and refinishing. The series of courses required for the degree will cover topics necessary to pass the ASE/I-CAR examinations in the areas of collision repair and refinishing. The Associate Degree program will include a ten week summer work experience in collision repair.

A new, state-of-the-art, Auto Body Technology building houses a lab and classroom dedicated to auto body repair, refinishing, and estimating. Morrisville's original 50,000 square foot automotive facility provides an excellent opportunity for students to develop additional skills in other areas of automotive service and repair. In addition to the core collision repair courses, students receive practical laboratory experience in diagnosis and repair of electrical/electronics, air conditioning, brakes, steering, suspension, alignment, and welding.

BOCES/Technical Secondary Education will be evaluated and credit may be awarded upon successful completion of first year with a minimum of 2.0 in an automotive curriculum.

Accreditation: I-CAR non-structural and refinish platinum certifications are available to AAS Auto Body Technology graduates who pass the certification exam.

Graduation Requirements: All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. To fulfill these requirements along with the required courses for this program, 60 credits are required for this program. An overall GPA of 2.0 or higher is required for graduation.

Program Requirement: Students are required to have a tool set and roll around tool box.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate proper metal joining and straightening methods
- Inspect, remove, install, align panels, doors and trim to meet shop standards
- Apply safety and environmental guideline standards
- Explain written procedures as outlined in estimates
- Apply a refinish to an acceptable color match

Curriculum Requirements - 60 Credits

COURSE	CREDITS
AUTO 102 Metals	3
AUTO 104 Basic Auto Electrical Systems	3
AUTO 109 Chassis Analysis I	4
AUTO 110 Summer Work Experience	3
AUTO 155 Intermediate Automotive Electricity and Electronics	3
AUTO 202 Auto Body Fundamentals	3
AUTO 209 Chassis Analysis II	4
AUTO 259 Auto Body Non-structural Repair and Refinishing	5
AUTO 260 Auto AC and Refrigeration Recovery OR AUTO 261 - Automotive Air Conditioning and Heating	1
AUTO 269 Advanced Auto Body Refinishing and Structural Measurement	5
AUTO 279 Auto Body Structural Repair	6
COMP 101 - Composition and Research	3
PSYC 101 - Introduction to Psychology	3
SUNY General Education Math as Advised	3
SUNY General Education Natural Science as Advised (3 credits minimum)	3
Liberal Arts & Sciences Electives	8
Suggested Course Sequencing	
Year 1/Fall - 16 Credits	
AUTO 102 - Metals	3

AUTO 104 - Basic Automotive Electrical Systems	3
AUTO 109 - Chassis Analysis I (fall only)	4
AUTO 202 - Auto Body Fundamentals (fall only)	3
MATH - SUNY General Education MATH as Advised	3
Year 1/Spring - 15-16 Credits	
AUTO 155 - Intermediate Automotive Electricity and Electronics	3
AUTO 209 - Chassis Analysis II (spring only)	4
AUTO 259 - Auto Body Non-structural Repair (spring only)	5
SUNY General Education Natural Science as Advised	3-4
Year 2/Fall - 15 Credits	
AUTO 110 - Summer Work Experience	3
AUTO 260 - Auto AC and Refrigeration Recovery	1
AUTO 269 - Advanced Auto Body Refinishing and Structural Measurement (fall only)	5
COMP 101 - Composition and Research	3
PSYC 101 - Introduction to Psychology	3
Year 2/Spring - 14 Credits	
AUTO 279 - Auto Body Structural Repair (spring only)	6
Liberal Arts and Sciences Credits as Advised	8

Automotive Technology, A.A.S., Major #0525

The Automotive Technology curriculum is designed to prepare graduates for the entry into the automotive/transportation service and repair industry.

The 50,000 square-foot and 12,000 square-foot automotive facilities provide an excellent opportunity for students to develop their skills in all automotive repair and service areas. Students receive practical laboratory experience in brakes/steering/ suspension, drive-trains, electrical, engine mechanical, engine performance, air conditioning, and basic auto body collision repair in addition to liberal arts courses.

The Automotive Technology Program prepares students for an entry level position in the Automotive/Transportation field and provide the opportunity to complete ASE certifications. The program also prepares students to continue their education in a 4-year degree program Students must complete the A.A.S. degree with a minimum 2.0 grade point average to transfer into the Automotive B. Tech. program as a junior.

Program Requirement: Students are required to have a tool set and roll around toolbox.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate professionalism appropriate for the auto service industry
- Perform diagnosis, service and repair of automotive internal combustion engines
- Perform diagnosis, service, and repair of automotive electrical/electronic systems
- Perform diagnosis, service, and repair of automotive heating and air conditioning systems
- Describe and follow safety and environmental guideline standards for the auto service industry
- Perform diagnosis, service, and repair of automotive steering and suspension

Curriculum Requirements - 64 Credits

COURSE	CREDITS
AUTO 102 - Metals	3

AUTO 103 - Internal Combustion Engines I	3
AUTO 104 - Basic Auto Electrical Systems	3
AUTO 109 - Chassis Analysis I	4
AUTO 110 - Summer Work Experience	3
AUTO 138 - Career Awareness	1
AUTO 155 - Intermediate Automotive Electricity and Electronics	3
AUTO 171 - Automotive Drivetrains	3
AUTO 202 - Auto Body Fundamentals	3
AUTO 204 - Automotive Electronic Systems	3
AUTO 205 - Electronic Fuel Systems	3
AUTO 209 - Chassis Analysis II	4
AUTO 255 - Drivability & Performance Problems OR AUTO 259 - Auto Body Non-structural Repair and Refinishing	5
AUTO 261 - Automotive Air Conditioning and Heating	3
COMP 101 - Composition and Research	3
PSYC 101 - Introduction to Psychology	3
MATH - SUNY General Education MATH as Advised	3
SUNY General Education Natural Science as Advised	3-4
Liberal Arts and Sciences Electives (minimum)	8
Suggested Course Sequencing	
Year 1/Fall - 17 Credits	
COURSE	CREDITS

AUTO 102 - Metals OR AUTO 103 - Internal Combustion Engines I	3
AUTO 104 - Basic Automotive Electrical Systems	3
AUTO 109 - Chassis Analysis (fall only)	4
AUTO 138 - Career Awareness	1
COMP 101 - Composition and Research	3
MATH - SUNY General Education Math as Advised	3
Year 1/Spring - 16 Credits	
AUTO 102 - Metals OR AUTO 103 - Internal Combustion Engines I	3
AUTO 155 - Intermediate Automotive Electricity and Electronics (spring only)	3
AUTO 209 - Chassis Analysis (spring only)	4
PSYC 101 - Introduction to Psychology	3
SUNY General Education Natural Science as Advised	3-4
Year 2/Fall - 15 Credits	
AUTO 110 - Summer Work Experience	3
AUTO 202 - Auto Body Fundamentals (fall only)	3
AUTO 204 - Automotive Electronics (fall only)	3
AUTO 205 - Electronic Fuel Systems (fall only)	3
Liberal Arts and Sciences Electives as Advised	3

Year 2/Spring - 19 Credits	
AUTO 171 - Automotive Drivetrains	3
AUTO 255 - Drivability & Performance Problems (spring only) OR AUTO 259 - Auto Body Non-structural Repair and Refinishing (spring only)	5
AUTO 261 - Automotive Air Conditioning and Heating	3
Liberal Arts and Sciences as Advised	7-8

Automotive Technology (Ford ASSET Option), A.A.S.

Major #0525

The Ford ASSET (Automotive Student Service Educational Training) program is a cooperative education partnership among SUNY Morrisville, Ford and Lincoln Dealers, and Ford Motor Company. The ASSET program allows technical and vocational students to gain on-the-job training at a sponsoring Ford or Lincoln dealership while earning an associate degree in Automotive Technology. Ford ASSET utilizes module based teaching methods at an accelerated pace.

All vehicles, components, special tools, and service information are provided by Ford Motor Company. Instruction is delivered by Ford certified technical trainers in NATEF certified labs and classrooms.

The 50,000 square-foot and 12,000 square-foot automotive facilities provide an excellent opportunity for students to develop their skills in all automotive repair and service areas. Students receive practical laboratory experience in brakes/steering/ suspension, drive-trains, electrical, engine mechanical, engine performance, air conditioning, and basic auto body collision repair in addition to liberal arts courses.

The Automotive Technology Program prepares students for an entry level position in the Automotive/Transportation field and provide the opportunity to complete ASE certifications. Areas for the career opportunities include diagnosis and repair of automobiles and small trucks, with a strong emphasis on computer control diagnostics along with the opportunity to develop as an automotive technician, service manager, parts manager, sales and body specialist, dealership manager, parts store manager and manufacturing facility manager.

The Automotive Technology Program prepares students to continue their education in a 4-year degree program Students must complete the A.A.S. degree with a minimum 2.0 grade point average to transfer into the Automotive B. Tech. program as a junior.

Program Requirement: Students are required to have a tool set and roll around tool box.

Upon completion of the ASSET program students will be:

- Entry-level technicians Ford certified in several specialty areas
- Prepared to enter a career with their participating Ford or Lincoln dealership

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate professionalism appropriate for the auto service industry
- Perform diagnosis, service and repair of automotive internal combustion engines
- Perform diagnosis, service, and repair of automotive electrical/electronic systems
- Perform diagnosis, service, and repair of automotive heating and air conditioning systems
- Describe and follow safety and environmental guideline standards for the auto service industry
- Perform diagnosis, service, and repair of automotive steering and suspension

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
ASET 111 - Intro to Automotive Service	2
ASET 112 - Introduction to Automotive Electrical Systems	3
ASET 113 - Introduction to Braking Systems	3
ASET 121 - Engine Repair	3
ASET 122 - Electrical and Electronic Systems	4
ASET 125 - ASSET Cooperative Training 1	1
ASET 211 - Climate Control	3
ASET 212 - Steering and Suspension Systems	3
ASET 213 - Manual Transmission Drivetrain	3
ASET 215 - ASSET Cooperative Training 2	4
ASET 221 - Automatic Transmissions	4
ASET 222 - Engine Performance	4
ASET 225 - ASSET Cooperative Training 3	1
AUTO 155 - Intermediate Automotive Electricity and Electronics	3
OR	
ASET 160 - Applied Electronics	3
AUTO 102 - Metals	3

Liberal Arts & Sciences Requirements

COURSE	CREDITS
COMP 101 - Composition and Research	3
SUNY General Education Math (as advised)	3
SUNY General Education Natural Science (as advised)	3
PSYC 101 - Introduction to Psychology	3
Liberal Art and Science Electives	8

Total Programs Credits: 63

Suggested Course Sequence

Year 1/Fall - 17 credits

COURSE	CREDITS
ASET 111 - Intro to Automotive Service (Fall Only)	2
ASET 112 - Intro to Auto Electrical Systems (Fall Only)	3
ASET 113 - Intro to Braking Systems (Fall Only)	3
AUTO 102 - Metals	3
COMP 101 - Composition and Research	3
SUNY General Education MATH as advised	3

Year 1/Spring - 14 credits

COURSE	CREDITS
ASET 121 - Engine Repair (Spring Only)	3
ASET 122 - Electrical and Electronics... (Spring Only)	4
ASET 125 - Cooperative Training 1 (Spring Only)	1
AUTO 155 - Int. Auto. Electricity... (Spring Only) (or ASET 160)	3
SUNY General Education Natural Science as advised	3

Year 2/Fall - 18 credits

COURSE	CREDITS
ASET 211 - Climate Control (Fall Only)	2
ASET 212 - Steering & Suspension Systems (Fall Only)	3
ASET 213 - Manual Transmissions (Fall Only)	3
ASET 215 - Cooperative Training 2 (Fall Only)	4
PSYC 101 - Introduction to Psychology	3
Liberal Art and Science Elective as advised	3

Year 2/Spring - 14 credits

COURSE	CREDITS
ASET 221 - Automatic Transmissions (Spring Only)	4
ASET 222 - Engine Performance (Spring Only)	4
ASET 225 - Cooperative Training 3 (Spring Only)	1
Liberal Arts and Sciences to complete minimum 20 credits	5

Business Administration, A.A.S., Major #0632

Business Administration is a ThinkPad University curriculum using laptop computers integrated into courses. This program is also offered at the Norwich Campus.

Graduates earning the associate in applied science degree in Business Administration are equally divided into two groups. Half transfer to bachelor degree programs and half go directly into the work force. Those going into the work force find jobs in marketing, finance, human resource management, or management training. They work with retailers, banks, food processors, publishers and other business or government organizations.

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

The program is designed to develop the broad understanding and attitudes needed by men and women to qualify for a wide range of positions. Building upon management skills acquired from the program, students should be capable of taking on the additional responsibilities of middle management as they acquire experience.

The course work consists of one-third liberal arts, sciences, and two-thirds business courses. The case study approach is used extensively and several courses incorporate computer applications and simulations. The specific courses offered give the student a well-rounded foundation from which to branch out in many directions.

Career Opportunities: Employment preparation for management training in human resources, corporate communications, marketing, public service and the service industry, self-employment or family business.

Although not designed with transfer in mind, students typically transfer to other business or technology-related bachelor degree program.

Graduation Requirement: Graduates must have 60 credits, including 20 credit hours in the Liberal Arts and Sciences. In addition, students must achieve a minimum grade point average of 2.0 overall and in core course requirements for graduation. Demonstrated proficiency through MATH 102 - Intermediate Algebra with Trigonometry is required for this program.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Communicate effectively and purposefully, integrating technology into writing and presentations.

- Identify problems, analyze information, and form conclusions within the business context.
- Possess analytical/quantitative skills appropriate to the business community.

Curriculum Requirements - 60 Credits

*Student must earn a minimum 2.0 GPA in all major field requirement courses

COURSE	CREDITS
*ACCT 101 - Principles of Accounting I	3
*ACCT 102 - Principles of Accounting II	3
*BSAD 100 - Business in the 21st Century	3
OR	
*BSAD 117 - Intro to Entrepreneurship	3
*BSAD 102 - Business Mathematics	3
*BSAD 108 - Business Law I	3
*BSAD 112 - Marketing	3
*BSAD 116 - Business Organization & Mgt	3
*BSAD 140 - Business Communications	3
*BSAD 221 - Business Statistics	3
*BSAD 295 - Business Management & Decision Making	3
*CITA 101 - Principles of Computer Applications	3
*BSAD as Advised	3
COMP 102 - Composition and Research	3
COMP 102 - Writing About Literature	3
MATH 102 - Intermediate Algebra with Trig	3
ECON 100 - Introduction to Macroeconomics	3
Additional SUNY General Education Credits as Advised	4
General Elective Credits as Advised	8

Suggested Course Sequencing

Year 1/Fall - 15 credits

COURSE	CREDITS
ACCT 101 - Principles of Accounting I	3
BSAD 100/ BSAD 117 - Business in the 21st Century/ Introduction to Entrepreneurship	3
BSAD 102 - Business Mathematics	3
CITA 101 - Principles of Computer Applications	3
COMP 101 - Composition and Research	3

Year 1/Spring - 15 credits

COURSE	CREDITS
ACCT 102 - Principles of Accounting II	3
BSAD 116 - Business Organization & Management	3
COMP 102 - Writing About Literature	3
MATH 102 - Intermediate Algebra with Trig	3
SUNY General Education as Advised	3

Year 2/Fall - 15 credits

COURSE	CREDITS
BSAD 108 - Business Law I	3
BSAD 112 - Marketing	3
BSAD 140 - Business Communications	3
ECON 100 - Principles of Macroeconomics	3
SUNY General Education as Advised	3

Year 2/Spring - 15 credits

COURSE	CREDITS
BSAD - Business Elective	3
BSAD 221 - Business Statistics	3
BSAD 295. Business Mgmt & Decision Making	3
SUNY General Education as Advised	3
Elective as Advised	3

Business Administration, A.S., Major #0671

Business Administration is a ThinkPad University curriculum using laptop computers integrated into courses. This program is also offered at the Norwich Campus.

The associate in science degree in Business Administration requires half the course work to be divided among the humanities, the mathematics/science and the social science fields of study. The emphasis is in the mathematics/science area where four courses are required for graduation. The other half of the required course work is in the applied business area as described in the Business Administration A.A.S. degree description. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

While a large majority of students who graduate with the A.S. degree transfer to bachelor degree programs, experience has shown that the background acquired from the business courses is sufficient to make a student eligible for a wide range of positions in business and government, as well.

This degree is primarily a transfer program; however, some students chose to enter the workforce.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Communicate effectively and purposefully, integrating technology into writing and presentations.
- Identify problems, analyze information, and form conclusions within the business context.
- Possess analytical/quantitative skills appropriate to the business community

Curriculum Requirements - 60 Credits

*Student must earn a minimum 2.0 GPA in all major field requirement courses

COURSE	CREDITS
*ACCT 101 - Principles of Accounting I	3
*ACCT 102 - Principles of Accounting II	3
*BSAD 100 - Business in the 21st Century	3
*BSAD 108 - Business Law I	3
*BSAD 112 - Marketing	3
*BSAD 116 - Business Organization & Management	3
*BSAD 203 - Business Law II	3
*BSAD 221 - Business Statistics	3
*BSAD 295 - Business Management & Decision Making	3
*CITA 101 - Principles of Computer Apps	3
OR	
*CITA 110 - Intro to Information Technology	3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
MATH 147 - Selected Topics in Precalculus	3
ECON 100 - Introduction to Macroeconomics	3
ECON 140 - Introduction to Microeconomics	3
Natural Science as Advised	3-4
Additional SUNY General Education Credits as Advised	12

Suggested Course Sequence

Year 1/Fall - 15 credits

COURSE	CREDITS
ACCT 101 - Principles of Accounting I	3
BSAD 100 - Business in the 21st Century	3
BSAD 108 - Business Law I	3
COMP 101 - Composition and Research	3
MATH 147 - Selected Topics in Precalculus	3

Year 1/Spring - 15 credits

COURSE	CREDITS
ACCT 102 - Principles of Accounting II	3
BSAD 203 - Business Law II	3
CITA 101 - Principles of Computer Applications	3
COMP 102 - Writing About Literature	3
SUNY General Education as Advised	3

Year 2/Fall - 15 credits

COURSE	CREDITS
BSAD 112 - Marketing	3
BSAD 116 - Business Organization & Mgmt	3
ECON 100 - Principles of Macroeconomics	3
SUNY General Education as Advised	3
SUNY General Education as Advised	3

Year 2/Spring - 15 credits

COURSE	CREDITS
BSAD 221 - Business Statistics	3
ECON 140 - Principles of Microeconomics	3
BSAD 295 - Business Management & Decision Making	3
SUNY General Education as Advised	3
SUNY General Education as Advised	3

Computer-Aided Design Technology, A.A.S., Major #2270

Computer-Aided Design Technology is a ThinkPad University Curriculum in which the use of laptop computers is integrated into courses.

Computer-Aided Design is a technical science that translates ideas into precise graphical and computer-based models. In a broad sense, the work of the designer/drafter is the language of industry. The Computer- Aided Design curriculum emphasizes the practical aspects of technical graphical communication, manufacturing processes, and mechanical design.

Career Opportunities: Graduates often work in the drafting and design departments of industrial firms as CAD drafter/designer, engineering technician, product designer, manufacturing technician under the direction of design chiefs or project engineers. They are prepared for work in the areas of product development and detailing, manufacturing design, and product design. Graduates advance rapidly with experience and additional training.

Transfer Options: The Computer-Aided Design Technology Program prepares students to continue their education in a 4-year degree programs include industrial technology, manufacturing engineering technology and mechanical engineering technology. It's recommended to take PHYS 128 for easier transfer into junior year in associated 4-year programs in the SUNY system as part of SUNY Transfer Path (Seamless Transfer) program.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities
- Apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge
- Conduct standard tests and measurements, and to conduct. Analyze, and interpret experiments
- Function effectively as a member of a technical team
- Identify, analyze, and solve narrowly defined engineering technology problems

- Apply written, oral, and graphical communication in both technical and non-technical environment; and an ability to identify and use appropriate technical literature
- Understand the need to engage in self-directed continuing professional development
- Show a commitment to address professional and ethical responsibilities, including a respect for diversity
- Show a commitment to quality, timeliness, and continuous improvement.

GPA: Overall GPA of 2.00 or higher and the average of all grades in the program core courses must be 2.0 or higher.

CURRICULUM REQUIREMENTS - 60 Credits

COURSE	CREDITS
CAD 184 - Computer-Aided Drafting for Mechanical Design	2
CAD 186 - 3D Parametric Solid Modeling	2
CAD 288 - Advanced Solid Modeling	2
DRFT 151 - Engineering Drawing	2
DRFT 252 - Geometric Dimensioning & Tolerencing	2
MFG 110 - Dimensional Metrology	2
MFG 206 - CNC Machining	3
MFG 207 - Quality Control	2
MFG 208 - Computer Aided Manufacturing – MasterCAM	2
MFG 221 - Manufacturing Processes I	3
MFG 240 - Design/Manufacture Capstone	3
MECH 101- Machine Tools	3
MECH 120 - Engineering Materials	3
MECH 211 - Analytical Mechanics	3
MECH 212 - Mechanical Design	4
MECH 213 - Strength of Materials	4
PHYS 107 - Introductory Physics I	4
COMP 101 - Composition and Research	3
MATH 103 - College Algebra w? Trigonometry	3
COMP 110 - Technical Communications	3
Elective Credits as Advised	5

Suggested Course Sequencing

Year 1/Fall - 17 credits

COURSE	CREDITS
COMP 101 - Composition and Research	3
MATH - Mathematics (as advised)*	3
PHYS 107 - Introductory Physics I	4
DRFT 151 - Engineering Drawing I	2
MECH 120 - Engineering Materials	3
CAD 184 - Comp-Aided Drafting for Mechanical Design	2

Year 1/Spring - 16 credits

COURSE	CREDITS
ENGL 112 - Technical Communications	3
MATH - Mathematics (as advised)*	3
MFG 110 - Dimensional Metrology	2
MECH 211 - Analytical Mechanics (Statics)	3
MECH 101 - Machine Tools	3
CAD 186 - 3D Parametric Solid Modeling	2

Year 2/Fall - 17 credits

COURSE	CREDITS
Technical Elective (as advised)*	2-5
MECH 213 - Strength of Materials	4
MFG 221 - Manufacturing Processes I	3
MFG 206 - CNC Machining	3
DRFT 252 - Geometric Dimensioning and Tolerancing	2
General Education Elective	3

Year 2/Spring - 18 credits

COURSE	CREDITS
MECH 212 - Mechanical Design	4
MFG 240 - Design/Manufacture Capstone	3
CAD 288 - Advanced Solid Modeling	4
MFG 207 - Quality Control	2
MFG 208 - Comp-Aided Manufacturing - MasterCAM	2
General Education Elective (as advised)	3

Computer Information Systems, A.A.S., Major #0581

Computer Information Systems (CIS) focuses on the application of computers in a business environment with an emphasis on the analysis and design of business information systems. Computer information systems professionals play a key and vital role in the management and growth of an organization and they are in high demand in almost every industry.

With a CIS degree, it's less about theory and more about practical application. The Computer Information Systems (CIS) degree program here at SUNY Morrisville provides students the skills to work with companies IT systems, analyze problems and efficiently create solutions, and learn different type of technologies that should be used to solve a business problem. Students receive practical hands-on experience in interactive program development in a networked, pc-based windows programming environment. Students will develop a strong background in fundamental concepts of hardware and software as applied to computers in a business environment; programming, operating systems, systems development life cycle; use of typical software packages including word processing, spreadsheeting, and database. In addition, students will get an introduction to core business disciplines such as accounting, macroeconomics, business organization and management.

Upon completion of program requirements, students are awarded the Associate in Applied Science (A.A.S.) degree. The hands-on approach in the Computer Information Systems (CIS) A.A.S. degree's program gives our college CIS A.A.S. degree students a real-world look at their field.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Employ critical thinking and problem-solving skills in developing technical solution
- Apply formal design methodologies to design information systems
- Explain theories regarding the application of information technologies to the solution of business problems
- Create and modify functional, clear, concise software design and implement with current programming languages
- Demonstrate proficiency in two or more operating systems or database systems

- Create functional Web pages using scripting language
- Install, configure, troubleshoot, and administer a basic network

Curriculum Requirements - 60 Credits

COURSE	CREDITS
CITA 110 - Intro to Information Technology	3
CITA 120 - Computer Concepts and OS	3
CITA 140 - Introduction to Programming	3
CITA 200 - Data Communications Networking	3
CITA 210 - Visual Programming and Development Tools	3
CITA 220 - Systems Analysis	3
CITA 280 - Tools and Techniques for App Development	3
CITA As advised	9
ACCT 101 - Principles of Accounting I	3
BSAD 116 - Business Organization & Management	3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
ECON 100 - Introduction to Macroeconomics	3
MATH As advised	3
Liberal Art & Science Elective (as advised)	8
General Electives (as advised)	4

Suggested Course Sequencing

Year 1/Fall - 17 credits

COURSE	CREDITS
CITA 110 - Introduction to Information Technology	3
CITA 140 - Introduction to Programming	3
CITA elective (as advised)	3
COMP 101 - Composition and Research	3
MATH - As advised to meet SUNY General Education	3
GNED 100 - First Year Experience	2

Year 1/Spring - 15 credits

COURSE	CREDITS
CITA 120 - Computer Concepts & Operating Systems	3
BSAD 116 - Business Organization & Management	3
COMP 102 - Writing about Literature	3
Liberal Art & Science Elective (as advised)	3
CITA elective (as advised)	3

Year 2/Fall - 15 credits

COURSE	CREDITS
CITA 200 - Data Communication Networking	3
CITA 210 - Visual Programming & Development Tools	3
CITA 220 - Systems Analysis	3
ECON 100 - Introduction to Macroeconomics	3
ACCT 101 - Principles of Accounting I	3

Year 2/Spring - 15 credits

CODE/NAME	CREDITS
CITA 280 - Tools & Techniques for App Development	3
Liberal Art & Science Elective (as advised)	5
General Electives (as advised)	4
CITA elective (as advised)	3

Computer Information Systems, A.S., Major #1171

Computer Information Systems (CIS) focuses on the application of computers in a business environment with an emphasis on the analysis and design of business information systems. Computer information systems professionals play a key and vital role in the management and growth of an organization and they are in high demand in almost every industry.

With a CIS degree, it's less about theory and more about practical application. The Computer Information Systems (CIS) degree program here at SUNY Morrisville provides students the skills to work with companies IT systems, analyze problems and efficiently create solutions, and learn different type of technologies that should be used to solve a business problem. Students receive practical hands-on experience in interactive program development in a networked, pc-based windows programming environment. Students will develop a strong background in fundamental concepts of hardware and software as applied to computers in a business environment; programming, operating systems, systems development life cycle; use of typical software packages including word processing, spreadsheeting, and database. In addition, students will get an introduction to core business disciplines such as accounting, macroeconomics, business organization and management.

The Computer Information Systems A.S. degree is a modification of the Computer Information Systems A.A.S. degree, designed to give the students a blend of the technical skills used by computing professionals and the business of managers in a four-year program. The additional course work ensures that the students obtain a thorough view of the modern business world and the impact of information technology on modern business practices.

Upon completion of program requirements, students are awarded the Associate of Science (A.S.) degree. The hands-on approach in the Computer Information Systems (CIS) A.S. degree's program gives our CIS A.S. degree students a real-world look at their field.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Employ critical thinking and problem-solving skills in developing technical solution
- Apply formal design methodologies to design information systems
- Explain theories regarding the application of information technologies to the solution of business problems
- Create and modify functional, clear, concise software design and implement with current programming languages

- Demonstrate proficiency in two or more operating systems or database systems
- Create functional Web pages using scripting language
- Install, configure, troubleshoot, and administer a basic network

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
CITA 110 - Intro to Information Technology	3
CITA 120 - Computer Concepts and OS	3
CITA 140 - Introduction to Programming	3
CITA 200 - Data Communications Networking	3
CITA 210 - Visual Programming and Development Tools	3
CITA 150 - Data Management Techniques	3
CITA As advised	3
ACCT 101 - Principles of Accounting I	3
ACCT 102 - Principles of Accounting II	3
BSAD 116 - Business Organization & Management	3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
ECON 100 - Introduction to Macroeconomics	3
MATH 151 - Analytic Geometry & Calculus	3
MATH As advised	3
Liberal Art & Science Elective (as advised)	8
General Electives (as advised)	12

Suggested Course Sequencing - 60 Credits

Year 1/Fall - 17 credits

COURSE	CREDITS
CITA 110 - Introduction to Information Technology	3
CITA 140 - Introduction to Programming	3
CITA elective (as advised)	3
COMP 101 - Composition and Research	3
MATH 151 - Analytic Geometry & Calculus I	3
GNED 100 - First Year Experience	2

Year 1/Spring - 15 credits

COURSE	CREDITS
ACCT 101 - Principles of Accounting I	3
BSAD 116 - Business Organization & Management	3
CITA 120 - Computer Concepts & Operating Systems	3
CITA 150 - Data Management Techniques	3
COMP 102 - Writing about Literature	3

Year 2/Fall - 15 credits

COURSE	CREDITS
ACCT 102 - Principles of Accounting II	3
CITA 210 - Visual Programming & Development Tools	3
CITA 220 - Systems Analysis	3
ECON 100 - Introduction to Macroeconomics	3
Math (as advised)	3

Year 2/Spring - 15 Credits

COURSE	CREDITS
Liberal Arts & Sciences Elective as Advised	3
General Electives As Advised	12

Criminal Justice, A.A.S., Major #1100

This Criminal Justice program is available only at the Norwich Campus. It is designed to prepare students for professional employment in the criminal justice, corrections, or security field.

In recent years, the need for police and security officers has increased significantly along with the professional expectations and performance standards. The Criminal Justice program is designed for students seeking entry level employment in the Criminal Justice field and for current employees interested in advancement. Students earning this degree may continue their education to the bachelor degree level or beyond.

The goal of this program is to help students develop the necessary knowledge, skills, and abilities required for success as criminal justice professionals. Program graduates will be eligible for employment in the full range of law enforcement careers including policing, corrections, security, criminal investigation, and related career areas. Graduates are expected to find a wide range of employment options with public and private agencies.

According to the US Department of Labor, opportunities for employment in Criminal Justice are expected to be well above the average for other career fields. Area Corrections and Police agencies have indicated a strong interest in this program and anticipate openings for graduates. Potential employers include: Municipal and State Police, County Sheriff's Departments, NY State Department of Corrections, the Court System, Corporate Security and more.

Graduation Requirements: Students will be required to maintain a 2.0 Grade Point Average to remain in the program. Students must complete all major course work with a 2.0 or above to be eligible for graduation in this major. A minimum of 20 credit hours is required in the humanities, mathematics or sciences and social sciences areas. Completion of MAGN 101* is required but this math does not meet the General Education requirement nor the Math/Science minimum requirement content area as stated above (Math 102 is highly recommended). Sixty-two credits in coursework, as described below, are required to graduate

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Effectively document investigations, incidents, and other information consistent with nationally recognized legal criterion

- Identify, collect, and preserve evidence according to standard police practice utilizing traditional, current, and technological methods in a manner that is mutually beneficial to all of the stakeholders in the criminal justice system
- Apply penal and criminal procedure laws in a law enforcement context

Curriculum Requirements - 62 Credits

Major Field Requirements

Student must earn a minimum 2.0 GPA in all major field requirement courses

COURSE	CREDITS
CJUS 101 Intro to Criminal Justice Systems	3
CJUS 201 Corrections	3
CJUS 202 Policing	3
CJUS 220 Criminal Investigation I	3
CJUS 221 Criminal Investigation II	3
CJUS 230 Basics of Penal Law	3
CJUS 231 Criminal Law Procedure	3

Liberal Arts and Science Requirements

COURSE	CREDITS
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
PSYC 101 Introduction to Psychology	3
SOCI 101 Introduction to Sociology	3
MAGN 101 Elementary Algebra	3
OR	
MAGN 107 Mathematical Literacy	3
OFFT 100 Introduction to Word Processing	1
OFFT 106 Personal Keyboarding	1
POLI 113 American Judicial System	3
PHED Physical Education as advised	3
OR	
WELL 101 Stress and Wellness	3
GNED 100 Freshman Experience	2
HIST as Advised	3
Foreign Language (as advised)	6
MATH and/or Science (as advised)	6
Additional General Elective Credits	1

Suggested Course Sequence

Year 1/Fall - 14-16 credits

COURSE	CREDITS
CJUS 101 - Introduction to Criminal Justice System	3
GNED 100 - Freshman Experience	2
COMP 101 - Composition and Research	3
MAGN 101 - Elementary Algebra	3
OR	
MAGN 107 - Mathematical Literacy	3
OFFT 100 - Introduction to Word Processing	1
OFFT 106 - Personal Keyboarding	1
PHED 141 - Fitness	1
OR	
WELL 101 - Stress and Wellness	3

Year 1/Spring - 16-18 credits

COURSE	CREDITS
CJUS 201 - Corrections	3
CJUS 202 - Policing	3
COMP 102 - Composition and Research	3
MATH - Math as Advised (102 or 123 suggested)	3
POLI 113 - American Judiciary System	3
PHED 142 - Fitness II	1
OR	
WELL 101 - Stress and Wellness	3

Year 2/Fall - 16-18 credits

COURSE		CREDITS
CJUS 220 - Criminal Investigation		3
CJUS 230 - Penal Law		3
SOCI 101 - Introduction to Sociology		3
Science as Advised		3
Foreign Language as Advised		3
PHED 141 - Fitness		1
OR		
WELL 101 - Stress and Wellness		3

Year 2/Spring - 16 credits

COURSE	CREDITS
CJSU 221 - Criminal Investigation	3
CJUS 231 - Criminal Procedure Law	3
HIST - History as Advised	3
PSYC 101 - Introduction to Psychology	3
Foreign Language as Advised	3
Elective Credit as Advised	1

CULINARY ARTS MANAGEMENT, A.A.S. , Major #2392

Culinary Arts Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The Culinary Arts Management program combines classroom time, laboratory learning, hands-on experience and cooperative work experiences with a goal of developing students who are both ready for the world of work or for transfer to an upper-level curriculum. The program has a foundation in culinary arts courses focusing on basic skills, garde manger, meat/seafood/poultry fabrication, stocks, sauces, soups, baking and pastry. Students will also progress through management and business classes to a final semester capstone course where they will assist in the operation of the kitchen at the Copper Turret Restaurant in the Village of Morrisville. The Copper Turret, which is operated year round by the Morrisville Auxiliary Corporation, will serve as the learning laboratory for this program. Students will be prepared for positions in restaurants, country clubs, resorts, banquet facilities, commercial kitchens, and all other food service operations.

The Culinary Arts Management program leads to an Associate in Applied Science (A.A.S.) degree and provides students with a culinary education that has depth and breadth as well as crucial work experience. The Culinary Arts Management program is designed to expose students to a broad range of career options to which they can add specificity through their work experience during and after completing the curriculum. Graduates of the program are prepared for positions as chefs, sous chef, line cook, kitchen manager, pastry chef, garde manger, and shift managers in restaurants, schools, health care and university food operations, and other institutions.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate skills and knowledge required of culinarians and apply them in a commercial kitchen operation
- Demonstrate industry-standard knowledge and skills regarding sanitation, food safety, nutrition and supervision in the hospitality industry
- Anticipate and manage labor and food costs in order to operate an economically sustainable establishment

- Demonstrate the ability to work in a professional bakery
- Demonstrate the ability to work in a professional kitchen as a prep, line and pantry cook
- Demonstrate an understanding of purchasing in the hospitality industry by writing food specifications, applying purchasing practices, interpreting market trends, using new technology applications, and analyzing operational cost control
- Explain basic concepts involved in marketing and how they can be applied to food service operations to facilitate financial objectives
- Identify and illustrate the basic elements of equipment design and layout in food service facilities
- Possess an extensive business portfolio that displays an up to date resume, cover letter, skill set, work philosophy, career goals and extensive work samples
- Demonstrate an understanding of the global hospitality industry and how the food service industry fits

Curriculum Requirements - 63 Credits

COURSE	CREDITS
ACCT Accounting as Advised	3
CUL 101 - Culinary Arts 1	4
CUL 111 - Professional Baking	3
CUL 201 - Advanced Culinary Arts	4
CUL 211 - Culinary Restaurant	6
CAS 240 - Hospitality Sales and Marketing	3
FSAD 102 - Applied Food Service Sanitation	1
FSAD 153 - Fundamentals of Hospitality Mgt	3
FSAD 154 - Equipment Selection and Layout	3
FSAD 201 - Cooperative Summer Work	2
FSAD 255 - Food Purchasing & Cost Control	4
FSAD 257 - Senior Seminar	1
NUTR 108 - Basic Nutrition	3
FSAD 200 - Internship in Customer Service	3
OR	
TOUR 106 - Intro to Travel/Tourism Hospitality Industry	3
COMP (as advised)	3
Additional SUNY General Education Credits	17

Suggested Course Sequence

Year 1/Fall - 16 credits

COURSE	CREDITS
COMP As advised	3
CUL 101 - Culinary Arts I	4
FSAD 102 - Applied Food Service Sanitation	1
CUL 111 - Professional Baking	3
OR	
SUNY GER	3
SUNY GER	5

Year 1/Spring - 15 credits

COURSE	CREDITS
CUL 111 - Professional Baking	3
OR	
SUNY GER	3
FSAD 153 - Fundamentals of Hospitality Mgmt	3
FSAD 154 - Equipment Selection & Layout	3
NUTR 108 - Basic Nutrition	3
FSAD 200/ TOUR 106 - Internship in Customer Service/Intro to Travel/Tourism	3

Year 2/Fall - 16 credits

COURSE	CREDITS
CAS 240 - Hospitality Sales & Marketing	3
CUL 201 - Advanced Culinary Arts	4
FSAD 201 - Summer Cooperative Employment	2
FSAD 255 - Food Purchasing & Cost Control	4
SUNY GER	3

Year 2/Spring - 16 credits

COURSE	CREDITS
ACCT 100/ ACCT 101 - Accounting Info & Mgmt Decisions/ Principles of Accounting I	3
CUL 211 - Culinary Restaurant	6
FSAD 257 - Career Seminar	1
SUNY GER	3
SUNY GER	3

Diesel Technology, A.O.S. Major #1604

Diesel Technology is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

This A.O.S. program consists of courses in vehicular and industrial mechanics. The curriculum is best suited for those students who wish to find immediate employment working on diesel and all aspects of industrial and agricultural equipment. The student is allowed to take a variety of courses to gain a broad background in state-of-the-art technology.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines
- Develop a comprehensive understanding of electrical systems and electronic controls used for diesel-powered equipment

  Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in diesel-powered equipment

Curriculum Requirements - 60 Credits

COURSE	CREDITS
DTEC 105 - Diesel Powertrains I	4
DTEC 110 - Diesel Powertrains II	4
DTEC 125 - Diesel Electrical Systems	4
DTEC 150 - Diesel Systems	3
DTEC 225 - Diesel Electronics	4

AGEN 131 - Fundamentals of Hydraulics	3
DTEC 350 - Advanced Diesel Fuel Systems	3
AGEN 161 - Basic Hydraulics	3
AUTO 102 - Metals	3
AGEN 261 - Advanced Hydraulics	4
AGEN 270 - Tractor Overhaul and Repair	5
OR	
DTEC 300 - Diesel Equipment Technology Internship II	4
AUTO 260 - Automotive Air Conditioning	1
OFFT 110 - Intro to Spreadsheet Software	1
RENG 102 - Renewable Energy Resources	3
AGEN 100 - Tractor Care and Maintenance	3
General Elective Course Selection - 12 Credits from the courses below:	
DTEC 151 - Seminar Caterpillar Power Systems	2
DTEC 290 - DET Internship I	1
DTEC 295 - DET Internship III	1
DTEC 300 - DET Internship II	4
AGEN 103 - Natural Resources Equipment Operation	2
AGEN 120 - Water Supply and Sanitation	3
AGEN 210 - Small Power Equipment II	3
AGBS 230 - Agricultural Business Management	2
AUTO 109 - Chassis Analysis I	4
AUTO 202 - Auto Body Fundamentals	3
AUTO 259 - Auto Body Non-structural Repair and Refinishing	3

DTEC 325 - Electrical Power Generation	3

Suggested Course Sequence

Year 1 /Fall - 17 Credits

COURSE	CREDITS
AGEN 100 - Tractor Care and Maintenance	3
AGEN 131 - Fundamentals of Hydraulics	3
DTEC 125 - Diesel Electrical Systems	4
RENG 102 - Renewable Energy Systems	3
OFFT 110 - Introduction to Spreadsheet Software	1
Elective as Advised (MAGN if needed)	3

Year 1 /Spring - 14 Credits

COURSE	CREDITS
AGEN 161 - Basic Hydraulics	3
DTEC 105 - Diesel Powertrains I	4
DTEC 225 - Diesel Electronics	4
AUTO 102 - Metals	3

Year 2/Fall -

COURSE	CREDITS
AGEN 261 - Advanced Hydraulics	4
DTEC 150 - Diesel Systems	3
Major Electives as Advised	
AUTO 260 - Automotive Air Conditioning	1

Year 2/Spring

COURSE		CREDITS
AGEN 270 - Tractor Overhaul and Repair		5
OR		
DTEC 300 - Diesel Equipment Technology Internship II		4
Major electives as Advised		

Diesel Equipment Technology, A.A.S., Major #2391

Diesel Equipment Technology is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The A.A.S. curriculum was patterned after an industrial training curriculum. This curriculum offers courses in agricultural, industrial and vehicular mechanics. The program provides the courses necessary to move from the technician level to management within a business. It is designed for students who may be considering additional course work after completing their two-year degree. Career Opportunities include diesel technician - truck, construction, electric power generation, agricultural, service writer, vocational teacher (with additional education), parts technician and factory representative.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines
- Develop a comprehensive understanding of electrical systems and electronic controls used for diesel-powered equipment
- Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in diesel-powered equipment

Curriculum Requirements - 62 Credits

COURSE	CREDITS
AGEN 161 - Basic Hydraulics	3
DTEC 105 - Diesel Powertrains I	4
DTEC 110 - Diesel Powertrains II	4
DTEC 125 - Diesel Electrical Systems	4
DTEC 150 - Diesel Systems	3
DTEC 225 - Diesel Electronics	4
AGEN 131 - Fundamentals of Hydraulics	3
DTEC 350 - Advanced Diesel Fuel Systems	3
AUTO 102 - Metals	3
AGEN 261 - Advanced Hydraulics	4
AGEN 270 - Tractor Overhaul and Repair	5
OR	
DTEC 300 - Diesel Equipment Technology Internship II	4
AUTO 260 - Automotive Air Conditioning	1
OFFT 110 - Intro to Spreadsheet Software	1
AGEN 100 - Tractor Care and Maintenance	3
COMP 101 - Composition and Research	3
COMP 110 - Technical Communications	3
Natural Science as Advised	3-4
MATH 102 Intermediate Algebra with Trigonometry	3
Additional SUNY General Education Credits	4

Suggested Course Sequence

Year 1/Fall - 14 credits

COURSE	CREDITS
AGEN 100 - Tractor Care and Maintenance	3
AGEN 131 - Fundamentals of Hydraulics	3
DTEC 125 - Diesel Electrical Systems	4
MATH 102 - Intermediate Algebra with Trig	3
OFFT 110 - Introduction to Spreadsheet Software	1

Year 1/Spring - 13 credits

COURSE	CREDITS
AGEN 161 - Basic Hydraulics	3
DTEC 105 - Diesel Powertrains I	4
DTEC 225 - Diesel Electronics	4
AUTO 102 - Metals	3
Social Science as Advised	
AUTO 260 - Automotive Air Conditioning	1

Year 2/Fall - 14 credits

COURSE	CREDITS
AGEN 261 - Advanced Hydraulics	4
DTEC 150 - Diesel Systems	3
COMP 101 - Composition and Research	3
Natural Science as Advised	4

Year 2/Spring

COURSE		CREDITS
AGEN 270 - Tractor Overhaul and Repair		5
OR		
DTEC 300 - Diesel Equipment Technology Internship II		4
COMP 110 - Technical Communications		3
Social Science Elective as Advised		
DTEC 350 - Advanced Diesel Fuel Systems		3

Dietetic Technician/Nutrition Care, A.A.S. Major #2513

The Dietetic Technician program focuses on the role of human nutrition in health and disease as well as the application of nutrition principles in wellness, fitness, and total health. Nutrition also encompasses such areas as food systems management, public health, and food service management. Students gain practical experience combined with the theoretical content presented in the classroom. Upon completion of the associate in applied science degree in the Dietetic Technician program and verification that the student met all of the competencies, the student will have fulfilled the requirements to sit for the national credentialing exam administered by the Commission on Dietetic Registration (CDR). With successful passage of the exam, graduates will become Dietetic Technicians, Registered (DTR).

Accreditation: The Dietetic Technician degree program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, a specialized accrediting body recognized by the United States Department of Education. For more information, please contact:

Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics

120 South Riverside Plaza, Suite 2190

Chicago, IL 60606-6995,

Phone: 800/877-1600 Ext. 5400

E-mail: ACEND@eatright.org

Website: http://www.eatrightPRO.org/ACEND

Career Opportunities: Graduates of this program will be able to become a member of the health care, wellness, or food management team. Graduates are eligible for employment in community nutrition settings as well as health and fitness clubs, corporate wellness programs, school lunch programs, hospitals, nursing homes and other health care settings. In these roles the Dietetic Technician complements the role of the Registered Dietitian in the assessment, planning, implementation, and evaluation of nutritional care. Many graduates of the program continue their education as a Registered Dietitian or in an allied field such as adult fitness, sports nutrition, sports physiology, home economics, or health education.

Transfer Options: Students who successfully complete this program transfer to a variety of educational programs both within the SUNY system and in private colleges and universities. Examples of transfer agreements with local universities include Syracuse University, SUNY

Oneonta, SUNY Plattsburg and Rochester Institute of Technology.

Additional Expenses - Including but not limited to:

- Students will arrange for their own transportation to the field experience in NUTR 270 during the last semester of the program (Note: Several field experiences are available for NUTR 270 on a limited basis for students with documentation stating they cannot physically drive a motor vehicle)
- Academy of Nutrition & Dietetics student membership - $50.00 (annual)
- Student Professional Liability Insurance - $24.00 (annual)
- Course uniforms - $80.00
- Course Laboratory Fees - $80.00
- Nutrition Conference Fee - $30.00

Health Requirements:

Student Health Requirements Include All of the Following:

- Documentation of receipt of two (2) MMR vaccines after age 12 months or Positive Titer results for Rubella, Rubeola, and Mumps
- PPD test- proof of test and results within 1 year
- Varicella (past history of disease, antibody titer, or documentation of vaccine)
- Physical exam information updated within 1 year
- Your signature to release information to the Nutrition and Dietetics Department and to the Field Experience facilities

  The signature of the physician (or other health profession who performed the physical)
- It is recommended that students become immunized with the Hepatitis B Vaccine. Students need documentation that all 3 doses have been administered or that a waiver is on file

Dietetic Technician students are required to adhere to the same public health laws and facility regulations as employees. Students are responsible for all fees associated with meeting health requirements. Students must meet the facility health requirements and have the ability to meet clinical objectives with or without reasonable accommodations. Students must demonstrate:

- The strength and manual dexterity to perform in all clinical, food service and community settings and to maintain the safety of clients without posing a threat to themselves
- The visual, hearing, and speech skills requisite to client nutrition assessment and professional performance including reading, gathering client information and performing any other procedures related to patient care and education

Graduation Requirements: All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. To fulfill these requirements along with the required courses for this program, 64 credits are required for this program. These requirements are fulfilled by successfully completing the courses for this program. Suitable academic progress in the Dietetic Technician Program is defined as a grade of 75 percent, C, or better in each nutrition, field experience and human anatomy and physiology courses. Students must also complete all required practice hours before proceeding to the next sequential course or to graduate.

GPA: Overall GPA of 2.00 or higher.

Student Learning Outcomes

Goal 1 – *Graduates will be ready for immediate employment in the nutrition and dietetics field.*

- 100% of students who complete the program will have achieved a satisfactory grade of C or better for all measures of entry-level competencies
- At least 80% of all entering students will complete the DT program/degree requirements within three years of starting (150% of the program length)
- 75% of the program graduates will take the CDR credentialing exam for nutrition and dietetic technicians within 12 months of program completion
- The program's one-year pass rate (graduates who pass the registration exam within one year of first attempt) on the CDR credentialing exam for nutrition and dietetic technicians is at least 70%
- Of graduates who seek employment, 80% are employed in nutrition and dietetics or related fields within 12 months of graduation
- Graduate entry-level practice skills will be rated as average or above by 80% of the employers of program graduates
- 80% of past graduates will rate the program as satisfactory or better when surveyed on their preparation for employment and/or further education

Goal 2 – Graduates will be prepared for transfer to nutrition and dietetics baccalaureate programs.

- 100% of the current formal articulation agreements with 4-year institutions will be maintained for transfer of our students to their dietetic programs
- 90% of graduating seniors will express satisfaction with the nutrition courses they have completed in the DT program with respect to the adequacy of their knowledge and skill building
- 90% of those with a GPA ≥ 2.75 who apply will be accepted to a baccalaureate program within one year of graduation from SUNY Morrisville to become a registered dietitian
- 80% of those accepted to a four-year dietetic program will complete the degree in three years

Curriculum Requirements - 64 Credits

COURSE	CREDITS
FSAD 101 - Quantity Food Preparation and Service	3
FSAD 102 - Certification of Applied Food Service	1
NUTR 110 - Nutrition 1	3
NUTR 115 - Health Field	2
NUTR 160 - Diet Therapy	3
NUTR 170 - Supervised Field Experience I	3
NUTR 219 - Orientation to Summer Field Experience	1
NUTR 220 - Summer Supervised Field Experience	2
NUTR 210 - Lifecycle Nutrition	3
NUTR 225 - Educational Methods Food and Health Care Fields	3
NUTR 230 - Supervised Field Experience II	3
FSAD 255 - Food Purchasing & Cost Control	4
NUTR 260 - Meal Management	3
NUTR 270 - Field Experience III	3
FSAD 257 - Senior Seminar	1
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
BIOL 150 - Human Anatomy & Physiology I	3
BIOL 150 - A & P Lab I	1
BIOL 151 - Human Anatomy & Physiology II	3
BIOL 151 - A & P II Lab (Science)	1
PSYCH 101 - Introduction to Psychology	3
SOC 101 - Introduction to Sociology	3
BSAD 116 - Business Organization & Management	3
MATH 123 or 141 - Statistics	3

Suggested Course Sequence

Year 1/Fall - 13- 19 Credits

COURSE	CREDITS
FSAD 101 - Quantity Food Preparation and Service	3
FSAD 102 - Certification of Applied Food Service	1
NUTR 110 - Nutrition I	3
NUTR 115 - Health Field	2
BIOL 150 - Human Anatomy & Physiology I (A&P)	3
BIOL 150L - A & P I Lab	1
Math as advised	3
GNED 100 as Advised	3

Year 1 /Spring - 17 - 20 Credits

COURSE	CREDITS
BSAD 116 - Business Organization & Management	3
NUTR 160 - Diet Therapy	3
NUTR 170 - Supervised Field Experience I	3
BIOL 151 - Human Anatomy & Physiology II (A&P)	3
BIOL 150L - A & P II Lab	1
NUTR 219 - Orientation to Summer Field Experience	1
PSYCH 101 - Introduction to Psychology	3
Math as advised	3

Year 2 /Fall - 18 Credits

COURSE	CREDITS
NUTR 220 - Summer Supervised Field Experience	2
NUTR 210 - Lifecycle Nutrition	3
NUTR 225 - Education Methods for Food & Health Care Fields	3
NUTR 230 - Supervised Field Experience II	3
FSAD 255 - Food Purchasing and Cost Control	4
COMP 101 - Composition & Research	3

Year 2 /Spring - 16 Credits

CODE/NAME	CREDITS
NUTR 260 - Meal Management	3
NUTR 270 - Supervised Field Experience III	3
FSAD 257 - Senior Seminar	1
SOCI 101 - Introduction to Sociology	3
COMP 102 - Writing about Literature	3
MATH 123 or 141	3

Early Childhood, A.A.S., Major #1327

The Early Childhood program is available only at the Norwich Campus. The program is designed to prepare students for employment as Early Childhood professionals. The U.S. Department of Labor - Bureau of Labor Statistics (www.bls.gov) projects continued strong employment opportunities for Early Childhood professionals for the foreseeable future. The curriculum provides those individuals seeking to pursue a career in this field with the knowledge, skills and experiences required for success. This program is designed to effectively prepare students to enter careers that do not require teacher licensure or certification. The New York State Department of Education (www.nysed.gov) and the National Association for the Education of Young Children (www.naeyc.org) encourage rigorous training and education requirements for early childhood professionals. Research suggests a significant relationship between providers' education and training and the quality of early education and care young children receive. As a result of federal legislation, continuing professional education is becoming increasingly important for many early childhood professionals already employed in the field. Accreditation: This degree program meets all of the standards set forth by the National Association of the Education of Young Children (NAEYC). Accordingly, the College is actively pursuing NAEYC accreditation.

Student Learning Outcomes

Student Learning Outcomes include the seven standards of professional preparation established by the National Association for the Education of Young Children

- Standard 1 – Promoting Child Development and Learning. Students will develop the skills necessary to create environments that are healthy, respectful, supportive, accepting and challenging to all children
- Standard 2 – Building Family and Community Relationships. Students will develop the skills necessary to create respectful, reciprocal relationships with families that support and involve families in their children's development
- Standard 3 – Observing, Documenting and Assessing to Support Young Children and Families. Students will use effective assessment tools such as observations and documentations to positively influence children's development

- Standard 4 – Using Developmentally Effective Approaches to Connect with Children and Families. Students will learn how to design activities, routines, interactions, and curriculum for specific children and groups of children
- Standard 5 – Using Content Knowledge to Build Meaningful Curriculum. Students develop curriculum to include both planned and spontaneous experiences that are developmentally appropriate, meaningful, and challenging for all young children, including those with developmental delays or disabilities
- Standard 6 - Becoming a Professional. Students conduct themselves in a completely professional manner at all times. Students reflect on and evaluate one's professional role as a team member, lifelong learner, and advocate for children and families
- Standard 7 – Students participate in field experiences and clinical practice in at least two of the three early childhood age groups (birth age 3, 3 through 5, 5 through 8 years) and in the variety of settings that offer early education (early school grades, child care centers and homes, Head Start programs)

Curriculum Requirements - 65 Credits

COURSE	CREDITS
ECHD 101 - Intro to Early Childhood	3
ECHD 102 - Social Development and Positive Guidance	3
ECHD 103 - Techniques of Observation and Assessment - Field 1	3
ECHD 201 Family & Child Health & Safety	3
ECHD 202 Language Literacy & Literature in Early Childhood	3
ECHD 203 Infants and Toddlers	3
ECHD 204 Children with Special Needs	4
ECHD 205 Creative Activities in the Arts	3
ECHD 206 Curriculum Methods, Materials, and Management	3
ECHD 212 Practicum in Early Childhood - Field Experience II	4
PSYC 241 Child Development	3
SOCI 220 Marriage and the Family	3

CITA 101 Principles of Computers & Apps	3
OR	
OFFT 109 Intro Presentation Software	1
AND	
OFFT 110 Intro Spreadsheet Software	1
GNED 104 Library Research Methods	1
COMP 101 Composition & Research	3
COMP 102 Writing About Literature	3
MATH 102 Algebra and Trigonometry II	3
PSYC 101 Introduction to Psychology	3
HIST History as Advised	3
SPAN 101 Beg. College Spanish I	3
OR	
AMSL 101 Am. Sign Language I	3
BIOL 105 Human Biology with Lab	4
OR	
BIOL 101 Introduction to Biology	4
Directed Social Science Elective	
Must select one of the following:	
PSYC 284 Psychology of Gender	3
PSYC 270 Drugs, Society and Behavior	3
HIST 220 African American History	3
SOCI 201 Social Problems in 21st Century	3
PSYC 255 Psyc of Personal Adjustment	3
PSYC 251 Abnormal Psychology	3

PSYC 386 Social Psychology	3

Suggested Course Sequence

Year 1/Fall - 18 credits

COURSE		CREDITS
ECHD 101 - Introduction to Early Childhood		3
SPAN 101 - Beginning College Spanish 1		3
OR		
AMSL 101 - American Sign Language 1		3
COMP 101 - Composition and Research		3
PSYC 101 - Introduction to Psychology		3
MATH 102 - Intermediate Algebra with Trigonometry		3
GNED 104 - Library Research Methods		1
CITA as Advised		2

Year 1/Spring - 16 credits

COURSE	CREDITS
BIOL 105 - Human Biology with Lab	4
COMP 102 - Writing About Literature	3
PHYC 241 - Child Development	3
ECHD 102 - Social Development & Positive Guidance	3
ECHD 103 - Technique of Observation and Assessment Field I	3

Year 2/Fall - 15 credits

COURSE	CREDITS
HIST - History as Advised	3
ECHD 201 - Family & Child Health, Safety & Nutrition	3
ECHD 202 - Language, Literacy and Literature in Early Childhood	3
ECHD 203 - Infants and Toddlers	3
ECHD 204 - Children with Special Needs	3

Year 2/Spring - 16 credits

COURSE	CREDITS
Directed Social Science Elective	3
ECHD 205 - Creative Activities in the Arts	3
ECHD206 - Curriculum Methods, Materials & Management	3
SOCI 220 - Marriage and the Family	3
ECHD 212 - Practicum in Early Childhood – Field II	4

Engineering Science, A.S., Major #0530

Engineering Science is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Engineering Science is a transfer program designed for students with high school preparation in mathematics and science who plan to continue their education at colleges of engineering. This program provides the core of knowledge common to all engineering disciplines such as chemical, civil, electrical/computer, and mechanical engineering. Students wishing to specialize in a pure science are also provided with a strong background to enable them to continue in their chosen field. Students benefit from relatively low costs, small classes and individual faculty attention. Conditional acceptance may be given to students who are interested in engineering science, but whose high school preparation does not meet the usual requirements for admission to the program. Candidates for the A.S. in Engineering Science must be full time, in residence and matriculated in Engineering Science for the entire second year.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Apply concepts form mathematics and the physical sciences to engineering problems.
- Analyze and interpret experimental data as a means of finding solutions to engineering problems.
- Communicate effectively, integrating text and graphical representation of engineering students.
- Formulate engineering models of physical systems.
- Utilize computational and numerical techniques in the solution of engineering problems.

Curriculum Requirements - 67 Credits

COURSE	CREDITS
ENGR 100 - Introduction to Engineering	3
ENGR 135 - Computing and Numerical Techniques	3
ENGR 201 - Statics	3
ENGR 202 - Dynamics	3
ENGR 210 - Electrical Systems (Circuits I)	3
ENGR 212 - Mechanics of Materials	3
MATH 161 - Calculus I	4
MATH 162 - Calculus II	4
MATH 261 - Calculus III	4
MATH 262 - Differential Equations	4
PHYS 154 - University Physics I (Mechanics)	4
PHYS 155 - University Physics II (Electricity & Magnetism)	4
CHEM 141 - Chemistry Principles I	3
CHEM 141L - Laboratory for Chemical Principles I	1
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
SUNY General Education as Advised	9
Transfer Pathway Elective Courses - Minimum of 6 credits from:	
BIOL 120 - General Biology I	4
CHEM 142 - Chemical Principles II with Lab	4
CHEM 241 - Organic Chemistry with Lab	4
PHYS 254 - University Physics III - Sound & Thermodynamics	4
PHYS 255 - University Physics IV - Optics & Modern Physics	4

Suggested Course Sequence

Year 1/Fall - 17 credits

COURSE	CREDITS
CHEM 141 - Chemical Principles I	3
CHEM 141L - Chemical Principles I Lab	1
COMP 101 - Composition & Research	3
ENGR 100 - Introduction to Engineering	3
MATH 161 - Calculus I	4
General Education Elective	3

Year 1/Spring - 18 credits

COURSE	CREDITS
COMP 102 - Writing About Literature	3
MATH 162 - Calculus II	4
ENGR 135 - Computing & Numerical Techniques	3
PHYS 154 - University Physics I (Mechanics)	4
Transfer Path Elective (CHEM 142 suggested)	4

Year 2/Fall - 17 credits

COURSE	CREDITS
MATH 261 - Calculus III	4
ENGR 201 - Statics	3
PHYS 155 - University Physics II (Electricity & Magnetism)	4
General Education Elective	3
General Education Elective	3

Year 2/Spring - 17 credits

COURSE	CREDITS
ENGR 202 - Dynamics	3
ENGR 210 - Electrical Systems	3
ENGR 121 - Mechanics of Materials	3
MATH 262 - Differential Equations	4
Transfer Path Elective (PHYS 256 suggested)	4

Environmental & Natural Resource Conservation, A.S., Major #1483

The Environmental and Natural Resources Conservation A.S. program was crafted so students can seamlessly transfer to the New York State College of Environmental Science and Forestry (ESF) at Syracuse University, Plattsburgh State University, Brockport State University, and other baccalaureate degree- granting institutions thereby ensuring junior status in baccalaureate degree curriculums. This is ensured with the articulation agreements that were established with these institutions. Students who successfully complete the Environmental and Natural Resources Conservation A.S. program also have the option of pursuing the bachelor of technology in Renewable Resources curriculum at SUNY Morrisville

The Environmental and Natural Resources Conservation major is intended as a foundation program for students wishing to matriculate to other universities to continue their education in specific baccalaureate programs. Transfer articulation agreements exist with a number of SUNY and state institutions to facilitate student planning and transfer. Admission to advanced study programs at certain universities may require the completion of courses at a higher level than those required for graduation in this program.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Be well prepared to transfer into baccalaureate degree granting institutions at the junior level in an environmentally related field of study;
- Have a good foundation in the sciences including chemistry and/or physics and the biological sciences;
- Have completed 8 general education pillars (this will position them properly for completing all 10 pillars when they are awarded a baccalaureate degree);
- Have a good foundation in basic environmentally-related course work;
- Develop a critical and unbiased approach to solving environmental problems; and
- Develop organizational skills, collaborative work experience, and sensitivity to an organizational culture.

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
BIOL /ENSC 102 Botany: Form and Function of Seed Plants	3
ENVT 100 Intro to Environmental Tech	3
NATR 100 Introduction to Forestry & Natural Resources	3
NATR 144 Seminar in Environmental Resources	1
CITA Computer Applications as Advised	3
Technical Electives as Advised (9 hours from subject areas: AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, ENSC, ENVT, HORT, NATR, PHYS RENG, RREN)	9

Liberal Arts and Science

COURSE	CREDITS
BIOL 120 General Biology I w/ Lab	4
OR	
BIOL 260 Principles of Zoology	4
Chemistry/Physics Elective (as advised) *Chem 101 excluded	8
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
COMM 111 Introduction to Speech	3
MATH 103 or Above as Advised	3
SUNY General Education as Advised	9
Open Electives (as advised)	6

Total Program Credits: 61

Suggested Course Sequence

Year 1/Fall - 16 credits

COURSE	CREDITS
BIOL 102 - Botany – Form & Function of Seed Plants	3
COMP 101 - Composition and Research	3
ENVT 100 - Introduction to Environmental Technology	3
MATH - Mathematics as Advised *Demonstrated proficiency with at least MATH 103 College Algebra with Trigonometry required	3
NATR 100 - Introduction to Forestry & Natural Resources	3
NATR 144 - Seminar in Environmental Resources	1

Year 1/Spring - 16 credits

COURSE	CREDITS
BIOL 120 - General Biology I	4
OR	
BIOL 260 - Principles of Zoology	4
COMM 111 - Introduction to Speech	3
COMP 102 - Writing About Literature	3
Technical Elective as Advised	3
General Education Elective as Advised *Student must take 12 credits in 3 different categories from the list of suggested electives	3

Year 2/Fall - 13 credits

COURSE	CREDITS
CHEM/PHYS - Chemistry or Physics as Advised	4
Technical Elective as Advised	3
Open Elective as Advised	3
General Education Elective as Advised *Student must take 12 credits in 3 different categories from the list of suggested electives	3

Year 2/Spring - 16 credits

COURSE	CREDITS
CHEM/PHYS - Chemistry or Physics as Advised	4
CITA 101/110 - CITA as Advised	3
Technical Elective as Advised	3
Open Elective as Advised	3
General Education Elective as Advised *Student must take 12 credits in 3 different categories from the list of suggested electives	3

Equine Science & Management, A.A.S. , Major #0687

Equine Science and Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The strengths of the Equine Science and Management program are mainly twofold: first in the range of courses, which offer practical experience in handling horses. The program provides the student with the opportunity to concentrate on breeding, training, nutrition, and management specifically with horses, rather than with a generalized group of livestock. The second strength of the program is the quality of the faculty, staff and facilities available to the student. The college has two new 100-foot by 200-foot indoor arenas, an 80-foot by 264-foot indoor riding arena, two 100-foot by 200-foot outdoor arenas, a half-mile racing track, three horse barns, a 34,000 square foot breeding and training facility, two hot walkers, Eurociser, paddocks, and all of the associated equipment and supplies necessary for a suitable educational experience. Additionally, there are more than 250 horses on site.

The SUNY Morrisville Equine Rehabilitation Center (SUNY MorrisvilleERC) facility includes a 22,000 square foot rehabilitation center building with classroom and administrative offices, a large rehabilitation treatment area, and ten stalls. A 31-stall barn for the thoroughbred Racing Program and a 140 by 300 foot indoor riding arena are also located at this facility. Therapeutic modalities available at the Equine Rehabilitation Center include aquatic therapies (underwater treadmill, cold salt water spa therapy, indoor swimming pool), therapeutic ultrasound, laser therapy (Class IIIB), cold compression therapy, solariums, and therapeutic exercises.

SUNY Morrisville employs 14 full-time faculty and staff, with a wide range of professional experience, in the Equine Science program area. The curriculum provides for the development of skills including care and training of horses, riding, driving, breeding and business and stable management. Students who major in Equine Science have varied objectives. Many intend to pursue a career in some aspect of the horse industry, while others may take technical courses from other areas of study to expand their employment base.

The career option prepares students to directly enter the industry upon graduation or to continue their equine education in one of the options in the bachelor of technology in Equine Science. The general option enables students to experience the horse industry while preparing for an allied field of employment. Both options are very flexible and can be developed based on individual interests and goals.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate safe procedures, sound judgment and critical thinking skills in human and horse interactions when handling on the ground, astride or driving.
- Develop and/or recognize proper body position and effective use of seat, leg, hands and/or voice aids for ground-handling, riding or driving.
- Conduct the necessary research, analysis, evaluation, and critical thinking skills required of equine management and demonstrate the ability to develop a well organized approach to address common problems related to equine training and management.
- Demonstrate an understanding of equine behavior and how it relates to developing trained responses.
- Understand the importance of providing a balanced ration and be able to apply principles of nutrition to meet the needs of horses that is commensurate with varied uses and workloads.
- Understand the principles and techniques of modern equine reproduction and how utilization of sound breeding management practices can improve breeding efficiency.
- Utilize a systematic method of evaluating conformation and observing performance to accurately gauge individual improvement and to make qualified comparisons between horses.
- Develop and implement health management practices and skills to recognize signs of lameness and a fundamental understanding of treatment therapies.
- Develop a positive, confident outlook and a responsible work ethic that is likely to attract success as an equine professional.
- Develop sound ethical principles and judgment when dealing with employers, employees, and clients.

Curriculum Requirements - 67 Credits

General Option

COURSE	CREDITS
AGBS 100 Agricultural Economics	3
AGBS 240 Farm Management & Finance	4
AGRO 111 Soil Science	3
OR	
ENSC 101 Agricultural Science	3
ESCI 110 Equine Anatomy and Physiology	3
ESCI 130 Equine and Stable Management	3
ESCI 140 Equine Judging	2
ESCI 150 Farm Practicum I (equine)	2
ESCI 151 Farm Practicum II (equine)	2
ESCI 210 Equine Nutrition	3
ESCI 235 Fitting & Marketing of the Equine	1
ESCI 305 Equine Reproduction and Breeding Management	3
ESCI 312 Equine Health and Lameness	3
CITA 101 Principles of Computers Apps	3
OR	
OFFT 100 Intro to Spreadsheet Software	1
AND	
OFFT 100 Intro to Word Processing	1
OR	
OFFT 109 Intro to Presentation Software	1
Basic Communication/Humanities as Advised	6
Additional General Education Courses	14
General Electives	13

Career Option

Career Option (to replace general elective credits):

COURSE	CREDITS
ERID 102/104 Western Equitation I Intermediate or Advanced	2
ERID 109/110 Hunt Seat Equitation I Intermediate or Advanced	2
ERID 103/105 Equitation II Western Horsemanship Intermediate or Advanced	1
ERID 111/112 Hunt Seat Equitation II Intermediate or Advanced	1
ERID 250 Breaking and Training	3
OR	
ERID 240 Intro to Training of Hunters and Jumpers	4
ERID 210 English Dressage	2
OR	
ERID 220 Western Dressage	2
ERID 200 Western Riding	1
One of the following:	
ERID 255 Intermediate Breaking &Training	4
ESCI 170 Draft & Driving Horse Mgt	2
ESCI 225 Equine Artificial Insemination	1
ERID 260 Intermediate training of Hunters and Jumpers	4

Suggested Course Sequence – General Option

Year 1/Fall - 17 credits

COURSE		CREDITS
ESCI 130 - Equine and Stable Management		3
ESCI 150 - Farm Practicum I		2
AGBS 100 - Agricultural Economics		3
AGRO 110 - Soil Science		3
OR		
ENSC 101 - Agricultural Science		3
Gen Ed English as Advised		3
Electives as Advised		3

Year 1/Spring - 15 credits

COURSE	CREDITS
ESCI 110 - Equine Anatomy & Physiology	3
ECI 151 - Farm Practicum II	2
ESCI 140 - Equine Judging	2
Gen Ed Basic Communication/Humanties as Advised	3
MATH - Mathematics as Advised	3
Electives as Advised	2

Year 2/Fall - 19-20 credits

COURSE	CREDITS
AGBS 240 - Farm management and Finance	4
ESCI 210 - Equine Nutrition	3
ESCI 235 - Fitting and Marketing of Equine	3
CITA OFFT - Computer Literacy as Advised	2 or 3
HIST - As Advised (American, Western or World Civ	3
Electives as Advised	4

Year 2/Spring - 12 credits

COURSE	CREDITS
ESCI 305 - Equine Reproduction and Breeding Management	3
ESCI 312 - Equine Health and Lameness	3
Social Science as Advised	3
Electives as Advised	3

Suggested Course Sequence – Career Option

Year 1/Fall - 18 credits

COURSE		CREDITS
ESCI 130 - Equine and Stable Management		3
ESCI 150 - Farm Practicum I		2
AGBS 100 - Agricultural Economics		3
AGRO 110 - Soil Science		3
OR		
ENSC 101 - Agricultural Science		3
Gen Ed English as Advised		3
ERID 102/104 - Western Equitation I		2
ERID 109/110 - Hunt Seat Equitation I		2

Year 1/Spring - 15 credits

COURSE	CREDITS
ESCI 110 - Equine Anatomy & Physiology	3
ECI 151 - Farm Practicum II	2
ESCI 140 - Equine Judging	2
Ged Ed Basic Communication/Hmanities as Advised	3
MATH - Mathematics as Advised	3
ERID 103 105 - Equitation II – Western	1
ERID 111 112 - Hunt Seat Equitation II	1

Year 2/Fall - 19-20 credits

COURSE	CREDITS
AGBS 240 - Farm management and Finance	4
ESCI 210 - Equine Nutrition	3
ESCI 235 - Fitting and Marketing of Equine	3
CITA OFFT - Computer Literacy as Advised	2 or 3
HIST - As Advised (American, Western or World Civ	3
ERID 250 - Breaking and Training	3
ERID 240 - Intro to Training Hunters and Jumpers	4
OR	
ERID 200 - Western Riding	1

Year 2/Spring - 14-17 credits

COURSE	CREDITS
ESCI 305 - Equine Reproduction and Breeding Management	3
ESCI 312 - Equine Health and Lameness	3
Social Science as Advised	3
ERID 210 - English Dressage	2
OR	
ERID 220 - Western Dressage	2
ERID 255 or ERID 260 or ESCI 225	1 to 4

Equine Racing Management, A.A.S., Major #0698

Equine Racing Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

This program prepares students for work as assistant trainers or grooms at race tracks with an emphasis on harness and thoroughbred racing. It also prepares students for the examination for licensure. Students enrolled in the thoroughbred racing option will have their riding abilities and weight evaluated if exercise rider or jockey are of primary interest.

Facilities for practical experience include an all-weather half-mile training track, stabling, turnout paddocks, two round pens, an 80-foot by 264-foot indoor arena, and a new 100-foot by 200-foot indoor arena. The college has more than 250 horses on site. During the first two years, five credit hours each semester are concentrated in practical work at the college track. Students continue work on the horses with emphasis placed on racing and on areas such as shoeing, training problems, breaking yearlings, and preparation for the annual sale.

The SUNY Morrisville Equine Rehabilitation Center (SUNY MorrisvilleERC) facility includes a 22,000 square foot rehabilitation center building with classroom and administrative offices, a large rehabilitation treatment area, and ten stalls. A 31-stall barn for the thoroughbred Racing Program and a 140 by 300 foot indoor riding arena are also located at this facility. Therapeutic modalities available at the Equine Rehabilitation Center include aquatic therapies (underwater treadmill, cold salt water spa therapy, indoor swimming pool), therapeutic ultrasound, laser therapy (Class IIIB), cold compression therapy, solariums, and therapeutic exercises.

In addition, horse-related courses such as anatomy and physiology, breeding, nutrition, equine farm management and general horse care (health and lameness) are taken throughout the two-year program. General Education courses in science, math, English, and social science round out the requirements (20 credit hours minimum).

Part of the uniqueness of this program is the summer option where students have the opportunity to compete in actual races.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate safe procedures, sound judgment and critical thinking skills in human and horse interactions when handling on the ground, astride or driving.

- Develop and/or recognize proper body position and effective use of seat, leg, hands and/or voice aids for ground-handling, riding or driving.
- Conduct the necessary research, analysis, evaluation, and critical thinking skills required of equine management and demonstrate the ability to develop a well organized approach to address common problems related to equine training and management.
- Demonstrate an understanding of equine behavior and how it relates to developing trained responses.
- Understand the importance of providing a balanced ration and be able to apply principles of nutrition to meet the needs of horses that is commensurate with varied uses and workloads.
- Understand the principles and techniques of modern equine reproduction and how utilization of sound breeding management practices can improve breeding efficiency.
- Utilize a systematic method of evaluating conformation and observing performance to accurately gauge individual improvement and to make qualified comparisons between horses.
- Develop and implement health management practices and skills to recognize signs of lameness and a fundamental understanding of treatment therapies.
- Develop a positive, confident outlook and a responsible work ethic that is likely to attract success as an equine professional.
- Develop sound ethical principles and judgment when dealing with employers, employees, and clients.

Curriculum Requirements - 67 Credits

COURSE	CREDITS
AGBS 100 Agricultural Economics	3
AGBS 240 Farm Management and Finance	4
AGRO 111 Soil Science OR ENSC 101 Agricultural Science	3
ESCI 110 Equine Anatomy and Physiology	3
ESCI 130 Equine and Stable Management	3
ESTB 100 Care and Training of the Race Horse I	5
ESTB 101 Care and Training of the Race Horse II	5
ESTB 210 Advanced Equine Racing	4
ESTB 220 Equine Racing Capstone	4
ESCI 210 Equine Nutrition	3
ESCI 235 Fitting & Marketing of the Equine	1
ESCI 305 Equine Reproduction and Breeding Management	3
ESCI 312 Equine Health and Lameness	3
CITA 101 Principles of Computers Apps	3
OR	
OFFT 100 Intro to Spreadsheet Software	1
AND	
OFFT 100 Intro to Word Processing	1
OR	
OFFT 109 Intro to Presentation Software	1
Basic Communication/Humanities as Advised	6
Additional General Education Courses	14

Suggested Course Sequence

Year 1/Fall - 17 credits

COURSE	CREDITS
ESCI 130 - Equine and Stable Management	3
ESTB 100 - Care and Training of the Race Horse I	5
AGBS 100 - Agricultural Economics	3
AGRO 110 - Soil Science	3
OR	
ENSC 101 - Agricultural Science	3
Gen Ed: English as Advised	3

Year 1/Spring - 18 credits

COURSE	CREDITS
ESCI 110 - Equine Anatomy and Physiology	3
ESTB 101 - Care and Training of the Race Horse II	5
ESCI 140 - Equine Judging	2
Basic Communication/Humanities as Advised	3
MATH - Gen Ed MATH as Advised	3
Electives as Advised	2

Year 2/Fall - 19-20 credits

COURSE	CREDITS
AGBS 240 - Farm management and Finance	4
ESCI 210 - Equine Nutrition	3
ESCI 235 - Fitting and Marketing of the Equine	3
CITA/OFFT - Computer Literacy as Advised	2 or 3
HIST - As Advised (American, Western or World Civ)	3
ESTB 210 - Advanced Equine Racing	4

Year 2/Spring - 18 credits

COURSE	CREDITS
ESCI 305 - Equine Reproduction and Breeding Management	3
ESTB 220 - Equine Racing Capstone	4
ESCI 312 - Equine Health and Lameness	3
Social Science as Advised	3
Electives as Advised	3

Gaming & Casino Management, A.A.S., Major #1361

Gaming and Casino Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Approved by the New York State Education Department, the Gaming and Casino Management degree program provides students with the managerial, technical and operational expertise that is integral to pursuing a career in the casino and entertainment segments of the hospitality industry.

Focusing on the latest technology, the program targets the legal/regulatory issues vital to protecting the integrity of casino gaming operations such as licensing, table game protection, surveillance operations and casino/hotel security. Students will learn about leadership, technology, the need for appropriate security in the casino business, biometrics, the particular functions of the different games, and retail operations in a casino.

The relationship of gaming to the growing tourism and destination industry is also a key component of our program. Using state-of-the-art equipment, students receive hands-on experience and the personal instruction necessary to develop the knowledge, skills, marketing and management techniques essential to securing a position in the gaming industry.

Program Highlights

- Computer applications are integrated throughout the curriculum to prepare graduates with workplace competencies
- Live gaming laboratory experiences All students complete an internship
- Majors participate in visits to casino resorts
- Faculty are members of the Casino Management Association, the New York State Hospitality and Tourism Association, the Council on Hotel, Restaurant, Institutional Education, the American Hotel & Lodging Association, the National Restaurant Association, and the International Food Service Executives' Association.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate a familiarity with the various games found in the casino environment

- Identify and interpret the rules of the games found in the casino environment Identify the lack of procedure in the gaming environment
- Understand and define basic management theories common to all types of hospitality operations.
- Possess an extensive business portfolio that displays an up to date resume, cover letter, skill set, work philosophy, career goals and shows extensive work samples.
- Analyze the importance of facility layout
- Review and discuss regulatory compliance issues found in the gaming industry
- Compare and contrast the differences found in casino surveillance verses casino security
- Collaborate with team members to conduct research and team projects
- Demonstrate the use of the technology used in the casino resort

Curriculum Requirements - 65 Credits

COURSE	CREDITS
ACCT - Accounting as Advised	3
BSAD 107 - Legal and Regulatory Aspects of the Gaming Industry	3
CAS 102 - Introduction to Gaming	3
CAS 103 - Casino Security	3
CAS 230 - Technology & Controls in Gaming	3
CAS 240 - Hospitality Sales & Marketing	3
CAS 280 - Leadership Development Strategies for Hospitality Industry	3
FSAD 100 - Global and Ethnic Foods	3
FSAD 153 - Fundamentals Hospitality Mgt	3
FSAD 201 - Summer Co-op	2
OFFT 100 & OFFT 109 & OFFT 110	3
OR	
CITA 10 - Principles of Computer Aps	3
FSAD 257 - Senior Seminar	1
TOUR 106 - Introduction to the Travel Tourism & Hospitality Industry	3
TOUR 153 - Hotel Operations	3
TOUR 250 - Tourism Planning & Development	3
TOUR 252 - Meeting and Convention Services	3
ECON 100 - Introduction to Macroeconomics	3
COMP as Advised	3
Math/Science as Advised	3
Additional SUNY General Education Credits as Advised	11

Suggested Course Sequencing

Year 1/Fall - 16 credits

COURSE	CREDITS
CAS 102 - Intro to Gaming	3
COMP - As advised	3
FSAD 100 - Global and Ethnic Foods	3
OFFT 100/ OFFT 110 - Intro to Word Processing Software/ Intro to Spreadsheet Software	1
TOUR 106 - Intro to Hospitality Industry	3
SUNY General Education as Advised	3

Year 1/Spring - 18 credits

COURSE	CREDITS
BSAD 107 - Legal & Regulatory Aspects of Gaming	3
CAS 103 - Casino Security	3
FSAD 153 - Fundamentals of Hospitality Mgmt	3
TOUR 153 - Hotel Operations	3
SUNY General Education as Advised	3
SUNY General Education as Advised	3

Year 2/Fall - 17 credits

COURSE	CREDITS
ACCT 100/ ACCT 101 - Accounting Info & Mgmt Decisions/ Principles of Accounting I	3
CAS 230 - Tech & Casino Controls in Gaming	3
CAS 240 - Hospitality Sales & Marketing	3
ECON 100 - Principles of Macroeconomics	3
FSAD 201 - Summer Cooperative Employment	2
TOUR 250 - Tourism Planning & Development	3

Year 2/Spring - 14 credits

COURSE	CREDITS
CAS 280 - Leadership Strategies for Hospitality Industry	3
TOUR 252 - Meeting/Convention Services	3
FSAD 257 - Career Seminar	1
SUNY General Education as Advised	3
SUNY General Education as Advised	4

Health Related Studies, A.S., Major #1451

The Health-Related Studies degree will prepare students for transfer into bachelor's degree programs that prepare graduates to work in the health care industry. The curriculum provides a strong foundation in the sciences including courses in the areas of biology, anatomy and physiology, and chemistry. Most transfer institution institutions have unique entrance requirements (information that should be acquired as soon as possible). The Health-Related Studies program offers a degree of flexibility that allows students to satisfy the different entrance requirements at the various transfer institutions, as well as to obtain entry-level positions in some laboratories.

The Health-Related Studies program includes course offerings that articulate with higher-division institutions in all of the following career options: nuclear medicine, physical therapy, health information management, health services management, physician assistant, diagnostic medical sonography (ultrasound), occupational therapy, respiratory care, medical technology, cytotechnology, cardiovascular perfusion, addiction counseling sciences, emergency medical services, mental health technology, occupational and environmental health, and science-intensive pre-professional fields (medical, dental, chiropractic, veterinarian).

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Apply selected biologic and chemical concepts to biological problems.
- Solve scientific problems using algebra, trigonometry, and statistics.
- Display both written and oral communication skills using scientific terminology.
- Collaborate and cooperate as a group member in a culturally diverse scientific environment.
- Use available research tools including, but not limited to, the internet to find answers to scientific questions.
- Critically evaluate and integrate scientific literature, principles, and concepts.
- Practice safe laboratory techniques, including adherence to all safety rules and regulations.

Curriculum Requirements - 60 Credits

COURSE	CREDIT
BIOL 120 General Biology I	4
BIOL 121 General Biology II	4
BIOL 150 Human Anatomy & Physiology I	4
BIOL 151 Human Anatomy & Physiology II	4
CHEM 121 General College Chemistry I	3
CHEM 121L Lab for General College Chemistry I	1
CHEM 122 General College Chemistry II	3
CHEM 122L Lab for General College Chemistry II	1
Additional Required Science *minimum of two courses from the following	8
BIOL 135 Myology I	3
BIOL 136 Myology II	3
BIOL 137 Neurology	4
BIOL 285 General Microbiology	4
BIOL 300 Biology of Normal and Neoplastic Cells	3
BIOL 301 Pathophysiology	3
BIOL 302 Epidemiology	3
BIOL 405 Basic Immunology	3
CHEM 241 Organic Chemistry I (CHEM 241 lab corequisite)	3
CHEM 241 lab Organic Chemistry I lab (CHEM 241 corequisite)	1
CHEM 242 Organic Chemistry II (CHEM 242 lab corequisite	3
CHEM 242 lab Organic Chemistry II lab (CHEM 242 corequisite)	1
PHYS 107 Introductory Physics I	4

PHYS 108 Introductory Physics II	4
PHYS 127 General Physics I	4
PHYS 128 General Physics II	4
COMP 101 Composition and Research	3
COMP 102 Writing about Literature	3
MATH 103 College Algebra w/ Trig	3
MATH 141 Statistics	3
PSYC 101 Introduction to Psychology	3
GNED 100 Freshman Year Experience	2
SUNY General Education Electives	11-13
General Electives	2

Suggested Course Sequencing

Year 1/Fall - 16 credits

COURSE	CREDITS
BIOL 120 - General Biology I	4
CHEM 121 - General Chemistry I	3
CHEM 121L - Lab for General Chemistry I	1
MATH 103 - College Algebra with Trigonometry (or higher in the algebra sequence after placement and consultation with the academic program)	3
COMP 101 - Composition and Research	3
GNED 100 - Freshman Year Experience	2

Year 1/Spring - 14 credits

COURSE	CREDITS
BIOL 120 - General Biology II	4
CHEM 122 - General Chemistry II	3
CHEM 122L - Lab for General Chemistry II	1
MATH 141 - Statistics	3
COMP 102 - Writing about Literature	3

Year 2/Fall - 15-18 credits

COURSE	CREDITS
BIOL 150 - Human Anatomy & Physiology I	4
PSYC 101 - Introduction to Psychology	3
General Education course as advised	3
Science course chosen from BIOL 135, BIOL 136, BIOL 285, BIOL 300, BIOL 301, BIOL 405, CHEM 241 and CHEM 241 lab, PHYS 107, PHYS 127	3-4
Elective as advised	2-4

Year 2/Spring - 13-14 credits

COURSE	CREDITS
BIOL 151 - Human Anatomy & Physiology II	4
General Education courses as advised	6
Science course chosen from BIOL 137, BIOL 285, BIOL 300, BIOL 302, BIOL 405, CHEM 242 and CHEM 242 lab, PHYS 108, PHYS 128	3-4

Horticulture, A.A.S., Major #0610

Students choose between the following options: Horticulture Production or General Transfer. Horticulture is a diverse field and this program provides a wide range of training to prepare students for careers in various disciplines. Some choose to enter the industry after two years. Others transfer to upper division horticulture and plant science programs at Cornell University, SUNY-ESF, and many others. Horticulture is one of the largest industries in the state and offers many professional options. The Horticulture Production option prepares students for practical, real-life situations in areas such as crop production, greenhouse operations, and integrated pest management. Students have opportunities to participate in income-generating and community service projects. The transfer option is a science-based course of study for transfer to a four-year program

Career Opportunities: Greenhouse operator/grower, floral designer, flower shop manager, wholesale florist, farm and garden store owner or manager, nursery operator/grower, salesperson of horticultural products or greenhouse equipment, maintenance supervisor of public grounds, public gardener, golf course superintendent, representative for wholesale growers and equipment suppliers, landscape/lawn technician, and more.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate knowledge of green industry practices such as plant materials and their landscape uses, specialty crop production, plant physiology, plant protection, and pesticide use & handling;
- Demonstrate problem-solving skills in the fields of landscape management, specialty crop production systems and greenhouse management.

Horticulture Production Option - 64 Credits

COURSE	CREDITS
AGRO 110 - Soil Science (Natural Science GENED) as advised	3
BIOL 102 - Botany (Natural Science GENED)	3
BSAD 116 - Business Organization and Management	3
ENSC 106 - Pesticide Use and Handling	2
ENSC 107 - Integrated Pest Management	1
HORT 101 - Plant Materials	3
HORT 108 - Herbaceous Plant Materials	2
HORT 110 - Horticulture Practices I or as advised	2
HORT 150 - Fruit and Vegetable Production	3
HORT 200 - Greenhouse Management	3
HORT 201 - Plant Propagation (Natural Science GENED)	3
HORT 202 - Greenhouse Production	3
HORT 206 - Sustainable Landscapes	3
HORT 210 - Horticulture Practices II or as advised	2
HORT 241 - Plant Protection (Natural Science GENED)	3
ACCT, BSAD 102 or 221, MAGN or MATH GENED as advised	3
General Electives As Advised	10
Basic Communications GENED as advised	3
Additional GENED *Select from 3 additional categories: Arts, American History, Humanities, Other World Civilization, Social Science, Western Civilization, Foreign Language as advised	9

General Transfer Option - 64 Credits

COURSE			CREDITS
BIOL 102 - Botany, Form and Function of Seed Plants			3
CHEM 121 - General Chemistry I			3
CHEM 121L - Lab for CHEM 121			1
CHEM 122 - General Chemistry II			3
CHEM 122L - Lab for CHEM 122			1
ENSC 107 - Integrated Pest Management			1
HORT 101 - Plant Materials			3
HORT 110 - Horticulture Practices 1 or as advised			2
HORT 210 - Horticulture Practices II or as advised			2
HORT 241 - Plant Protection			3
General Electives			21
COMP 101 - Composition and Writing			3
COMP 102 - Writing About Literature			3
COMM 111 - Intriduction to Speech			3
MATH as Advised			3
As advised, GENED from at least 1 additional category: Arts, American History, Foreign Language, Other World Civilization, Social Science, Western Civilization			6

Landscape Management Option

Provides students with the foundational knowledge, hands-on skills, and experience that enable them to successfully pursue a career in the landscape industry.

Major Field Requirements

COURSE	CREDITS

BIOL 102 - Botany	3
BSAD 116 - Business Organization & Mgt	3
ENSC 106 - Pesticide Use and Handling or as advised	2
HORT 101 - Plant Materials	3
HORT 103 - Landscape Planning & Design I	3
HORT 105 - Landscape Planning Design II	3
HORT 206 - Sustainable Landscapes	3
ENSC 107 - Integrated Pest Management	1
HORT 108 - Herbaceous Plant Materials	2
HORT 109 - Landscape and Turf Management	3
HORT 110 - Horticulture Practices I	2
OR	
HORT 210 - Horticulture Practices I	2
OR	
As Advised	2
HORT 201 - Plant Propagation	3
HORT 240 - LandCADD	3
HORT 241 - Plant Protection	3
NATR 160 - Principles of Arboriculture	2
NATR 161 - Practices of Arboriculture	1
Free Electives and/or Prereqs * Choice of course based on a consultation with the student's advisor	9
ACCT, BSAD 102 or 221, MAGN, or MATH as advised	3
Basic Communication GenEd * Choice of course based on a consultation with the student's advisor	

Remaining GenEd from 2 additional areas Arts, American History, Foreign Language, Humanities, Other World Civilization, Social Science, Western Civilization * Choice of course based on a consultation with the student's advisor	9

Total Program Credits: 64

Suggested Course Sequence - Horticulture Production Option

Year 1/Fall - 13 credits

COURSE	CREDITS
HORT 101 - Plant Materials	3
BIOL 102 - Botany: Form and Function of Seed Plant	3
HORT 110 - Horticulture Practices 1 (or as advised)	2
AGRO 110 - Soil Science	3
Basic Communication as Advised	3

Year 1/Spring - 17 credits

COURSE		CREDITS
HORT 108 - Herbaceous Plant Materials		2
HORT 210 - Horticulture Practices II (or as advised)		2
ACCT - Accounting as Advised		3
OR		
BSAD 102 or 221 as Advised		3
OR		
MAGN or MATH as Advised		3
General Elective as Advised		4
SUNY General Education as Advised		3
HORT 150 - Fruit and Vegetable Production		3

Year 2/Fall - 16 credits

COURSE	CREDITS
HORT 200 - Greenhouse Production	3
HORT 201 - Plant Propagation	3
ENSC 107 - Integrated Pest Management	1
General Electives as Advised	6
SUNY General Education as Advised	3

Year 2/Spring - 17 credits

COURSE	CREDITS
HORT 202 - Greenhouse Production	3
BSAD 116 - Business Organization & Management	3
ENSC 106 - Pesticide Use and Handling	2
HORT 241 - Plant Protection	3
HORT 206 - Sustainable Landscapes	3
SUNY General Education as Advised	3

Courses taken “as Advised” will need to have a course substitution submitted prior to enrolling.

Suggested Course Sequence - General Transfer Option

Year 1/Fall - 14 credits

COURSE	CREDITS
HORT 101 - Plant Materials	3
BIOL 102 - Botany: Form and Function of Seed Plant	3
HORT 110 - Horticulture Practices 1 (or as advised)	2
COMP 101 - Composition and Research	3
MATH - Math as Advised	3

Year 1/Spring - 17 credits

COURSE	CREDITS
HORT 210 - Horticulture Practices II (or as advised)	2
COMP 102 - Writing About Literature	3
General Elective as Advised	6
SUNY General Education as Advised	6

Year 2/Fall - 17 credits

COURSE	CREDITS
ENSC 107 - Integrated Pest Management	1
CHEM 121 - General Chemistry 1 Lecture and Lab	4
COMM 111 - Introduction to Speech	3
MATH - Math as Advised	3
General Education as Advised	6

Year 2/Spring - 16 credits

COURSE	CREDITS
HORT 241 - Plant Protection	3
CHEM 122 - General Chemistry II Lecture and Lab	4
Electives as Advised	9

Courses taken “as Advised” will need to have a course substitution submitted prior to enrolling.

Suggested Course Sequence - Landscape Management Option

Year 1/Fall - 14 credits

COURSE	CREDITS
HORT 101 - Plant Materials	3
HORT 109 - Landscape & Turf Management	3
HORT 110 - Horticultural Practices I or as Advised	2
BIOL 102 - Botany: Form and Function of Seed Plant	3
Basic Communication as Advised	3

Year 1/Spring - 17 credits

FREE	CREDITS
HORT 103 - Landscape Planning & Design I	3
HORT 108 - Herbaceous Plant Materials	2
ACCT - Accounting as Advised OR BSAD 102 or 212 as Advised OR MATH as Advised	3
SUNY General Education as Advised	6
Free Electives or Prerequisites as Advised	3

Year 2/Fall - 16 credits

COURSE		CREDITS
HORT 105 - Landscape Planning & Design II		3
HORT 201 - Plant Propagation		3
ENSC 107 - Integrated Pest Management		1
NATR 160 - Principles of Arboriculture		2
NATR 161 - Practices of Arboriculture		1
SUNY General Education as Advised		3
General Electives or Prerequisites as Advised		3

Year 2/Spring - 17 credits

COURSE	CREDITS
HORT 240 - Landcadd	3
HORT 241 - Plant Protection	3
HORT 206 - Sustainable Landscapes	3
ENSC 106 - Pesticide Use and Handling	2
BSAD 116 - Business Organization & Management	3
Free Elective or Prerequisite as Advised	3

Courses taken “as Advised” will need to have a course substitution submitted prior to enrolling.

Human Performance & Health Promotion, A.S., Major #1450

The Human Performance and Health Promotion Associates Degree will prepare students to find employment in general fitness positions in wellness facilities and general fitness facilities. The curriculum includes a strong foundation in math and science, along with fitness-related classes in general fitness and wellness and exercise physiology. The program is unique in its inclusion of two exercise physiology classes to ensure the complete and comprehensive understanding, by the student, of the body's response to exercise. Students are taught to handle a diverse set of exercise and fitness situations to strengthen their confidence and marketability in the field. Students are well equipped for immediate entry into the workforce, but are especially prepared for transfer to other programs in the following areas: Human Performance and Health Promotion, B.S. at SUNY Morrisville, Exercise Physiology, Physical Education, Kinesiology, Athletic Training, and Health Education. The Human Performance and Health Promotion program also prepares graduates for employment in fitness centers, recreational facilities, or corporate wellness programs and for certification from the American College of Sports Medicine.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Describe the role of physical activity in the prevention of and treatment of chronic diseases.
- Describe the chronic and acute responses of the body to physical activity.
- Distinguish between aerobic and anaerobic physical exercise and recommend activities to specifically test or to train either system.
- Evaluate whether the allied health profession is the student's desired career path, and assess ability to model appropriate professional behavior
- Accurately assess a client's heart rate and blood pressure at rest and during physical activity.

Curriculum Requirements - 60 Credits

COURSE	CREDITS
HPHP 100 - Intro to Wellness & Fitness	4
HPHP 101 - Fieldwork in HPHP	1
HPHP 200 - Exercise Physiology I	4
HPHP 201 - Exercise Physiology II	4
MAST 100 - CPR for Health Professionals	1
NUTR 110 - Nutrition I	3
BIOL 120 - General Biology I	4
BIOL 150 - Human Anatomy & Physiology I	4
BIOL 151 - Human Anatomy & Physiology II	4
PHYS 107 - Introductory Physics I	4
COMP 101 - Composition and Research	3
COMM 111 - Introduction to Speech	3
MATH 103 - College Algebra with Trig	3
SOCI 250 - Social Gerontology	3
PSYC 101 - Introduction to Psychology	3
MATH 141 - Statistics	3
PHIL 201 - Introduction to Philosophy	3
General Electives as Advised	6

Suggested Course Sequencing

Year 1/Fall - 19 credits

COURSE	CREDITS
HPHP 100 - Introduction to Wellness and Fitness	4
BIOL 120 - General Biology I	4
NUTR 110 - Nutrition I	3
COMP 101 - Composition and Research	3
GNED 100 - First Year Experience	2
MATH 103 - College Algebra with Trigonometry (or higher in the algebra sequence after placement and in consultation with the academic program advisor)	3

Year 1/Spring - 14 credits

COURSE	CREDITS
HPHP 101 - Fieldwork in HPHP	1
COMM 111 - Introduction to Speech	3
PHYS 107 - Introduction to Physics	4
General Education (as advised)	3
General Education (as advised)	3

Year 2/Fall - 14 credits

COURSE	CREDITS
BIOL 150 - Human Anatomy & Physiology I	4
PSYC 101 - Introduction to Psychology	3
HPHP 200 - Exercise Physiology I	4
PHIL 201 - Introduction to Philosophy	3

Year 2/Spring - 15 credits

COURSE	CREDITS
MATH 141 - Statistics	3
BIOL 151 - Human Anatomy & Physiology II	4
HPHP 201 - Exercise Physiology II	4
SOCI 250 - Social Gerontology	3
MAST 100 - CPR for Health Professionals	1

HUMAN SERVICES, A.A.S., Major #0604

Through the Associate of Applied Science (A.A.S.) degree program in human services offered at the Norwich Campus of SUNY Morrisville, students prepare to help individuals, families and communities through learning about and practicing a variety of support services, including crisis intervention, direct support, counseling, case management and human service administration. Students will learn how to offer assistance to those seeking support or guidance in many settings, including homes, schools, hospitals and nonprofit agencies. Students begin their studies by immediately immersing themselves in their first of two internships beginning in their first semester of study. By the time students finish their practicum in their last semester, they will have the education and skills to begin helping those in need. SUNY Morrisville Human Service Program graduates have attained employment as domestic violence advocates, substance abuse case managers, children's health home case managers, outpatient mental health intake workers, school-based counselors and direct support professionals for people with developmental disabilities. Those students who have completed the associate's degree have transferred into bachelor's degree programs as juniors in social work, applied psychology, human development and human services.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Recount historical context and current trends of the human service profession (CSHSE Standard 11, 13)
- Evaluate skills and strategies that influence change (CSHSE Standard 13, 14)
- Integrate human service competency skills into the helping process (CSHSE Standard 12, 13)
- Analyze personal styles, attributes, values, ethics, bias and prejudices (CSHSE Standard 20)
- Demonstrate understanding of interpersonal skills necessary to effect change (CSHSE Standard 17)
- Develop a plan of action and implementation techniques with the client (CSHSE Standard 14, 16)
- Monitor and assess the effectiveness of interventions (CSHSE Standard 14, 16)

- Exhibit professionalism in relationship to the values and ethics established by the Council for Standards in Human Service Education
- Recognize the impact on biological, psychological and social forces on human behavior and the impact these forces have on implementing change (CSHSE Standard 12)
- Demonstrate an understanding of diversity and cultural influences (CSHSE Standard 12)
- Illustrate skills associated with the collection and dissemination of information including issues of confidentiality (CSHSE Standard 15)
- Display recognition of organizational theories and administrative aspects of human service delivery (CSHSE Standard 18)

Curriculum Requirements - 64 Credits

COURSE	CREDITS
HUMS 100 - Careers in the Helping Profession	1
HUMS 101 - Intro to Human Services	3
HUMS 200 - Helping Process & Crisis Intervention	3
HUMS 201 - Counseling & Case Management	3
HUMS 202 - Management & Administration in Human Services	3
HUMS 250 - Human Services Practicum	3
HUMS 141 - Internship Human Service I	1
HUMN 142 - Internship Human Services II	1
HUMS 143 - Internship Human Services III	1
CITA 101 - Prin of Computer App	3

Suggested Course Sequence

Year 1/Fall - 16 credits

COURSE	CREDITS
HUMS 101 - Intro to Human Services	3
HUMS 100 - Careers in Helping Professions	1
HUMS 141 - Internship in Human Services I	1
PSYC 101 - Introduction to Psychology	3
COMP 101 - Composition & Research	3
MATH 102 - Intermediate Algebra with Trigonometry	3
GNED 100 - First Year Experience	2

Year 1/Spring - 17 credits

COURSE	CREDITS
HUMS 201 - Counseling & Case Management	3
HUMS 142 - Internship in Human Services II	1
HUMS 143 - Internship in Human Services III	1
PSYC 241 - Abnormal Psychology	3
COMP 102 - Writing About Literature	3
SOCI 101 - Introduction to Sociology	3
COMM 111 - Introduction to Speech	3

Year 2/Fall - 16 credits

COURSE	CREDITS
HUMS 200 - Helping Process & Crisis Intervention	3
HIST - History as Advised	3
BIOL 105 - Human Biology Lecture & Lab	4
CITA 101 - Principles of Computer Applications	3
SOCI /PSYC - Elective as Advised	3

Year 2/Spring - 15 credits

COURSE	CREDITS
HUMS 202 - Management & Administration of Human Services	3
HUMS 250 - Human Services Practicum	3
Elective as Advised	3
PSYC 255 - Psychology of Personal Adjustment	3
SOCI/PSYC - Elective as Advised	3

Individual Studies, A.A.S., A.S., Major #0688

Individual Studies is a ThinkPad University curriculum using laptop computers integrated into courses. This program is also offered at the Norwich Campus.

The Individual Studies degree program provides flexible educational opportunities to students who are exploring their academic and career options or who have unique educational goals. Students are provided with academic advisement and career guidance that allows them to design an individualized plan of study. Students enrolled in the Individual Studies program may take elective courses from a wide selection of academic programs on campus.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Communicate clearly and effectively, both orally and in writing.
- Demonstrate critical thinking and reasoning skills.
- Identify, analyze, and evaluate arguments as they occur in their own or others' work.
- Develop well-reasoned and persuasive arguments.
- Demonstrate effective information management skills.
- Perform the basic operations of personal computer use.
- Understand and use basic research techniques.
- Locate, evaluate, and synthesize information from a variety of sources.

Demonstrate readiness to join the workforce or pursue further study through the effective application of skill in communication, critical thinking and reasoning, and information management.

Curriculum Requirements – AAS Degree

Liberal Arts and Science

COURSE	CREDIT
COMP 101 - Composition & Research	3
COMP 102 - Writing About Literature	3
Two courses (in any combination) from the SUNY General Education categories listed below: American History Other World Civilization Social Science Western Civilization	6
Two courses from Natural Science or Mathematics as Advised	6
One course from any SUNY General Education Category or one course from the Liberal arts and Science list	3
Additional Elective Credits	43

Total Program Credits: 64

Curriculum Requirements – AS Degree

Liberal Arts and Science 30

COURSE	CREDIT
COMP 101 - Composition & Research	3
COMP 102 - Writing About Literature	3
MATH as Advised	3
Two courses (in any combination) from the SUNY General Education categories listed below: American History Other World Civilization Social Science Western Civilization	6
One course from any of the SUNY General Education categories below: American History The Arts Basic Communication Foreign Language Humanities Other World Civilization Social Science Western Civilization	3
Three courses from Natural Science or Mathematics as Advised	9
Additional SUNY General Education As Advised	3
Additional Elective Credits	34

Total Program Credits: 64

Suggested Course Sequence

Course Sequences are individualized and built in consultation with each student's academic advisor

Journalism Studies, A.A., Major #2092

Journalism Studies is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The Journalism Studies program is designed for students to begin their education in many different fields related to public communication. The vast majority of graduates transfer to four-year programs, either at Morrisville in Journalism & Communication for Online Media (JCOM), or other institutions in programs of communication, journalism, advertising, broadcasting, public relations or other related fields.

This program places a strong emphasis on improving a student's skills as a writer. It is writing that is the cornerstone for success in any public communication field, and students will find their own styles as writers within a system that allows for use of complex concepts and ideas in terms an audience will understand.

At the same time, the associate of arts degree program in Journalism Studies allows students to explore many fields related to public communication. Production labs are designed to give hands-on experience in journalism, broadcasting, Web content production, desktop publishing, and digital still and video photography.

Opportunities to transfer to a bachelor degree program for preparation to enter careers as reporters, photographers, copywriters and editorial staff. Other careers include advertising, public relations, industrial publications, newspapers, commercial radio and television broadcast content production, Internet content production, and Internet broadcasting, technical writing, and graphic communications.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate the ability to gather a basic news story, write that story in appropriate Associated Press style on deadline, and when appropriate, collaborate with other members of a news team to prepare the story for publication or broadcast.
- Demonstrate an understanding of, and identify examples of agenda-setting, gatekeeping, and message framing as tools in their use of mass media communication.

- Demonstrate the ability to analyze issues of public import, identifying existing opinions or points of view and producing their own analysis and opinions in appropriate journalistic forms.
- Demonstrate the ability to identify credible news sources across mass media based on a thorough knowledge of accepted journalistic standards.

Curriculum Requirements - 64 Credits

COURSE	CREDITS
JOUR 101 - Intro to Mass Communication	3
JOUR 111 - News Writing and Editing	3
JOUR 112 - Advanced News Writing and Reporting	3
OR	
JOUR 126 - Broadcast Writing	3
JOUR 185 - Production Lab I	1
JOUR 186 - Production Lab II	1
JOUR 214 - Specialized Writing	3
OR	
JOUR 280 - Broadcast Management, News & Production	3
JOUR 285 - Production Lab III	1
OR	
JOUR 287 - WCVM	1
JOUR 286 - Production Lab IV	1
JOUR 121 - Photography	3
OR	
JOUR 220 - Mass Media & Society	3
OR	
JOUR 272 - Public Relations and Publicity Management	3

OR	
JOUR 280 - Broadcast Management, News, and Promotion	3
COMP 101 - Composition and Research	3
COMP 102 - Writing About Literature	3
Liberal Arts Electives (as advised)	9
Humanities/Social Science Electives	9
MATH/SCI - Math or Science (as advised)	3
American History as Advised	3
Social Sciences as Advised	3
Other World Civilization as Advised	3
Western Civilization as Advised	3
Natural Sciences as Advised	3
Mathematics as Advised	3

Suggested Course Sequence

Year 1/Fall - 16 credits

COURSE	CREDITS
COMP 101 - Composition and Research	3
JOUR 111 - News Writing and Editing	3
JOUR 185 - Production Lab I	1
JOUR 101 - Introduction to Mass Communication	3
HIST - American History 101, 102, 103 as Advised	3
General Education in Social Sciences	3

Year 1/Spring - 16 credits

COURSE		CREDITS
COMP 102 - Writing About Literature		3
JOUR 112 - Advanced News Writing and Reporting		3
OR		
JOUR 126 - Broadcast Writing		
JOUR 186 - Production Lab II		1
General Education in Other World Civ		3
General Education in Western Civ		3
Liberal Arts Elective (as advised)		3

Year 2/Fall - 16-17 credits

COURSE		CREDITS
JOUR 214 - Specialized Writing		3
JOUR 285 - Production Lab III		1
OR		
JOUR 287 - Production Lab for WCVM Media III		1
MATH - As advised		3
Liberal Arts Electives (as advised)		6
General Education in Natural Sciences		3-4

Year 2/Spring - 16 credits

COURSE		CREDITS
JOUR 286 - Production Lab IV		1
JOUR 121 - Photography		3
OR		
JOUR 220 - Mass Media and Society		3
OR		
JOUR 272 - Public Relations and Publicity Management		3
OR		
JOUR 280 - Broadcast Management, News & Promotion		3
Math or Science (as advised)		3
Humanities/Social Science Electives (as advised)		9

Landscape Design & Management, A.S., Major #2910

The mission of this program is to provide students with a solid foundation in the study of landscape design and management, to prepare them for higher levels of study, and to propel them toward a successful career where they can achieve meaningful personal and professional lives. Quality, as it relates to the program, is defined by the demonstration of problem-solving skills expressed with sensitivity to natural and built environments and to visual aesthetics. The curriculum is both rigorous and diverse as it includes course requirements in design, horticulture, sustainability, environmental science, and natural resources. In order to qualify our graduates for entry into the landscape industry and other related fields, the program engages students in applied learning experiences gained outside the classroom and during summer internships.

Upon successful completion of this program, students can seek entry-level employment in fields such as landscape design, landscape contracting, landscape horticulture, parks & estate management, recreational planning, and environmental design. Graduates of this program have excellent opportunities to continue their education in a bachelor program of Landscape Architecture, Horticulture Business Management, or any related discipline.

Student Learning Outcomes

Knowledge

- Design Vocabulary: use appropriate design vocabulary in written and oral presentations.
- Design Elements & Principles: apply design principles and elements in design solutions.
- Design Process: engage in the stages of the design process with an evolution of design thinking.

Skills

- Creative Problem-solving: develop imaginative and functional solutions in design programming, concept & form development, and landscape management.

- Graphic Communication: depict ideas and design solutions using effective 2-d graphic media and computer-assisted design (CAD) in the drafting and rendering of illustrative plans, section elevations, freehand sketches, and perspectives.
- Project & Time Management: plan and organize project requirements; collaborate effectively in team projects; meet project deadlines.

Values

- Sustainable principles: demonstrate knowledge of landscape sustainability principles as they relate to energy and water conservation, pollution control, and environmental benefits.
- Sustainable practices: select native plant species where appropriate; choose hardscape materials with a regional fit; protect and create wildlife habitat; and reduce water runoff.

Curriculum Requirements - 64 Credits

COURSE	CREDITS
HORT 101 Plant Materials	3
HORT 103 Landscape Planning & Design I	3
HORT 105 Landscape Planning & Design II	3
HORT 109 Landscape & Turf Management	3
HORT 206 Sustainable Landscapes	3
HORT 240 LANDCADD	3
HORT Electives (as advised)	4
ENSC 106 Pesticide Use and Handling	2
ENSC 107 Integrated Pest Management	1
NATR 160 Principles of Arboriculture	2
NATR 161 Practices of Arboriculture	1
MATH - SUNY General Education MATH as Advised	3
SUNY General Education Basic Communication as Advised	3
BIOL 102 Botany	3
Additional Gen Ed (as advised) *Proficiency through MATH 103 & COMP 102 is recommended for transfer.	21
Free Electives	6

Suggested Course Sequence

Year 1/Fall - 14 credits

COURSE	CREDITS
HORT 101 - Plant Materials	3
HORT 109 - Landscape & Turf Management	3
HORT 110 - Horticultural Practices I	2
BIOL 102 - Botany: Form and Function of Seed Plant	3
MATH - As Advised	3

Year 1/Spring - 17 credits

COURSE	CREDITS
HORT 103 - Landscape Planning and Design I	3
HORT - Elective as Advised	2
SUNY General Education Basic Communication as Advised	3
SUNY General Education Elective as Advised	9

Year 2/Fall - 16 credits

COURSE	CREDITS
HORT 105 - Landscape Planning & Design II	3
ENSC 107 - Integrated Pest Management	1
NATR 160 - Principles of Arboricluture	2
NATR 161 - Practice of Arboriculture	1
SUNY General Education as Advised	9

Year 2/Spring - 17 credits

COURSE	CREDITS
HORT 206 - Sustainable Landscapes	3
HORT 240 - LandCADD	3
ENSC 106 - Pesticide Use and Handling	2
SUNY General Education as Advised	3
General Electives as Advised	6

Liberal Arts & Sciences: Humanities & Social Sciences, A.S., Major #1120

This program is also offered at the Norwich Campus.

This is a university-parallel program that gives the student a solid foundation in the Liberal Arts and Sciences similar to the first two years of the curriculum at a four- year liberal arts college or university. It provides a basis for further study leading to a bachelor degree in a variety of liberal arts areas, among them: psychology, sociology, anthropology, education, human services, English, history, philosophy, communication and the arts.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- On successful completion of the program, students will be able to:
- Think critically, and utilize information to support reasoning in writing. Communicate ideas effectively orally.
- Recognize a variety of literary and artistic forms of expression. Develop a foundation of ethical awareness in academic life.
- Give concrete examples of a major theme across time and/or cultures.
- Differentiate institutions, social groups, and cultures and recognize how diversity and change in the human experience contributes to identities.

Curriculum Requirements - 60 Credits

Required Humanities Courses

COURSE	CREDITS
COMP 101 Composition & Research	3
COMP 102 Writing About Literature	3
COMM 111 Introduction to Speech	3
Foreign Language or the Arts taken from the appropriate SUNY General Education list	3
LITR 2xx 200-level or above	3
One 200-level or above in SUNY General Education Arts, Basic Communication, Foreign Language, or Humanities taken from the appropriate SUNY General Education list	3

Required Social Science Courses

COURSE	CREDITS
One 100-level course in American History taken from the appropriate SUNY General Education list	3
One 100-level course in Western Civilization taken from the appropriate SUNY General Education list	3
One 100-level course in Other World Civ taken from the appropriate SUNY General Education list	3
One 100-level course in Social Science taken from the appropriate SUNY General Education list	3
Two 200-level or above courses in SUNY General Education American History Other World Civilizations, Social Science, or Western Civilization taken from the appropriate SUNY General Education list	6

Required Mathematics & Natural Science

COURSE	CREDITS
Natural Science with a lab taken from the appropriate SUNY General Education list	3-4
Mathematics as advised taken from the appropriate SUNY General Education list	3
Mathematics or Natural Science taken from the appropriate SUNY General Education list	3
General Elective Credits	15

Suggested Course Sequence

Year 1/Fall - 15 credits

COURSE	CREDITS
COMP 101 Composition & research	3
100 level American History	3
100 level social science	3
Math by placement	3
General elective	3

Year 1/Spring - 15-16 credits

COURSE	CREDITS
COMP 102 Writing about Literature	3
100 level Western Civilization	3
100 level Other World Civilization	3
Natural science w/lab	3 or 4
Art or foreign Language	3

Year 2/Fall - 15 credits

COURSE	CREDITS
COMM 111 Intro to Speech	3
200 level or higher literature	3
200 level or higher Gen Ed (WC/AH/OWC/SS)	3
Math or science elective	3
General elective	3

Year 2/Spring - 15 credits

COURSE	CREDITS
200 level or higher Gen Ed (H/Art/BC/FL)	3
200 level or higher Gen Ed (WC/AH/OWC/SS)	3
General elective	3
General elective	3
General elective	3

Liberal Arts & Sciences: Teacher Education Transfer— A.A., A.S.

Childhood - Major #1802

Early Childhood - Major #1803

Adolescence - Major #1804

The Teacher Education Transfer program is designed to help students explore their interest in a career in teaching at the elementary or secondary levels. Students have the opportunity to become familiar with current issues and employment opportunities in this field and to do forty hours of guided fieldwork in area schools beginning in their first semester in the program.

Students choose one of three programs, depending on the grade level of the students they will eventually become certified to teach: Early Childhood (birth through grade 2), Childhood (Grades 1-6), or Adolescence (Grades 7-12).

Students in these degree programs also have a concentration. SUNY Morrisville offers six concentrations: English, History (Early Childhood/Childhood), Social Studies (Adolescence), (each leading to the Associate in Arts degree); Math, Biology, Chemistry (each leading to the Associate in Science degree).

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate pedagogical content knowledge and skills necessary to be a successful teacher education student
- Demonstrate professional knowledge, skills and dispositions necessary to be a successful teacher education student
- Demonstrate a critical understanding of the American educational system

Curriculum Requirements - 64 67 Credits

COURSE	CREDITS
PSYC 101 Introduction to Psychology	3
EDU 101 Introduction to Teaching	3
EDU 201 Foundations of Education	3
EDU 202 Guided Fieldwork in Education	1
Foreign language as advised	3
Liberal Arts & Sciences	
may be fulfilled in Core Courses Required for Concentration	
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
PSYC 101 Introduction to Psychology	3
MATH as advised	3
Natural Science as Advised	3-4
American History as Advised	3
Western Civilizations Advised	3
Other Worlds Civilizations as Advised	3
Art/Music as Advised	3
Foreign Language as Advised	3
General Electives as Advised	4-9

Advisement Track (Choose One)

Early Childhood

COURSE	CREDITS
PSYC 241 Child Development	3
Concentration *see below for options and courses	9-22

Childhood

COURSE	CREDITS
PSYC 241 Child Development	3
Concentration *see below for options and courses	9-22

Adolescence

COURSE	CREDITS
PSYC 242 Adolescent Development	3
Concentration *see below for options and courses	9-22

Concentration List

English (AA, Early Childhood, Childhood, Adolescence)

COURSE	CREDITS
One course from the following:	
LITR 203 American Literature to 1900	3
LITR 204 American Lit 1800 to the Present	3
One course from the following:	
LITR 205 English Literature to 1800	3
LITR 206 English Lit 1800 to the Present	3
One course from the following:	
LITR 211 Black American Writers	3
HUMN 231Native American Studies	3

History (AA, Early Childhood and Childhood)

COURSE	CREDITS
Two courses from the following:	
HIST 101 United States History to 1800	3
HIST 102 U.S. History 1800 to 1900	3
HIST 103 U.S. History from 1900-Present	3
One course from the following:	
HIST 161 European History to 1648	3
HIST 162 European History from 1500	3
One course from the following:	
HIST 220 African American History	3
HIST 225 Women in the United States	3

Social Studies (AA, Adolescence)

COURSE	CREDITS
POLI 101 American National Government	3
ECON 100 Introduction to Macroeconomics	3
ECON 140 Introduction to Microeconomics	3
Two courses from the following:	
HIST 101 United States History to 1800	3
HIST 102 U.S. History 1800 to 1900	3
HIST 103 U.S. History from 1900-Present	3

Mathematics (AS, Early Childhood, Childhood, Adolescence)

Note: Math concentration requires that students place into MATH 103. If placement is lower, extra courses will be required.

COURSE	CREDITS
MATH 145 Discrete Mathematics	3
MATH 149 Elementary Linear Algebra	3
MATH 151 General Calculus A	3
MATH 152 General Calculus B	3

Biology (Early Childhood, Childhood, Adolescence)

COURSE	CREDITS
BIOL 120 General Biology I + lab	4
BIOL 121 General Biology II + lab	4
BIOL 285 Microbiology	4
CHEM 121 General College Chemistry + lab	4
CHEM 122 General College Chem II + lab	4

Chemistry (AS, Early Childhood, Childhood, Adolescence)

COURSE	CREDITS
CHEM 121 General College Chem I + lab	4
CHEM 122 General College Chem II + lab	4
CHEM 241 Organic Chemistry I + lab	4
CHEM 242 Organic Chemistry II + lab	3
MATH 151 General Calculus A	3
MATH 152 General Calculus B	3

Suggested Course Sequence

Year 1/Fall - 18 credits

COURSE	CREDITS
EDU 101 Introduction to Teaching	3
PSYC 101 Introduction to Psychology	3
COMP 101 Composition and Research	3
MATH 102 Intermediate Algebra with Trig	3
HIST 151 World History to 1600	3
Foreign Language as Advised	3

Year 1/Spring - 15 credits

COURSE		CREDITS
COMP 102 Writing About Literature		3
PSYC 241 Child Development		3
OR		
PSYC 242 Adolescent Development		3
SUNY GenEd American History as Advised		3
Course in Concentration		3
SUNY Other World Civilization as Advised		3

Year 2/Fall - 18-19 credits

COURSE		CREDITS
HIST 161 European History to 1648		3
OR		
HIST 162 European History from 1500		3
COMM 111 Introduction to Speech		3
Course in Concentration		3
Course in Concentration		3
SUNY GenEd Natural Science as Advised		3-4
SUNY GenEd Social Science Elective as Advised		3

Year 2/Spring -16 credits

COURSE	CREDITS
EDU 201 Foundations of Education	3
EDU 202 Guided Fieldwork in Education	1
Course in Concentration	3
Course in Concentration	3
SUNY GenEd Humanities or Arts as Advised	3
General Elective as Advised	3

Massage Therapy, A.A.S., Major #1342

This program is specifically designed to meet the New York State Licensure requirements for massage therapy training, including a minimum of 150 hours in a clinical setting. Massage therapy technique classes are hands on experiences that offer students the experience to work with various populations and pathologies. These experiences allow students to enter the massage therapy profession with the skills and confidence necessary to succeed. Students also receive instruction in general studies, sciences and massage history. To progress through the program a student must achieve a minimum grade of C in all massage therapy and biology courses. The associate in applied science degree in Massage Therapy is designed to prepare students for the practice of the profession of Massage Therapy. Licensed massage therapists are independent health care professionals who provide services through the skilled manipulation of the soft structures of the body focusing on both prevention and treatment.

Massage therapists may be self-employed or employed in a variety of settings including the offices of chiropractors and physical therapists, destination and day spas, wellness centers, hospitals, hospice programs, long- term care facilities, corporations, cruise ships, professional athletic teams and performing arts companies.

Students completing the A.A.S. degree will be academically prepared to meet the licensure requirements as specified by the New York State Education Department.

Graduates seeking licensure in New York State must apply for and pay an examination fee. Licensure is based upon the successful completion of the massage therapy exam and the ability to answer questions to establish “good moral character.” Anyone who has been convicted of/and or charged with a felony or misdemeanor in any state or country, surrendered a license or been found guilty or charged with professional misconduct, unprofessional conduct, incompetence or negligence, will be subject to a review by an investigator for the Office of Professional Discipline and may experience problems or delays with the licensing process. Inquiries should be directed to the Division of Professional Licensing Services, Office of the Professions, New York State Education Department.

The New York State Department of Education allows the transfer of 250 hours of previously completed massage therapy course work. A transfer student will be expected to submit comprehensive course descriptions and transcripts from his/her previous massage school(s) to be evaluated.

Program Requirements

Students accepted into the program must submit a complete physical examination and proof of immunizations as required by the Public Health Law due to affiliations with area health care facilities. Students are to adhere to the same requirements as employees. Students must demonstrate the strength, mobility and manual dexterity to perform in all laboratory/clinical settings in order to maintain the safety of clients and meet performance standards. All students must be covered by a health insurance policy in order to participate in the laboratory/clinical portion of the program. If a student does not have valid health insurance, the college provides information about procuring health insurance.

Each student must provide documentation of having one western and one eastern bodywork session prior (massage) to enrolling in the program-failure to do so will result in massage therapy courses being removed from the students schedule prior to the start of classes. This will delay enrollment in the massage therapy classes for a year.

Students will not be eligible for admission or continuation in the massage therapy program if they repeat any of the following courses twice without earning a grade of C or higher, including dropping/withdrawal or failing, at this institution or another college: all MAST courses, BIOL 150, BIOL 151, BIOL 135, BIOL 136,

BIOL 137

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Demonstrate effective and safe delivery of therapeutic massage utilizing a variety of techniques
- Identify and analyze pathologies
- Develop appropriate treatment plans based on client assessment
- Communicate in a professional and effective manner with clients and the general public
- Demonstrate professional and ethical behaviors related to massage therapy
- Document massage therapy sessions accurately and professionally utilizing accepted formats and terminology
- Demonstrate the ability to adapt to various practice settings
- Develop a treatment plan

Program Outcomes

- The pass rate for graduates will meet or exceed the NYS pass rate (+ or -5%) for those taking the examination for the first time.
- 75% of those students progressing to the second semester will complete the program within the time identified on the sample study plan.
- Students completing the A.A.S. degree will be academically prepared to meet the licensure requirements as specified by the New York State Education Department.
- Graduation Requirements: All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. These requirements are fulfilled in the following list of courses for this program. A grade of C or higher is required for all BIOL and MAST courses that are used as prerequisite courses in the MAST program.

Curriculum Requirements

Major Field Requirements

COURSE	CREDITS
MAST 100 CPR for Healthcare Providers	1
MAST 101 Eastern Anatomy and Physiology	3
MAST 102 Western Massage I	4
MAST 103 Western Massage II	2
MAST 104 Eastern Massage	2
MAST 201 Western Medical Massage	4
MAST 202 Eastern Medical Massage	4
MAST 203 Professional Issues	1
MAST 204 Massage Clinical Experience	5
MAST 205 Senior Seminar	3
MAST 206 Professional Practice Issues	2
BIOL 135 Myology I	3
BIOL 136 Myology II	3
BIOL 137 Neurology	4
BIOL 150 Human Anatomy & Physiology I	4
BIOL 151 Human Anatomy & Physiology II	4

Liberal Arts and Science

COURSE	CREDITS
COMP 101 Composition and Research	3
COMP 110 Technical Communications	3
OR	
COMM 111 Introduction to Speech	3
PSYC 101 Introduction to Psychology	3

Additional General Elective Credits: 2

Total Program Credits: 60

Suggested Course Sequence

Year 1/Fall - 18 credits

COURSE	CREDITS
MAST 101 Eastern Anatomy and Physiology	3
MAST 102 Western Massage	4
BIOL 150 Human Anatomy & Physiology I	4
COMP 101 Composition and Research	3
BIOL 135 Myology I	4

Year 1/Spring - 15 credits

COURSE	CREDITS
MAST 102 Western Massage II	2
MAST 104 Eastern Massage	2
BIOL 151 Human Anatomy and Physiology II	4
BIOL 136 Myology II	4
PSYC 101 Introduction to Psychology	3

Year 2/Fall - 14 credits

COURSE	CREDITS
MAST 201 Western Medical Massage	4
MAST 202 Eastern Medical Massage	4
BIOL 137 Neurology	4
Elective as Advised	2

Year 2/Spring - 15 credits

COURSE	CREDITS
MAST 204 Massage Clinical Experience	5
MAST 205 Senior Seminar	3
MAST 206 Professional Practice Issues	2
MAST 100 CPR for Healthcare Providers	1
MAST 203- Professional Issues	1
COMM 111 Introduction to Speech	3
OR	
COMP 110 Technical Communications	3

Mechanical Engineering Technology A.A.S., Major #0493

Mechanical Engineering Technology is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Mechanical Engineering Technology applies almost universally to industry and engineering technology. It is oriented to production and is concerned with such areas as product design, manufacturing technology, product and material testing, and quality control.

The curriculum emphasizes three technical streams: technical graphics communication, manufacturing processes, and mechanical design. It is a laboratory-oriented program that provides a wide selection of courses in CAD, machining, mechanical design and manufacturing processes. A hands-on equipment philosophy applies from drafting to machining to hydraulics. Theory and practical work are coordinated to give a thorough but broad understanding of the skills required by industry.

Accreditation: This program is accredited by the Engineering Technology Accreditation Commission of ABET.

Career Opportunities: The Mechanical Engineering Technology program prepares students to enter manufacturing or allied industries as an engineering technician, quality and production control technician, a laboratory technician in plant operation, mechanical design, metal working, and foundry industries, or as a CAD drafter/designer, product designer under the direction of design chiefs or project engineers in the areas of product development and detailing, manufacturing design, and product design. The Mechanical Engineering Technology program prepares students for careers in design and drafting, engineering aide, laboratory technician, quality and production control, plant engineering technician, mechanical design, metal working, and foundry industries.

Transfer Options: Most Mechanical Engineering Technology graduates pursue a four-year degree in Mechanical Engineering Technology, Manufacturing Engineering Technology, or Computer-Integrated Manufacturing Technology. It's recommended to take PHYS 128 for easier transfer into junior year in related 4-year programs in the SUNY system as part of SUNY Transfer Path (Seamless Transfer) program.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;
- Apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge;
- Conduct standard tests and measurements, and to conduct. Analyze, and interpret experiments;
- Function effectively as a member of a technical team;
- Identify, analyze, and solve narrowly defined engineering technology problems;
- Apply written, oral, and graphical communication in both technical and non-technical environment; and an ability to identify and use appropriate technical literature;
- Understand the need to engage in self-directed continuing professional development;
- Show a commitment to address professional and ethical responsibilities, including a respect for diversity; and
- Show a commitment to quality, timeliness, and continuous improvement.

Curriculum Requirements - 60 Credits

COURSE	CREDITS
CAD 184 Computer-Aided Drafting for Mechanical Design	2
CAD 186 3D Parametric Solid Modeling	2
DRFT 151 Engineering Drawing	2
DRFT 252 Geometric Dimensioning and Tolerancing	2
MFG 110 Dimensional Metrology	2
MFG 206 CNC Machining	3
MFG 207 Quality Control	2
MFG 208 Computer Aided Manufacturing – MasterCAM	2
MFG 221 Manufacturing Processes I	3
MFG 240 Design/Manufacture Capstone	3
MECH 101 Machine Tools	3
MECH 120 Engineering Materials	3
MECH 211 Analytical Mechanics	3
MECH 212 Mechanical Design	4
MECH 213 Strength of Materials	4
MECH 233 Fluid Power and Control	4
PHYS 107 Introductory Physics I	4
COMP 101 Composition and Research	3
MATH 151 General Calculus A	3
COMP 110 Technical Communications	3
Elective Credits as Advised	3

Suggested Course Sequencing

Year 1/Fall - 17 credits

COURSE	CREDITS
COMP 101 Composition and Research	3
MATH Mathematics (as advised)	3
PHYS 107 Introductory Physics I	4
DRFT 151 Engineering Drawing I	2
MECH 120 Engineering Materials	3
CAD 184 Comp-Aided Drafting for Mechanical Design	2

Year 1/Spring - 16 credits

COURSE	CREDITS
ENGL 112 Technical Communications	3
MATH Mathematics (as advised)	3
MFG 110 Dimensional Metrology	2
MECH 211 Analytical Mechanics (Statics)	3
MECH 101 Machine Tools	3
CAD 186 3D Parametric Solid Modeling	2

Year 2/Fall - 18 credits

COURSE	CREDITS
MATH Mathematics (as advised)	3
MECH 213 Strength of Materials	4
MFG 221 Manufacturing Processes I	3
MFG 206 CNC Machining	3
DRFT 252 Geometric Dimensioning and Tolerancing	2
General Education Elective	3

Year 2/Spring - 18 credits

COURSE	CREDITS
MECH 212 Mechanical Design	4
MFG 240 Design/Manufacture Capstone	3
MECH 233 Fluid Power and Control	4
MFG 207 Quality Control	2
MFG 208 Comp-Aided Manufacturing MasterCAM	2
General Education Elective	3

Medical Office Administration, A.A.S. , Major #2200

Medical Office Administration is a ThinkPad University curriculum using laptop computers integrated into courses. This program is offered at the Morrisville Campus only.

The Medical Office Administration program is designed to give the student a background for medical office work in this electronic age. To supplement the regular program of study, special features emphasize medical coding and billing as well as medical transcription, information processing and/or the opportunity to acquire specialized knowledge working within the front end of a medical office. Students in the Medical Office Administration program will have the opportunity to work with up-to-date computers and software. Students are introduced to the various exams that may be required of them upon graduation in relation to the billing and coding occupations. Students are required to participate in an internship program their second year where they combine their education and interpersonal skills. Various required courses listed in the Proposed Curriculum structure (below) may be earned through articulation agreements between various high schools and SUNY Morrisville. Distance learning courses are currently in place for all of the medical courses as well as some of the general education requirements and electives. No previous business education is required. Scheduling is flexible, with students being placed in courses according to the level of proficiency achieved in high school. Students are placed in the curriculum with the appropriate courses that challenge their skills and enhance their learning experience. Graduates of the two-year Medical Office Administration program receive the associate in applied science (AAS) degree. Credits may be transferred into any one of the following, four-year degree programs Entrepreneurship, Business Administration or Technology Management. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

Career Opportunities: Employment available as a front-end office manager in health care facilities; billing and/or coding specialist in medical offices, hospitals, and insurance companies; and medical transcriptionist for medical facilities. Many students completing this degree decide to outsource their expertise to health care offices and work from home. They, therefore, have a variety of offices in which they work for simultaneously.

Student Learning Outcomes

Upon successful completion of this program, students will be able to:

- Transcribe a dictated letter or report into a mail-ready document using a computer and

transcribing equipment

- Apply appropriate critical thinking skills and identify human relation skills in structured case settings;
- To analyze medical language using prefixes, suffixes, root words, and combining forms;
- To identify and practice legal and ethical responsibilities of an administrative medical specialist, (i.e.,HIPAA mandates, medical records, health information, and consents and disclosures as well as telephone etiquette);
- Code diagnoses and procedures using ICD-10, HCPS and CPT coding systems;
- Identify and apply technological skills including: operating systems, spreadsheets, database management

Required Curriculum

Major Field Requirements

COURSE	CREDITS
ACCT Accounting as Advised	3
BSAD 102 Business Math	3
BSAD 140 Business Communications	3
OFFT 116 Medical Keyboarding	2
OFFT 117 Office Administration Orientation	1
OFFT 120 Document Design for Effective Communications	3
OFFT 130 Data Entr	1
OFFT 135 Machine Transcription	2
OFFT 200 Medical Coding	3
OFFT 201 Outpatient Billing	2
OFFT 202 Inpatient Billing	2
OFFT 216 Office Practice Simulation	3
OFFT 218 Medical Office Procedures	3
OFFT 220 Document Design Business Analysis	3
OFFT 235 Medical Transcription	3
OFFT 250 Medical Terminology	3
OFFT 291 Office Technology Internship I	1
OFFT 292 Office Technology Internship II	1

Liberal Arts and Science

COURSE	CREDITS
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
MATH as Advised	3
BIOL 150 Human Anatomy and Physiology I	3
BIOL 150L Human Anatomy Physiology I Lab	1

Additional General Elective Credits: 7

Total Program Credits: 62

*A minimum average of C in all Medical Office Administration courses

Suggested Course Sequencing

Year 1/Fall - 16 credits

COURSE	CREDITS
BSAD 102 Business Mathematics	3
COMP 101 Composition and Research	3
OFFT 116 Medical Keyboarding	2
OFFT 117 Office Admin Orientation	1
OFFT 250 Medical Terminology	3
OFFT 130 Data Entry	1
SUNY GER	3

Year 1/Spring - 15 credits

COURSE	CREDITS
COMP 102 Writing About Literature	3
OFFT 120 Document Design for Effective Communication	3
OFFT 200 Medical Coding	3
MATH SUNY GER Mathematics as Advised	3
SUNY GER	3

Year 2/Fall - 17 credits

COURSE	CREDITS
BIOL 150 Human Anatomy & Physiology I	3
BIOL 150L Human Anatomy & Physiology I Lab	1
OFFT 135 Machine Transcription	2
OFFT 201 Outpatient Billing	2
OFFT 218 Medical Office Procedures	3
OFFT 220 Document Design for Business Analysis	3
BSAD 140 Business Communications	3

Year 2/Spring - 16 credits

COURSE	CREDITS
ACCT 100/ ACCT 101 Accounting Information & Mgmt Decisions/ Principles of Accounting I	3
SUNY GER	3
OFFT 202 Inpatient Billing	2
OFFT 216 Office Practice Simulation	3
OFFT 235 Medical Transcription	3
OFFT 291/292 Office Tech Internship I & II	2

Natural Resources Conservation, A.A.S., Major #0617

The Natural Resources Conservation curriculum provides fundamental training in ecology, fish and wildlife, forestry, outdoor recreation and related subjects. Students receive a broad-based education with an emphasis on practical, hands- on experience. College, state and county properties provide a wide assortment of opportunities for field experiences such as fish surveys, trail building, wildlife habitat improvement and forest surveys and management.

Career Opportunities: Parks, forestry, arboriculture, fisheries and wildlife management. Soil conservation service, conservation officer, forestry technician, forest ranger, environmental consultant, and water and wastewater treatment plant operator.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Describe the state of the natural resources profession and potential career opportunities.
- Conduct himself/herself in a manner consistent with an embodied sense of conservation stewardship.
- Deal professionally and ethically with clients, the public, and agency personnel.
- Utilize oral and computer communication skills necessary to interact in the profession.
- Demonstrate advanced knowledge and competency in taxonomy and natural history.
- Demonstrate hands-on experience in natural resource sampling, inventory, and measurement techniques.
- Demonstrate competency in utilizing geospatial technologies (Global Positioning System – GPS, Geographic Information System – GIS, and remote sensing).
- Apply critical thinking and problem-solving skills in natural resource conservation.
- Utilize existing technology, products, and services to maximize work efficiency and success.
- Practice a collaborative spirit in team-efforts and project coordination.

SOCIETY OF AMERICAN FORESTERS ACCREDITED FOREST TECHNOLOGY CONCENTRATION:

Students wishing to specialize in Forestry and Silviculture may complete the Forest Technology Concentration Minor in the Natural Resources Conservation A.A.S. program by taking: as their three capstone electives NATR 211 Forest Protection, NATR 215 Practices of Silviculture and NATR 232 Wildlife Ecology and Management; BSAD 116 Organizational Behavior and Management as their fourth semester technical elective; and then completing the four credit hour NATR 246 Internship in Natural Resources at an approved forest industry internship site.

Curriculum Requirements

COURSE	CREDITS
NATR 100 Introduction to Forestry and Natural Resources	3
NATR 101 General Ecology	3
NATR 103 Natural Resources Equipment Operation	2
NATR 110 Natural Resources Measurements	3
NATR 115 Forest Ecology	3
NATR 120 Introduction to Recreation Area Management	3
NATR 142 Plane Surveying	3
NATR 144 Seminar Environmental Resources	1
NATR 210 Dendrology	3
NATR 213 Basics of Geospatial Technology	2
NATR 250 Aquatic Ecology	1
BIOL 102 Botany	3
ENVT 100 Introduction to Environmental Technology	3
AGRO 110 Soil Science	3
OFFT 100 Introduction to Spreadsheets	1
COMP 101 Composition and Research	3
COMP 102, COMP 110 or COMM 111	3
MAGN 101 Elementary Algebra	3
Technical Electives from AGBS, AGEN, AGSC, BIOL. BSAD, CHEM, CJUS, ENSC, ENVT, HORT, NATR, RENG, RREN	2

Core Specialization (select three course from the list below)

COURSE	CREDITS
NATR 211 Forest Protection	3
NATR 215 Practices of Silviculture	3
NATR 221 Invasive Species Management	3
NATR 232 Wildlife Ecology & Management	3
NATR 252 Fish Ecology & Management	3

Suggested Course Sequence

Year 1/Fall - 17 credits

COURSE	CREDITS
BIOL 102 Botany - - Form and Function of Seed Plants	3
COMP 101, 102, 110, or COMM 111 as advised	3
ENVT 100 Introduction to Environmental Technology	3
MATH Mathematics as advised	3
NATR 100 Introduction to Forestry & Natural Resources	3
NATR 144 Seminar in Environmental Resources	1
OFFT 110 Introduction to Spreadsheet Software	1

Year 1/Spring - 16/17 credits

COURSE	CREDITS
AGRO 110 Soil Science	3
NATR 101 General Ecology	3
NATR 103 Natural Resources Equipment Operation	2
NATR 110 Natural Resources Measurements	3
NATR 115 Forest Ecology	3
COMP/GER/*Tech Elec* American History/Western Civ/Other World Civ/Social Science/Foreign Language/The Arts as advised. 1 course required. Students planning on matriculating to the Renewable Resources Technology BT should take an additional GER elective from a different GER pillar.	2-3

Year 2/Fall - 14-15 credits

COURSE	CREDITS
NATR 120 Introduction to Recreation Area Management	3
NATR 142 Plane Surveying	3
NATR 210 Dendrology	3
NATR 250 Aquatic Ecology	3
COMP/GER/*Tech Elec* American History/Western Civ/Other World Civ/Social Science/Foreign Language/The Arts as advised. 1 course required. Students planning on matriculating to the Renewable Resources Technology BT should take an additional GER elective from a different GER pillar.	2-3

Year 2/Spring - 12-13 credits

COURSE	CREDITS
Three of the five following capstone courses:	
NATR 211 Forest Protection	3
NATR 215 Practice of Silviculture	3
NATR 221 Invasive Species Management	3
NATR 232 Wildlife Ecology and Management	3
NATR 252 Fish Ecology and Management	3
Capstone Required Total	9
NATR 213 Basics of Geospatial Technology	1
COMP/GER*/Tech Elec* American History/Western Civ/Other World Civ/Social Science/Foreign Language/The Arts as advised. 1 course required. Students planning on matriculating to the Renewable Resources Technology BT should take an additional GER elective from a different GER pillar.	2-3

Nursing, A.A.S., Major #0622

The mission of the SUNY Morrisville Department of Nursing is to foster the development of the intentional learner who is prepared to transition to practice as a member of the interdisciplinary health care team. The nursing program will provide educational opportunities that promote student learning across the lifespan, cultures, and the health/wellness continuum. The nursing faculty are committed, collaborative partners with students and healthcare agencies, supporting nursing workforce needs and interests in our communities while striving to meet its continual and changing health care needs. The focus of the program is mastery of graduate level competencies reflecting the knowledge, skills, and attitudes required for the delivery of safe, quality care. Upon completion of the program students receive the A.A.S. degree and are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

The program is accredited by:

The Accreditation Commission for Education in Nursing

3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326

(404-975-5000), www.acenursing.org

The State Education Department Division of Professional Education

89 Washington Avenue, 2nd Floor

West Wing, Albany, NY 12234

(518)-486-2967, OPPROGS@nysed.gov

Student Learning Outcomes

The curriculum is compatible with the philosophy and conceptual framework of the Division of Nursing and provides educational experiences that prepare a graduate to:

- Advocate for the patient and their families to promote a partnership in providing compassionate and coordinated care based on respect for patient's preferences, values, and needs.

- Conduct self in a way that reflects integrity, responsibility, and ethical practices necessary to function effectively within nursing and interdisciplinary teams, fostering open communication, mutual respect and shared decision-making to achieve safe and quality patient care.
- Use their clinical reasoning ability to integrate nursing science in the provision of safe and quality care necessary to minimize risk of harm to patients, family, and providers.
- Integrate best current evidence with clinical expertise based on the patient and family's values and preferences for delivery of optimal healthcare.
- Examine the evidence that supports clinical practice and question underlying assumptions necessary to improve the quality and safety of health care systems.
- Make judgements in practice based on information and technology to communication, manage knowledge mitigate error, and support decision- making.

Career Opportunities

The Nursing program prepares the graduates for careers in a variety of settings such as: acute care hospitals, long term care facilities, home care, community-based agencies, and rehabilitative facilities. Candidates for licensure must meet all requirements as determined by the State Education Department. In addition to meeting the educational requirements for the NCLEX-RN; applicants must also answer questions establishing "good moral character". Anyone who has been convicted of/and or charged with:

- felony
- misdemeanor professional misconduct
- unprofessional conduct and/or
- negligence, in any state or country, may experience problems or delays with the licensing process

Inquiries should be directed to the Division of Professional Licensing Services, Offices of the Professions, New York State Education Department

(www.nysed.gov/nurse.htm).

The application fees for licensure, due at the time of application (NURS 250) are approximately a total of $ 375 payable to the testing vendor and State Education Department.

Transfer and Non-Traditional Students

Transcripts will be evaluated on an individual basis. Transfer students are required to complete 30 credit hours at SUNY Morrisville for degree completion per college policy.

Any student who has repeated two nursing courses or repeated the same nursing course twice (dropping/withdrawal or failing grade) at another college/nursing program will not be eligible for admission to the associate degree nursing program.

Prior to admission, students who have been enrolled in nursing courses at another institution must submit a letter of reference from the Dean or Associate Dean or Chairperson of that program to Director of Nursing at SUNY Morrisville in order to determine the applicant's past performance and potential. There are established enrollment numbers for each course.

Once enrolled, a student may only repeat any nursing course once, for a maximum of two repeats for the entire curriculum. Repeats include instances of dropping/withdrawing/ failing. When a student fails to complete any/all course(s) required to progress to the next semester, they will not be scheduled for the nursing sequence until documentation of completion has been received and approved. Following approval, scheduling will occur on a space available basis. This may delay the student's time to degree completion.

Readmission to the program is on a "space available" basis. In some instances a student seeking readmission will be required to meet with the Director of Nursing to describe remedial actions undertaken and to address the factors that will enhance their success. It is the responsibility of the student to prove their behaviors have changed in a substantive fashion.

Program Entrance Requirements

- Minimum Regents score 75 in Biology
- Minimum HS average B (80) in Biology
- Minimum GPA: 2.75 for transfer students
- Completion of MAGN 101, 106, or 107 with a grade of C or better or placement testing in MATH 102
- TEAS test with a minimum composite score of 62 (maximum 2 attempts)

Students who do not meet the admission requirements for the Nursing program may be admitted to the Individual Studies curriculum. A minimum cumulative average of 2.75 is required for admission to Nursing.

Health Requirements:

All health clearance requirements must be on file at the Student Health Center three weeks prior to the start of the semester.

- Annual physical examination
- Annual Tuberculin Skin Test (TST) or follow up X-Ray
- Annual Influenza vaccination
- 2 MMR's or Titers
- Rubella Titer
- Chicken Pox (documented history of disease, vaccination and or a varicella titer)
- Hepatitis B Vaccine or signed waiver
- Meningitis Vaccine or signed waiver
- Tetanus/diphtheria
- Current certification in CPR – Basic Life Support (BLS) for Health Care Providers through the American Heart Association is required and must be maintained for the clinical components of all nursing courses. Certification must be obtained prior to enrollment in any clinical course.
- Proof of health insurance

Nursing students are to adhere to the same public health laws and facility regulations as employees. Students must meet the facility health requirements and have the ability to meet clinical outcomes with or without reasonable accommodations. Students must demonstrate:

- The strength and manual dexterity to perform in all laboratory and clinical settings and to maintain the safety of clients without posing a threat to himself/herself.
- The visual, hearing and speech skills requisite to client assessment and professional performance including reading, recording client information, performing ausculatory exams, and performing any and all other diagnostic and therapeutic procedures.

Students with a suspected or documented allergy/latex hypersensitivity are responsible for being tested prior to entering the program. The test results and a writte plan of accomodation/treatment sighed by a licensed healt care provider must accompany the annual physical examination.

Background Checks

Students enrolled in the nursing program must conform to the rules, policies, and procedures of the clinical affiliates in order to participate in practical experiences, which may include background checks. The cost of the background check will be the responsibility of the student. Failure to consent to and submit the appropriate background screening findings will prohibit the student from continuing in the nursing program.

Transportation Information

Transportation is available from the SUNY Morrisville campus to area hospitals and other health care facilities. Throughout the program, clinical experience is correlated with the theoretical content presented in the classroom. Each of these experiences is planned to meet the learning needs of the students. Students will need to provide their own transportation to clinical for the preceptor experience; the second half of NURS 250.

Additional Expenses

The following are approximate additional expenses: uniforms/special equipment

Course fees range from $16-60 per semester. Lab kids $50, course in the first year, achievement tests $200-230/ semester (this includes the cost for NCLEX-RN review materials).

Program Outcomes

- Eighty percent (80%) of the graduates of the first time test takers will meet or exceed the National Council Licensure Exam (NCLEX-RN).
- Ninety percent (90%) of the program graduates will be employed in nursing and/ or will be enrolled in a baccalaureate program within six (6) months of graduation.

- Sixty percent (60%) of students will complete the program within three (3) years of matriculation into the nursing programs.

Graduation Requirements

All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. To fulfill these requirements along with the required courses for this program, 64 credits are required for this program. These requirements are fulfilled in the following list of courses for this program.

GPA: Overall GPA of 2.00 or higher A student must maintain a 2.0 grade point average to remain in good standing. To progress to the next sequential nursing course, a student must achieve a minimum grade of C+ in each nursing course and a minimum of a C in anatomy and physiology courses. A mathematics course may be required dependent upon placement test scoring, however, all nursing courses (through NURS 250) require that each student pass mandatory medication mathematics proficiency exams. Demonstrated Proficiency through MAGN 101 is required

Curriculum Requirements - 64 Credits

COURSE	CREDITS
NURS 120 - Fundamentals in Nursing	7
NURS 150 - Nursing Care of the Individual with Common Health Problems	9
NURS 152 - Pharmacology I	1
NURS 210 - Nursing Care of the Individual with Common Complex Health Problems	9
NURS 212 - Pharmacology II	1
NURS 250 - Nursing Care of the Individual with Multiple Common Complex Health Problems	8
NURS 251 - Transition into Practice	1
NURS 252 - Pharmacology III	1
BIOL 150 - Human Anatomy & Physiology I	4
BIOL 151 - Human Anatomy & Physiology II	4
BIOL 285- Microbiology I	4
COMP 101 Composition and Research	3
COMP 102 Writing About Literature	3
NUTR 108 Basic Nutrition	3
PSYC 101 General Psychology	3
PSYC 241 Child Development	3

Suggested Course Sequence

Year 1/Fall - 17 credits

COURSE	CREDITS
NURS 120 Fundamentals in Nursing	7
BIOL 150 Human Anatomy and Physiology I	4
PSYC 101 Introduction to Psychology	3
COMP 101 Composition and Research	3

Year 1/Spring - 17 credits

COURSE	CREDITS
NURS 150 Nursing II	9
NURS 152 Pharmacology I	1
PSYC 241 Child Development	3
BIOL 151 Human Anatomy and Physiology II	4

Year 2/Fall - 17 credits

COURSE	CREDITS
NURS 210 Nursing III	9
NURS 212 Pharmacology II	1
BIOL 285 Microbiology	4
NUTR 108 Basic Nutrition	3

Year 2/Spring - 13 credits

COURSE	CREDITS
NURS 250 Nursing IV	8
NURS 251 Transition into Practice	1
NURS 252 Pharmacology II	1
COMP 102 Writing About Literature	3

Renewable Energy Technology, A.A.S., Major #2098

Renewable Energy Technology is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The Renewable Energy Technology Associate in Applied Science (RET A.A.S.) degree provides students with a broad and comprehensive technical education in the rapidly growing field of renewable energy. The RET A.A.S. program focuses on developing skilled technicians who are prepared to enter the job market as entry-level installers, operators, or maintenance technicians for renewable energy technologies including grid-tied solar photovoltaic, solar thermal, small wind, micro hydroelectric and multiple bioenergy systems. The degree program has the flexibility to train students directly out of high school, as well as displaced workers who already possess a mechanical or electrical technical background.

The Renewable Energy Technology A.A.S. is a demanding curriculum for incoming students as there are strong math, biology, chemistry, physics, and electrical components to the program. SAT scores, combined with math and science units, and their high school average will be considered to ensure that incoming students will be able to handle a rigorous curriculum.

Required tools/equipment: Laptop, clipboard, safety glasses, work gloves, work boots (steel/safety toe), waterproof rubber boots (recommended), hard hat, rain gear (coat and pants/bibs), and cold weather gear (insulated clothing).

Graduates from the RET A.A.S. have been successfully employed as entry-level installers or maintenance technicians for renewable energy technologies including grid-tied solar photovoltaic, small wind, micro hydroelectric and bioenergy systems. Graduates are currently working in several states across the country and abroad within their chosen renewable energy field

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Describe basic social, political and economic driving forces impacting renewable energy resources and systems regionally, nationally and abroad
- Interpret system schematics and designs to safely connect renewable energy mechanical and electrical components

- Install, maintain, and troubleshoot renewable energy systems by developing problem-solving skills through critical thinking in both hands-on and written technical environments
- Work safely and responsibly in groups with diverse individuals
- Work safely and responsibly in groups with diverse individuals

Curriculum Requirements - 60 Credits

COURSE	CREDITS
RENG 101 Electrical Theory for Renewable Energy	4
RENG 102 Renewable Energy Resources	3
RENG 103 Renewable Energy Seminar	1
RENG 150 Analysis Techniques for Renewable Energy	1
AGEN 151 Applied Hydraulics for Hydropower Generation	3
RENG 310 Biomass Energy Resources	3
RENG 221 Intro to Small Wind Systems	3
RENG 231 Intro to Solar Photovoltaics	3
AGEN 125 Residential Electrification	3
NATR 213 Basics of Geospatial Technology	1
OR	
CAD 181 Intro to Computer-Aided Drafting	1
CITA 101 Principles of Computers & Apps	3
Natural Science as Advised	8
COMP 101 Composition and Research	3
Humanities (as advised)	3
SUNY General Education History, Western Civilization, or Other World Civilization as Advised	3
MATH as Advised	3
Technical Electives as Advised	12

Suggested Course Sequencing

Year 1/Fall - 17 credit

COURSE		CREDITS
RENG 101 Electrical Theory for Renewable Energy		4
RENG 102 Renewable Energy Resources		3
RENG 103 Renewable Energy Seminar		1
MATH (as advised)		3
COMP 101 Composition and Research		3
CITA 101 Principles of Computers and Applications		3

Year 1/Spring - 14 credits

COURSE		CREDITS
RENG 150 Analysis Techniques for Renewable Energy		1
AGEN 151 Applied Hydraulics for Hydropower Generation		3
AGEN 125 Residential Electrification		3
SUNY General Education Natural Science as Advised		4
Humanities as Advised		3

Year 2/Fall - 16 credits

COURSE		CREDITS
RENG 310 Biomass Energy Resources		3
RENG 231 Introduction to Solar Photovoltaics		3
PHYS 107 Introduction to Physics		4
CITA 140 - Introduction to Programming		3
Lower Level Elective as Advised (e.g. RESC 221)		3

Year 2/Spring

COURSE		CREDITS
NATR 213 Basics of Geospatial Technology		1
RENG 221 Introduction to Small Wind Systems		3
Lower Level Elective as Advised (e.g. RENG 225)		3
Lower Level Elective as Advised (e.g. RESC 260)		3
SUNY General Education History, Western Civilization, or Other World Civilization as Advised		3

Recommended Technical Electives:

COURSE	CREDITS	
AGRO 110 - Soil Science	3	
AGRO 210 - Field Crops	3	
AUTO 102 - Metals (welding)	3	
AGEN 161 - Basic Hydraulics	3	
BSAD 116 - Business Organization and Management	3	
CAD 181 - Introduction to Computer-Aided Graphics	1	
CAD 183 - Architectural Computer-Aided Drafting and Design	3	
CITA 120 - Computer Concepts & Operating Systems	3	
CITA 140 - Introduction to Programming	3	
CITA 200 - Data Communications and Networking	3	
DTEC 150 - Diesel Systems	3	
ENSC 101 - Agricultural Science	3	
ENSC 106 - Pesticide Use and Handling	2	
ENSC 107 - Integrated Pest Management	1	
MECH 211 - Analytical Mechanics (statics)	3	
NATR 103 - Natural Resources Equipment Operation	2	
NATR 213 - Basics of Geospatial Technology	1	
RENG 225 - Tower Climbing and Rescue	2	
RENG 251 - Anaerobic Digester Design and Operation	3	
RENG 130 - Light Framing	3	
RESC 221 - Plumbing	3	
RESC 260 - Heating and Energy Systems	3	

Residential Construction, A.O.S., Major #0463

Residential Construction is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

The Residential Construction curriculum is designed for students that wish to develop skills and knowledge in the residential construction industry. Students in the program will develop technical skill sets through coursework and experiential learning laboratories. Students will engage in a broad range of construction disciplines, including masonry, carpentry, plumbing, HVAC, electrical, design, planning, estimating, and worksite management.

In addition to technical courses, students will take business, accounting, and composition courses. These courses allow students develop communication and soft skills that are required in the field and accelerate advancement in the construction industry.

Career Opportunities: Employment opportunities are as numerous as the various segments of the home-building industry. Employment directly related to residential construction could include entrepreneurship, materials purchasing, or working with a contractor as an estimator, foreman, or project manager.

Graduates with a comprehensive knowledge of construction and business are well-suited for careers in sales. These careers might include real estate, development, retail and wholesale building materials sales and management, and product manufactures representatives.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Develop estimates, construction contracts, and material lists for typical residential structures.
- Design and build masonry systems including foundations, concrete and masonry unit structures for residential applications.
- Estimate, plan schedule and complete building projects with minimal supervision for residential construction.
- Demonstrate best practices and safety while constructing wood framing for residential structures.
- Apply a working knowledge of a rough-in and devise installation for utilities for residential dwellings.

- Interpret and interpolate working drawings used for construction of residential commercial structures.
- Estimate the major material components and standards of workmanship for the home building industry.

Curriculum Requirements - 60 credits

COURSE	CREDITS
RESC 106 Graphic Communication	3
RESC 130 Light Framing	3
RESC 160 Introduction to Building Material and Estimating	3
RESC 201 Estimating and Planning	3
RESC 211 Masonry and Foundations	3
RESC 221 Plumbing	3
RESC 260 Heating and Energy Systems	3
RESC 270 Construction Planning and Management	4
CAD 181 Introduction to CAD	1
WOOD 101 Wood Products and Processes	3
WOOD 260 Production Maintenance & Supervision	2
AGEN 125 Electrification	3
AGEN 135 Construction Surveying	3
BSAD 108 Business Law I	3
BSAD Business as Advised	3
ACCT Accounting as Advised	3
COMP 101 Composition and Research	3
COMP 110Technical Communications	3
Additional General Elective Credits	8

Suggested Course Sequence – Residential Construction

Year 1/Fall - 16 credits

COURSE	CREDITS
RESC 130 Light Framing	3
COMP 101 Composition and Research	3
WOOD 101 Wood Products and Processes	3
RESC 106 Intro to Building Materials and Estimating	3
CAD 181 Intro to Computer-Aided Drafting	1
BSAD Elective as Advised (e.g. BSAD 117)	3

Year 1/Spring - 15 credits

COURSE	CREDITS
RESC 160 Intro to Building Materials and Estimating	3
AGEN 125 Electrification	3
COMP 110 Technical Communications	3
ACCT 100 Accounting Info. And Mgt. Decision	3
Elective as advised (e.g. RENG 102)	3

Year 2/Fall - 14 credits

COURSE	CREDITS
RESC 221 Plumbing	3
AGEN 135 Construction Surveying	3
RESC 211 Masonry and Foundations	3
RESC 201 Estimating and Planning	3
Elective as advised (e.g. RENG 231)	2

Year 2/Spring - 15 credits

COURSE	CREDITS
RESC 270 Construction Planning & Mgt	4
BSAD 108 Business Law 1	3
RESC 260 Heating and Energy Systems	3
WOOD 260 Production Maint Supervision	2
Elective as advised (e.g. RENG 221)	3

RESTAURANT MANAGEMENT, A.A.S., Major #0572

Restaurant Management is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Restaurant Management emphasizes a sequence of management courses which includes food service and hotel operations. In addition, students take food and beverage merchandising, purchasing and cost control and are serve safe certified. Students also work in The Copper Turret Restaurant operated in the village of Morrisville during the fourth semester. The Copper Turret is a full service tavern and upscale dining facility where the students rotate through positions in both front and back of the house.

Graduates of this program are prepared to work as entry-level managers in hotels, restaurants, clubs, fast food units, airlines, catering, theme parks, casinos, resorts, and various entertainment complexes.

The hospitality field offers graduates mobility to positions such as food and beverage director, bar manager, food production supervisor, and general manager/ owner. Graduates also transfer to the college's BBA in Resort and Recreation Service Management or other bachelor degree programs.

Career Opportunities: Manager or assistant, food and beverage director, banquet and catering manager, purchasing agent, food production supervisor and dining room supervisor in restaurants, hotels, colleges, schools, resorts, convention centers, major sporting events, and entertainment facilities.

Graduation Requirements: Students graduating from this program must complete a minimum of 62 credit hours earned and maintain at least a 2.0 gpa. Students must also complete at least 20 credit hours in Liberal Arts and Sciences. Also, a residency requirement of 30 credit hours at SUNY Morrisville should be met.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Understand and define basic management theories common to all types of foodservice operations

- Identify and illustrate the basic elements of equipment design and layout in food service facilities
- Possess an extensive business portfolio that displays an up to date resume, cover letter, skill set, work philosophy, career goals and shows extensive work examples
- Demonstrate basic culinary skills and apply those skills in a commercial kitchen operation
- Recognize proper food handling procedures and demonstrate through a national certification exam, a high level of knowledge regarding foodservice safety and sanitation
- Explain basic concepts involved in marketing and how they ca be applied to food service operations to facilitate financial objectives
- Calculate recipe and menu cost, create work schedules, order products, and demonstrate the delivery of exceptional customer service
- Exhibit a comprehensive working knowledge o restaurant operations management
- Demonstrate an understanding of purchasing in the hospitality industry by writing food and non-food specfications, applying purchasing practices, interpreting market trends, using new technology applications, and analyzing operational cost control

Curriculum Requirements - 62-63 Credits

COURSE	CREDITS
ACCT Accounting as Advised	3
FSAD 101 Quantity Food Preparation and Service	3
FSAD 102 Applied Food Service Sanitation	1
FSAD 153 Fundamentals of Hospitality Mgt	3
FSAD 154 Equipment Selection and Layout	3
FSAD 201 Summer Co-Op Employment	2
OR	
TOUR 251 Cooperative Work Experience	2
CAS 240 Hospitality Sales & Marketing	3
FSAD 255 Food Purchasing & Cost Control	4
FSAD 257 Senior Seminar	1
FSAD 258 Restaurant Mgt & Operations	6
NUTR 108 Basic Nutrition	3
TOUR 106 Introduction to Travel/Tourism & Hospitality Industry	3
TOUR 153 Hotel Operations	3
School Elective (BSAD, FSAD, TOUR, CUL, CAS, BREW, RRMT)	3
OFFT 110 Intro to Spreadsheet Software	1
COMP as Advised	3
General Elective Credits as Advised	17

Suggested Course Sequence

Year 1/Fall - 17 credits

COURSE	CREDITS
COMP As advised	3
FSAD 101 Quantity Food Preparation and Service	3
FSAD 102 Applied Food Service Sanitation	1
NUTR 108 Basic Nutrition	3
OFFT 110 Intro to Spreadsheet Software	1
TOUR 106 Intro to Hospitality Industry	3
SUNY GER	3

Year 1/Spring - 15 credits

COURSE	CREDITS
FSAD 153 Fundamentals of Hospitality Mgmt	3
FSAD 154 Equipment Selection & Layout	3
TOUR 153 Hotel Operations	3
SUNY GER	3
SUNY GER	3

Year 2/Fall - 15 credits

COURSE	CREDITS
FSAD 201 Summer Cooperative Employment	2
CAS 240 Hospitality Sales & Marketing	3
FSAD 255 Food Purchasing & Cost Control	4
SUNY GER	3
SUNY GER	3

Year 2/Spring - 16 credits

COURSE	CREDITS
ACCT 100/ ACCT 101 Accounting Info & Mgmt Decisions/ Principles of Accounting I	3
FSAD 257 Career Seminar	1
FSAD 258/ CUL 211 Restaurant Mgmt & Operations/ Culinary Restaurant	6
SUNY GER	3
SUNY GER	3

Travel/Tourism Hospitality Management, A.A.S., Major #0680

Travel/Tourism Hospitality Management is a ThinkPad University curriculum in which the use of a laptop computer is integrated into courses.

This program takes a global approach to exploring the many segments of the travel/ tourism-hospitality industry. Computer applications are integrated throughout the curriculum and computerized reservation systems are used to prepare graduates with the required competencies.

Graduates of this program are prepared for entry-level management positions in the travel/tourism-hospitality industry. They work at various jobs in the following organizations and agencies: food and beverage establishments throughout various segments of the industry, hotels or motels, bed and breakfast facilities, country clubs, conference centers, corporations in the office of travel or special events, travel agencies, transportation suppliers, national, state or local conference and convention bureaus, and resorts of various types throughout the world.

Students will need to purchase a travel agency uniform shirt. A laboratory fee is required for FSAD 100 and TOUR 250.

As a unique feature of the program, SUNY Morrisville operates an on-campus travel agency which features live SABRE. All students complete an agency internship. Majors also develop a cruise each year, typically to the Caribbean.

Career Opportunities: Entry-level manager of travel/tourism-hospitality businesses, meeting and convention management services, corporate travel, hotel-resort management, tourism agencies, convention bureaus, travel agencies, conference centers, and entertainment facilities.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Understand and define basic management theories common to all types of hospitality operations
- Possess an extensive business portfolio that displays a up to date resume, cover letter, skill set, work philosophy, career goals and shows extensive work samples.

- Demonstrate basic culinary skills and apply those skills in a commercial kitchen operation
- Demonstrate a basic comprehension of global geography
- Explain and describe various aspects of the travel and tourism industry including air transportation, ground transportation, cruising, lodging, gaming, food service, and tourism attractions and events
- Exhibit the ability to work successfully in the travel and tourism industry for 320 hours; students will receive documentation from an employer, create a written report on their know-how and will conduct an oral presentation on their experience
- Demonstrate the ability to be a cohesive and productive member of the campus run travel agency, displaying customer service skills, competencies on the phone, and displaying sales techniques
- Illustrate through the use of presentations and simulations an understanding of the hotel industry including front office operations, hierarchy of hotel operations; check-in and check-out procedures, and reservations

Curriculum Requirements - 61 Credits

COURSE	CREDITS
ACCT Accounting as Advised	3
CAS 240 Hospitality Sales and Marketin	3
FSAD 100 Global and Ethnic Foods	3
FSAD 153 Fundamentals of Hospitality Management	3
FSAD 257 Senior Seminar	1
OFFT 100 Intro Word Processing Software	1
OR	
OFFT 106 Personal Computer Keyboarding I	1
OR	
OFFT 109 Intro to Presentation Software	1

OR	
OFFT 110 Intro to Spreadsheet Software	1
TOUR 101 Tourism and Geography	3
TOUR 106 Intro Travel/Tourism & Hospitality Industry	3
TOUR 151 Computerized Reservations System	3
TOUR 152 Travel Industry Operations and Administration	3
TOUR 153 Hotel Operations	3
TOUR 250 Tourism Planning/Development	3
TOUR 251 Summer Co-op	2
OR	
FSAD 201 Summer Co-op Employment	2
TOUR 252 Meeting and Convention Services	3
TOUR 253 Travel Agency Operations	2
TOUR 255 Tourism Agency Operations	2
COMP 101 Composition and Research	3
Foreign Language as Advised	3
Additional General Elective Credits	14

Suggested Course Sequence

Year 1/Fall - 16 credits

COURSE		CREDITS
COMP As advised		3
FSAD 100 Global & Ethnic Foods		3
OFFT 100/ 109/ 110 Intro to Word/Presentation/Spreadsheet (choose one)		1
TOUR 101 Tourism & Geography		3
TOUR 106 Intro to Hospitality		3
SUNY GER		3

Year 1/Spring - 15 credits

COURSE	CREDITS
FSAD 153 Fundamentals of Hospitality Mgmt	3
TOUR 151 SABRE Comp Res Sys	3
TOUR 152 Travel Industry Op & Admin	3
TOUR 153 Hotel Operations	3
Foreign Language (SUNY GER)	3

Year 2/Fall - 16 credits

COURSE	CREDITS
CAS 240 Hospitality Sales & Marketing	3
TOUR 250 Tourism Planning & Development	3
FSAD 201 Summer Cooperative Employment	2
TOUR 253 Travel Agency Operations	2
SUNY GER	3
SUNY GER	3

Year 2/Spring - 15 credits

COURSE	CREDITS
ACCT 100/ ACCT 101 Accounting Info & Mgmt Decisions	3
FSAD 257 Career Seminar	1
TOUR 252 Meeting & Convention Services	3
TOUR 255 Tourism Agency Operations	2
SUNY GER	3
SUNY GER	3

Wood Products Technology, A.A.S., Major #0618

Wood Products Technology is a ThinkPad University curriculum in which the use of laptop computers is integrated into courses.

Wood Products Technology is a one-of-a-kind program in the State of New York, designed to train students for employment in finish carpentry, cabinet-making and furniture production, while using cutting edge technology like computer numerical controlled machinery to enter wood manufacturing industries.

The major begins with a survey of the industry and an introduction to the use of commercial cabinet-making equipment. Students learn wood properties and identification, manufacturing and grading at the sawmill and apply this knowledge to the seasoning or kiln drying of lumber. Students also learn both in theory and practice about adhesives, finishes and wood laminates.

Students can choose either the Finish Carpentry option which includes the electrical, plumbing or light framing trades, or the Furniture Production and Business option that concentrates on the business aspects where the students learn accounting, marketing and human resource management. Students following the Finish Carpentry option take all of the wood courses while an introduction to electrical, plumbing and light framing is gained to allow the student to enter the building trades. Students following the Furniture Production and Business option also take all of the traditional wood courses with a concentration of business classes for the student interested in starting their own business or working for a large furniture manufacturer.

The facility is a 14,000 square foot fully-equipped wood center where the students can start with a log and use the same wood to complete a finished project. The technologically advanced equipment includes a WoodMizer LT300 sawmill, SII Dry Kiln with state-of-the-art drying software, a Weinig Profimat #26 five head molder with knife grinding equipment, a modern woodshop with four planers, Sawstop table saws, a Kreg Face frame clamping table and a General 5 hp. Shaper with self-feed.

Career Opportunities: The Wood Products Technology program prepares students for supervision and self-employment in the lumber, furniture, cabinet making, and finish carpentry industry. This includes fields like kitchen and bath construction and re-modeling and architectural millwork. Sales and services of related machinery and supplies is another option.

Program Requirements: There is a laboratory fee of $100 for Wood 101 and Wood 241 courses. For each of these course the students will complete a wood furniture project that they can keep.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Dry any species of lumber with minimal defects.
- Identify defects that will cause degrade during drying.
- Collect data, create and present a professional laboratory report.
- Demonstrate current safety precautions in a manufacturing setting.
- Operate technological advanced manufacturing equipment.
- Describe the finishing procedure that best fits the application.
- Inspect lumber according to NHLA grading rules and determine best use.

Finish Carpentry Option:

The Finish Carpentry option provides students with wood working skills and construction skills including electrification, plumbing and light framing.

Curriculum Requirements - 61 Credits

Major Field Requirements

COURSE	CREDITS
WOOD 101 Products and Processes	3
WOOD 160 Wood Technology	3
WOOD 170 Lumber Manufacturing and Grading	3
WOOD 180 Furniture Design and Construction	3
WOOD 211 Wood Industry Field Trip	1
WOOD 221 Wood Glues, Laminates and Finishes	3
WOOD 231 Seasoning and Preservation	3
WOOD 241 Secondary Wood Processing	4
WOOD 271 Cabinet Design and Manufacturing	3
RESC 130 Light Framing	3
RESC 106 Graphic Communications	3
RESC 221 Plumbing	3
DRFT 151 Engineering Drawing I	2
CAD 181 Introduction to Auto CAD	1
AGEN 125 Electrification	3
COMP 101 Composition and Research	3
MATH as Advised	3
SUNY General Education Natural Science	3
General Elective Credits as Advised	11

Furniture Production and Business Option

The furniture production and business option Prepares students to work in furniture manufacturing and cabinet shops and gives them skills in business

including accounting, marketing and human resources. Students that choose this option could operate a small business in wood products.

Curriculum Requirements - 60 Credits

COURSE	CREDITS
WOOD 101 Products and Processes	3
WOOD 160 Wood Technology	3
WOOD 170 Lumber Manufacturing and Grading	3
WOOD 180 Furniture Design and Construction	3
WOOD 211 Wood Industry Field Trip	1
WOOD 221 Wood Glues, Laminates and Finishes	3
WOOD 231 Seasoning and Preservation	3
WOOD 241 Secondary Wood Processing	4
WOOD 260 Production Maintenance Supervision	2
WOOD 271 Cabinet Design and Manufacturing	3
BSAD 112 Marketing	3
BSAD Business As Advised	3
DRFT 151 Engineering Drawing I	2
CAD 181 Introduction to Auto CAD	1
ACCT Accounting as Advised	3
COMP 101 Composition and Research	3
MATH as Advised	3
SUNY GenED Science as advised	3
Additional General Elective Credits	11

Suggested Course Sequence - Finish Carpentry

Year 1/Fall - 16 Credits

COURSE	CREDITS
WOOD 101 - Products and Processes	3
COMP 101 - Composition and Research	3
CAD 181 - Introduction to Auto CAD	1
RESC 130 - Light Framing	3
RESC 106 - Graphic Communications	3
BSAD 112 - Marketing	3

Year 1/Spring - 18 Credits

COURSE	CREDITS
AGEN 125 - Electrification	3
WOOD 160 - Wood Technology	3
SUNY General Education Natural Science (e.g. CHEM 110)	3
WOOD 180 - Furniture Design and Construction	3
WOOD 170 - Lumber Manufacturing and Grading	3
MATH - As advised to meet SUNY General Education	3

Year 2/Fall - 15 Credits

COURSE	CREDITS
RESC 221 - Plumbing	3
WOOD 221 - Wood Glues, Laminates, and Finishes	3
WOOD 231 - Seasoning and Preservation	3
WOOD 241 - Secondary Wood Processing	4
DRFT 151 - Engineering Drawing I	2

Year 2/Spring - 12 Credits

COURSE	CREDITS
WOOD 260 - Production Maintenance Supervision	2
WOOD 271 - Cabinet Design and Manufacturing	3
WOOD 211 - Wood Industry Field Trip	1
Business As Advised	3
ACCT 100 - Accounting Information and Management Decisions	3

Suggested Course Sequence - Furniture Production & Business Option

Year 1/Fall - 16 Credits

COURSE	CREDITS
WOOD 101 - Products and Processes	3
COMP 101 - Composition and Research	3
DRFT 101 - Engineering Drawing I	2
BSAD 112 - Marketing	3
MATH as Advised	3
General Elective Credit as Advised	2

Year 1/Spring - 16 Credits

COURSE	CREDITS
CAD 181 - Introduction to Computer-Aided Drafting	1
WOOD 160 - Wood Technology	3
SUNY General Education Natural Science (e.g. CHEM 110)	3
WOOD 180 - Furniture Design and Construction	3
WOOD 170 - Lumber Manufacturing and Grading	3
ACCT 100 - Accounting Information and Management Decisions	3

Year 2/Fall - 16 Credits

COURSE		CREDITS
WOOD 221 - Wood Glues, Laminates, and Finishes		3
WOOD 231 - Seasoning and Preservation		3
WOOD 241 - Secondary Wood Processing		4
SUNY General Education Elective as Advised		3
General Elective as Advised		3

Year 2/Spring - 12 Credits

COURSE	CREDITS
WOOD 260 - Production Maintenance Supervision	2
WOOD 271 - Cabinet Design and Manufacturing	3
WOOD 211 - Wood Industry Field Trip	1
Business As Advised	3
ACCT 100 - Accounting Information and Management Decisions	3

Agricultural Mechanics Certification, Major #0912

The program provides one year of college-level subjects in specialized farm mechanics areas. It is designed for the student who for one reason or another can only find time for one year of college study. Included are many different phases of agricultural mechanization from machinery to electricity and refrigeration.

Student must demonstrate proficiency through MAGN 101 Elementary Algebra Sample Study Plan.

COURSE	CREDITS
AGEN 100 Tractor Care and Maintenance	3
AGEN 103 Natural Resources Equipment Operation	2
AGEN 105 Principles of Farm Machinery	2
AGEN 115 Agricultural Engineering - Industry Overview	1
AGEN 145 Agricultural Building Systems	3
AGEN 125 Rural and Residential Electrification	3
AGEN 140 Welding	3
AGEN 210 Small Power Equipment II	3
AGEN 220 Maintenance, Repair, and Performance Tuning of Arctic Cat Power Equipment	4
AUTO 103 Internal Combustion Engines	3
AUTO 260 Automotive Air Conditioning	1
DTEC 105 Powertrains I	4

Accounting (ACCT)

ACCOUNTING

ACCT 100 - ACCOUNTING INFORMATION & MANAGEMENT DECISIONS

This course, recommended for non-business majors, is an accounting approach to measuring and reporting upon the economic activity, resources, and obligations of a business. Also discussed is the accounting approach to the application of accounting information to performance evaluation and the decision making process. Basic accounting processes, evaluation of financial position earnings, measurement in retailing and manufacturing, basic cost ac-counting and budgeting are discussed. This course is not available to accounting, business administration or computer information systems majors.

3 credits (3 lecture hours), fall or spring semester

ACCT 101 - PRINCIPLES OF ACCOUNTING I

An introduction to accounting theory and principles as applied to a business enterprise is covered in Principles of Accounting I. Principles and procedures as applied to the accumulation, processing and reporting of financial information resulting from business transactions are discussed. Students are exposed to manual and electronic media for the preparation of journals, ledgers, financial statements. Inventories, receivables, payables, plant assets and payroll accounting are also covered.

Prerequisite: MAGN 101

3 credits (3 lecture hours), fall or spring semester

ACCT 102 - PRINCIPLES OF ACCOUNTING II

This course covers the methods of accounting for corporate organization and operation including equity-related transactions, corporate income statement, and statement of cash flows. Financial statement analysis is also covered. Managerial accounting is also included and covers such topics as product costing, short-run decision making, budgeting, and CVP analysis.

Prerequisite: ACCT 101 minimum grade of C

3 credits (3 lecture hours), fall or spring semester

ACCT 103 - COMPUTERIZED ACCOUNTING

Introduces students to the advanced automated accounting system used in today's business environment. Teaches skills to convert accounting data into a format that can be processed through contemporary accounting software packages. Exposure to advanced accounting problems incorporates knowledge from the Financial and Managerial Accounting courses. Students will work with spreadsheets, databases, Internet, presentation software, and general ledger programs.

Prerequisite: ACCT 102, minimum grade of C

3 credits (3 lecture hours)

ACCT 105 - MANAGERIAL ACCOUNTING

This course continues the presentation of managerial accounting topics from Principles of Accounting II. Emphasizes use of accounting data within an organization by its managers. The purpose of this course is to define the information needed, identify sources of information and explain how managers use the information in planning, control, and making decisions. A sampling of relevant articles from recent professional publications will focus on new management techniques necessary in today's changing business environment.

Prerequisite: ACCT 102, minimum grade C

3 credits (3 lecture hours), spring semester

ACCT 201 - INTERMEDIATE ACCOUNTING I

This course covers advanced accounting principles, practices of corporations, and current trends using publications of the leading accounting organizations such as the Financial Accounting Standards Board and AICPA. Topics include financial statements, current assets, investments, plant assets and current liabilities.

Prerequisite: ACCT 102 minimum grade of C

3 credits (3 lecture hours), spring semester

ACCT 205 - COST ACCOUNTING

Topics covered include elements of production cost, material, labor and overhead. Also covered are the job cost system, process cost system, standard cost system, and other miscellaneous cost accounting topics.

Prerequisite: ACCT 102 minimum grade of C

3 credits (3 lecture hours), spring semester

ACCT 212 - FEDERAL INCOME TAX ACCOUNTING

Basic principles of federal income taxation are covered. Topics include: federal and state income taxation for the individual including filing requirements exemptions, deductions, determination of taxable income, computation of tax, tax credits and tax payments. A project is required.

Prerequisite: ACCT 100 or ACCT 101

3 credits (3 lecture hours), fall semester

ACCT 301 - INTERMEDIATE FINANCIAL ACCOUNTING I

An extension of financial accounting to include advanced topics related to revenue recognition and measuring and reporting of assets that include cash, investments, receivables, inventories, plant, property, and equipment, and intangible assets. The course will emphasize both accounting theory and practice and the development of professional judgment and critical thinking skills. Designed to help achieve an in-depth understanding of financial accounting sufficient to practice the profession of accounting and to solve problems at the level tested on the Uniform CPA Examination, by the end of the semester, students are expected to understand the principles, assumptions, and constraints that guide financial reporting (as outlined in the FASB's conceptual framework), and to apply US GAAP in several settings. The International Financial Reporting Standards (IFRS) will be emphasized as there is an increasing convergence between US GAAP and IFRS.

Prerequisite: Enrolled in the Bachelor of Business Administration in Business Administration program, have completed 18 credit hours in 300 level or above business or business related course work, ACCT 101 with a grade of C or above or permission of instructor.

3 credits(3 lecture hours), fall semester

ACCT 302 - INTERMEDIATE ACCOUNTING II

Continuation of ACCT 301. Liabilities and equities, accounting for income taxes, pensions, leases, revenue recognition and statement of cash flows.

Prerequisite: Enrolled in the Bachelor of Business Administration in Business Administration program, ACCT 301 with a grade of C or above, BSAD 350 with a grade of c or above or permission of instructor.

3 credits (3 lecture hours), fall or spring semester

ACCT 303 - COST ACCOUNTING

Introduction to managerial accounting and methods used to report information to decision makers internal to the firm. Course topics include cost concepts and behavior, cost estimation, activity-based costing, job-order costing, process costing, joint product costing, budgeting, performance measures, transfer pricing, CVP analysis, customer profitability analysis, and linear programming.

Prerequisite: ACCT 102 with a C or above or permission of the instructor.

3 credits(3 lecture hours), fall or spring semester

ACCT 401 - AUDITING

Study of audit standards and techniques in the conduct of an audit examination. Theory and practice of auditing is studied from both internal and external audit points of view.

Prerequisites: ACCT 302 with a grade of C or above and BSAD 375 with a grade of C or above or permission of instructor

3 credits (3 lecture hours), fall or spring semester

Agricultural Business (AGBS)

AGRICULTURAL BUSINESS

AGBS 100 – AGRICULTURAL ECONOMICS

In this course, fundamental economic principles keyed to agriculture are discussed. Emphasis is placed on specialization and exchange, the commercial banking system, monetary and fiscal policy, and supply and demand. Units on gross national product and the consumer price index, Global international trade, United States and New York state economics are also discussed.

3 credits (3 lecture hours), fall and spring semester

AGBS 110 – INTRODUCTION TO AGRICULTURAL BUSINESS MANAGEMENT

AGBS 110 is a dual-credit course with designated high schools to acquaint selected high school students with the basic principles of agricultural business. Students will have the opportunity to gain valuable career planning skills through job shadowing experiences, resume writing and interviews. Students will learn about the various forms of business organizations, agriculture marketing, sales; consolidated and diversified agriculture business opportunities. Students will also be exposed to the financial management and decision making process of owning and operating an agriculture business.

Prerequisites: Junior or senior level standing

3 credits (3 lecture hours), spring semester

AGBS 200 – MARKETING AGRICULTURAL PRODUCTS

Supply and demand analysis, elasticity of demand, commodity futures exchange with emphasis on individual projects in futures trading are included in this course. Market structure, marketing orders, pricing, advertising, and approaches to studying marketing problems are also covered as well as units on cooperatives and marketing alternatives.

3 credits (3 lecture hours), spring semester

AGBS 225 - ENVIRONMENTAL ECONOMICS

This course covers application of basic economic principles to environmental problems, pareto optimality, efficiency, price theory, perfect competition, market intervention and failure, and how the neoclassical theory affects policy decisions regarding the environment. Economic concepts are presented in an environmental context.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

AGBS 230 – AGRICULTURAL BUSINESS MANAGEMENT

Fundamentals of small agricultural business operation. Forms of business organization. Sources and uses of long and short term credit and extending credit. Capital budgeting and investment analysis.

2 credits (2 lecture hours)

AGBS 240- FARM MANAGEMENT AND FINANCE

This course is designed to give students a broad understanding of the management skills required to be successful in 21st century agriculture. Students will study organizational behavior, human resource management and financial decision making as they relate to agricultural businesses with a particular emphasis on: dairy, equine, vegetable and fruit production. Major emphasis is on the fundamental principles underlying sound farm organizational and op-rational decision making. The principles and techniques developed are general enough to have validity through time, in any geographic area under any conditions. On the other hand, they are specific enough to be applied to an individual farm at a given time. This course requires a 15 page research paper (APA format) applying sound theoretical and practical research to an agricultural business of choice.

Prerequisite: ABGS 100 or permission of the instructor

4 credits: fall and spring

AGBS 250 – DECISION MAKING FOR AGRICULTURAL MANAGERS

Using economic models and managerial decision making processes, students will be responsible for completing weekly analysis of farm operations, identifying and solving problems and/or creating opportunities for improving farm operations. Students will be

actively involved in the process of gathering, organizing, and analyzing financial, production, and labor efficiency data. Upon completion of data analysis, evaluation of alternatives and making final recommendations to management, students will be actively involved in the implementation and monitoring processes. Each semester, students will complete a comprehensive case study analysis.

3 credits, (2 lecture hours, 2 laboratory hours), fall and spring semesters

AGBS 305 – AGRICULTURAL FINANCIAL DECISION MAKING

This course involves case work and on-farm consulting with the Farm Credit System. All lectures will be taught at Morrisville State College. Most laboratory assignments will be completed at First Pioneer Farm Credit (the largest agricultural lender in the United States) in Sangerfield, NY, or at selected farms in which students will act as agricultural leaders.

Prerequisites: ACCT 101, AGBS 240

3 credits (2 lecture hours, 2 laboratory hours), fall semester

AGBS 350 – AGRICULTURE BUSINESS DEVELOPMENT

This course provides basic economic theories to help students understand issues related to agribusiness development. Following the study of economic theories, empirical issues will be discussed including agricultural tourism, pollution and environment, the green revolution and the new trends in alternative energy focusing on the economic impact of utilizing bio diesel and ethanol. Students will learn how to look at issues related to agribusiness development from an economic perspective, and will learn how to apply the basic tools of economic analysis to a wide range of issues relating to renewable and non-renewable natural resource use.

Prerequisites: AGBS 240 or permission of the instructor

3 credits (3 lecture hours), fall semester

AGBS 400 – DISTRIBUTION & MARKETING OF AGRICULTUIRAL PRODUCTS

Through a series of six modules--cooperatives in agriculture; agriculture commodity purchasing and selling; food processing; product distribution; consumer retail relations; and financial feasibility --students will gain valuable experience and insight into the rapidly developing value added sector of the agriculture industry. Students are required to take a field

trip to New York City and numerous other consumer markets to meet course requirements. All laboratory exercises will be conducted at either Nelson Farms, the Agribusiness Dairy Processing facility or established off-campus collaborating businesses. Students will rotate through each module.

Prerequisites: AGBS 100 Agricultural Economics or ECON 100 Introduction to Macroeconomics or ECON 140 Introduction to Microeconomics, AGBS 200 Marketing of Agriculture Products or BSAD 112 Marketing, AGBS 240

4 credits (1 lecture hour, 6 laboratory hours), fall or spring semester

AGBS 405 – CAPSTONE FOR FARM MANAGERS & RURAL ENTREPRENEURS

Students will be introduced to successful rural entrepreneurs. They will work in teams and act as consultants to evaluate farm and rural agriculturally based businesses financial, human resources, and strategic management practices. Students interested in food and agricultural entrepreneurship will evaluate food processing techniques, packaging and food safety procedures. Upon identifying key problems, students will present their finding to both class and entrepreneur. All lectures will be taught at SUNY Morrisville. Most of the laboratory assignments will be completed at the farm or rural business in which the students will be serving as consultants.

Prerequisites: AGBS 100, AGBS 240, 305, ACCT 100 or ACCT 101

3 credits (2 lecture hours, 2 laboratory hours), spring semester

AGBS 450 – AGRICULTURE POLICY & DEVELOPMENT

This course will provide students with a foundation in the principles and practices of agricultural policy and the policy process. Students will develop an understanding for the policy process as it relates to agriculture, its interaction with other institutional arrangements, and an awareness of policy analysis. Specific emphasis will be placed on the National Farm Bill, New York State Agriculture Policy and its impact on the rural economy as well as the individual producer. Students are required to participate in field trips to the National Agriculture Outlook Conference in Arlington, Virginia, and Agriculture Awareness day in Albany, New York.

Prerequisites: AGBS 100 Agricultural Economics or ECON 100 Introduction to Macroeconomics or ECON 140 Introduction to Microeconomics

3 credits (3 lecture hours), spring semester ours), spring semester

AGBS 460 – INTERNATIONAL AGRICULTURE MARKETING

The globalization of markets for food and agricultural products makes it essential to understand how international food and agricultural markets function and how they influence the options and choices of food and agribusiness firms. This course examines emerging globalization issues, the global food and agribusiness environment, potential markets, global agribusiness strategy, and global agribusiness operations. The course will also examine the impact of our changing social demographics on domestic product sales. Students will be required to prepare and present an analysis of barriers to international trade and opportunities for emerging national and international markets, as well as develop an international marketing plan for a product of their choice.

Prerequisites: AGBS 100

3 credits (3 lecture hours), spring semester

AGBS 470 – INTERNSHIP IN AGRICULTURAL MARKETING AND MANAGEMENT

In this course, students will participate in supervised fieldwork in a selected agriculture business or agriculture service organization. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the agriculture business/organization. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation.

15 credits

AGBS 480 – RETAILING AGRICULTURE PRODUCTS

This course provides students with a comprehensive view of retailing and direct marketing of agriculture products. Students will study and analyze current multi-channel retail strategies among box stores, roadside/farms stands, farmer's markets, grocery stores and ecommerce activities. Students will be required to research and track the life of a value added product from the farm to the table, prepare and present a plan to market a valueadded agriculture product to a box store of their choice, as well as obtain experience working in a retail setting.

Prerequisites: AGBS 240

3 credits (3 lecture hours), spring semester

Agriculture & Natural Resources (AGNR)

AGRICULTURE & NATURAL RESOURCES

AGNR 200 – JOB PREPARATION SKILLS & RESOURCES

This course investigates career opportunities in the field of agriculture. Students learn how to prepare for a job interview in their specific field. They will prepare resumes, cover letters, and practice various types of interview skills.

Prerequisite: Senior Standing

1credit (2 hours lecture/seminar)

AGNR 399 – RESEARCH AND MANAGEMENT IN AGRICULTURE, SUSTAINABILITY AND NATURAL RESOURCES

Research and Management in Agriculture, Sustainability and Natural Resources

A mentored independent study that allows a student the opportunity to conduct research, collect and analyze data and/or develop management plans or recommendations for management in Agricultural, Sustainability or Natural Resources projects. Upon conclusion of this class, the student will complete a comprehensive database, write a comprehensive report, conduct analytical research, develop a management plan, develop a poster presentation, and/or write or participate in the writing of a journal article. Projects are planned in coordination with a professor.

Prerequisite: Junior or Senior Standing

1-4 credits (as arranged with the Professor), fall or spring semester

AGNR 400 – INSTRUCTIONAL ASSISTANCE EXPERIENCE

Designed to concentrate students' knowledge in an Agriculture Science or Natural Resource discipline to the extent that they can convey that knowledge to associate degree level students. As part of their course work they will re-search class topics, lead discussions for 100 or 200 level course work, demonstrate practical applications during laboratory sessions, and assist the professor with class and lab preparation. Student is expected to meet regularly with a

discussion or laboratory section, to gain instructional experience, and to regularly discuss course objectives, techniques, and subject matter with the Lead Faculty member. Prerequisite: “B” or better in the required course or by permission of the Instructor.

1-4 credits (as arranged with the Professor) fall or Spring Semester

Agronomy (Crops & Soils) (AGRO)

AGRONOMY (CROPS & SOILS)

AGRO 105 - SOIL & WATER CONSERVATION

Principles of soil and water conservation are covered in this course as well as practical application through land use, runoff and erosion control and soil management practices.

2 credits (3 lecture hours, 2 laboratory hours), spring semester (8 weeks)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGRO 110 - SOIL SCIENCE

This course covers the fundamentals of soil science, origin, nature and formation of soils, physical and chemical properties and soil management practices.

3 credits (2 lecture hours, 2 laboratory hours), fall and spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGRO 115 – PRINCIPLES OF COMPOST MANAGEMENT

In this course students will learn the science behind compost production. They will implement the food waste compost program on campus from source material collection through final product production. New ideas of organic source material will be tested to continually improve and expand upon the composting program. This course will be conducted in a seminar style with associated lab.

3 credits (2 seminar hours, 2 laboratory hours), fall and spring semester

AGRO 210 - FIELD CROPS

Production of field crops, their importance, adaptation, varieties and cultural practices are covered in this course.

Prerequisite: AGRO 110 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

AGRO 215 - SOIL FERTILITY & FERTILIZERS

Principles involved in supplying essential elements for growing plants. Soil and tissue analysis, nutrient deficiency symptoms. Factors in manufacture, applications and economics of fertilizers, amendments and organic materials.

Prerequisite: AGRO 110

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGRO 310 - PASTURE MANAGEMENT & FORAGES PRODUCTION

Fundamentals of pasture management and forages production for maximum yield, quality, and longevity.

Prerequisite: AGRO 110

3 credits (2 lecture hours, 2 laboratory hours), fall semester

Agricultural Science (AGSC)

AGRICULTURAL SCIENCE

AGSC 120 - DOMESTIC ANIMAL BEHAVIOR

This course is designed to provide the student with an introduction to, and a general understanding of domestic animal behavior. The evolutionary aspects of behavior, learning theory, normal and abnormal behaviors will be studied. Material will be presented concerning dogs, cats, sheep, goats, hogs, cattle and horses with an emphasis on cattle and horses.

3 credits (3 lecture hours), spring semester

AGSC 115 - AGRICULTURAL SCIENCE AND CONTEXT

An introductory course in Agricultural Science intended for majors and students in related disciplines. This course will introduce students to the variety of industries and career paths within the agricultural science discipline as well as to the common skills necessary within these industries. Topics covered will include agricultural research from literature review through disseminating research results, computer literacy in agricultural science, and New York agriculture in context as compared to the North East, the United States as a whole, and the world.

1 credit (1 lecture hour), fall semester

AGSC 132 - INTRODUCTION TO COMPUTER APPLICATIONS IN PRECISION FARMING

Course introduces the student to site-specific crop management and precision farming. It involves the application of selective computer software and hardware in site-specific crop management. In addition, it focuses on providing the student with an overview of the basics of global positioning system (GPS), an introduction to geographic information systems (GIS), and an introduction to remote sensing.

2 credits (1 lecture hour, 2 laboratory hours) fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGSC 135 - COMPUTER APPLICATIONS IN AGRICULTURAL RESEARCH I

Application of computer software in agricultural research including: statistical packages which include ANOVA, Duncan Multiple range test, correlation, etc.

1 credit, spring semester

AGSC 137 - AGRICULTURAL STATISTICS

This course involves the application of procedures and techniques for collecting, analyzing, and interpreting agricultural data. The course encompasses an introduction to statistical methods using examples and applications. The course also focuses on basic statistical analysis using the MS Excel spreadsheet program and other pertinent computer tools. Emphasis is placed on providing the student with problem-solving skills and the ability to interpret the results of basic agricultural statistical analysis.

Prerequisite: MAGN 101 or equivalent

3 credits (3 lecture hours), spring semester

AGSC 140 - COMPUTER APPLICATIONS IN PRECISION FARMING II

The student will pursue research projects in the area of GPS, GIS and other precision farming-related areas and then make presentations using PowerPoint. Prerequisite: AGSC 132 & 135 or consent of instructors

1 credit, spring semester

AGSC 145 - COMPUTER APPLICATIONS IN AGRICULTURAL RESEARCH II

The student will pursue projects in the areas of basic and applied research and then make presentations on the project using PowerPoint.

Prerequisite: AGSC 130 & 135 or consent of instructors 1 credit, fall semester

AGSC 246 - INTERNSHIP IN AGRICULTURAL SCIENCE

This internship involves students working in an approved job in agriculture. A journal, written report, and employer and faculty evaluation are required upon completion of the internship.

4 credits (12 weeks, 480 hours minimum), fall semester

AGSC 250 – CURRENT TOPICS IN AG SCIENCE

A capstone course in Agricultural Science intended for majors and students in related disciplines. Students completing the Agricultural science AAS degree and either moving into a bachelor's degree or entering the workforce will put the skills they've acquired over the preceding semesters into practice. Each semester a new issue facing agricultural production will be selected and students will develop proposals for how they would proceed to address the issue. This course will be conducted in a seminar style with associated lab.

3 credits (2 hours seminar, 2 hours lab), spring

AGSC 350 - ANIMAL GENETICS

This course provides an application of the principles of genetic selection for the improvement of dairy cattle and horses. The basic concepts of inheritance from both mathematical and biological perspectives are emphasized. Progeny and performance testing programs, pedigree analysis, mating systems and their application to selection and production of genetically superior animals are discussed.

Prerequisites: DAS 100 or ESCI 305 and DANS 120 or ESCI 110 with a C or better (prerequisite or co-requisite)

3 credits (3 lecture hours), spring semester for equine or fall semester for dairy students, alternate years, even years

American Sign Language (AMSL)

AMERICAN SIGN LANGUAGE

AMSL 101 –AMERICAN SIGN LANGUAGE I

American Sign Language may be used to satisfy the SUNY General Education requirement for Foreign Language only by students in programs leading to certification in elementary and secondary education and in programs leading to careers where there is likely to be significant contact with the hearing impaired. This is an introductory course for students in American Sign Language with basic vocabulary, structure, syntax and grammar. Conversational skills will be emphasized from an expressive and receptive perspective, as well as the manual alphabet, numbers, colors and facial grammar. Exposure to Deaf Culture and culturally appropriate behaviors will be included in the course.

3 credits (3 lecture hours); fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

AMSL 102 – American Sign Language II

A continuation of AMSL I involves the study of advanced ASL vocabulary, linguistic structures, and Deaf culture. Students will develop advanced levels of receptive and expressive conversational skills.

Prerequisite: AMSL I or permission of instructor 3 credits (3 lecture hours); fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

Animal Science (ANSC)

ANIMAL SCIENCE

ANSC 100 - ANIMAL SCIENCE & INDUSTRY

Concurrent Enrollment

This is a concurrent enrollment course with designated high schools to acquaint high school students with animal science and industry. It offers an introduction to farm and companion animal production and its affiliated industries with emphasis on the biological nature of animals, infrastructures and economic uniqueness of affiliated industries, animal products and services, and the management of animal enterprises.

3 credits (minimum of 45 lecture hours), spring semester

ANSC 101: INTRODUCTION TO ANIMAL SCIENCE

An introductory course in Animal Sciences for students interested in a career path in the animal industries. This course will introduce students to the various animal industries, including both agricultural and companion animals. Topics covered will include housing, handling, reproduction, health, genetics and breeding, as well as current topics on welfare and sustainability.

3 credits (2 lecture, 2 lab)

ANSC 110: LIVESTOCK PRODUCTION MANAGEMENT/TECHNIQUES

Livestock Production Management and Techniques will provide an overview of animal agriculture with a focus on management practices related to health, husbandry, feeing, breeding, and marketing of beef cattle, small ruminants, swine, poultry, and alternative agricultural species. This will be accomplished through lectures and hands-on experiences during laboratory sessions. Live animals will be used during laboratories in accordance with federal regulations, and all laboratories will be conducted with respect for the animals.

3 Credits (2 lecture hours, 2 laboratory hours)

ANSC 150: LIVE ANIMAL EVALUATION

Live Animal Evaluation is a hands-on two credit hour lecture/laboratory course concentrating on the science and art of live animal evaluation. The lectures will cover all aspects of improving the selection of meat animals and the efficiency of meat animal production. Laboratory activities will include the evaluation of market animals and the evaluation and selection of breeding animals of all meat animal species. Worksheets on calculating carcass grades and performance data will be given to complement in class activities. This course is an excellent introduction for all livestock production courses and will provide a baseline of information for students interested in intercollegiate livestock judging.

2 credits (1 lecture hour, 2 laboratory hours),

ANSC 200: SHEEP INDUSTRY/PRODUCTION SYSTEMS

This course will teach the principles of modern sheep production including all aspects of sheep production management systems and the U.S./Global Sheep Industry. The course will incorporate genetics, nutrition, reproduction, disease control, management and marketing of sheep. Concentrating on the U.S. Sheep market, the course will include the international perspective of the industry. Students will gain an understanding of the world's sheep industry and how it affects the U.S market. From flock management to marketing strategies, students will leave ANSC 200 with a well round knowledge of the entire sheep industry.

Prerequisite: ANSC 110

3 credits (2 Lecture Hours, 2 Laboratory Hours).

Anthropology (ANTH)

ANTHROPOLOGY

ANTH 101 -INTRODUCTION TO ANTHROPOLOGY

An introduction to the study of human beings, ranging across the four fields of biological and cultural anthropology, archaeology and linguistics. Focus is placed on human evolution and origins, development of human culture, and description and comparison of differing ways of life around the world. Emphasis on basic anthropological concepts of evolution, culture, kinship, institutions, globalization and socio-historical change.

3 credits, fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

Students may not receive credit for both SOCS 122 and ANTH 101

Architectural Studies and Design, A.S., Major #1755

This hands-on architectural studies and design program is built around a studio centric experience and the use of applied technology. The curriculum engages students with the intention of developing creative, functional, and programmatic problem solving abilities. Students are challenged to learn to make decisions in a culturally and environmentally responsive manner. They develop creative thinking and communication skills needed to explore and research diverse problems that influence architectural discourse. Creative design decisions are informed by historic and social influences as well as sustainable futures. This integrative program is concerned with designing, creating, improving and shaping built environments, and ultimately, celebrating the human condition.

Studio and critique space are located in the Sheila C. Johnson Design Center. This Leadership in Energy and Environmental Design (LEED) Certified building is open to students 24 hours a day, seven days a week. The building has wireless internet access, a computer-aided design lab, a shop, a laser cutter, photography areas, and copying/scanning/plotting machines. Three-dimensional printing is also available. Software used in the architectural profession is easily accessible to students through the college network and in the computer-aided design lab.

This design-based program is intended to prepare students to transfer and succeed in a professional or pre-professional baccalaureate program in architecture. Associate of Science (AS) degrees are designed specifically for transfer. Graduates have transferred into architecture programs at the University at Buffalo, Rensselaer Polytechnic Institute, Cornell University, Syracuse University, and Pratt Institute, to name a few. Some graduates have chosen to continue their education in allied fields such as architectural engineering, architectural engineering technology, civil engineering, construction management, graphic design, interior design, and landscape architecture. Other graduates have chosen to move directly into the architectural and design professions.

Student Learning Outcomes

Upon Successful completion of this program, students will be able to:

- Translate abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- Employ at a theoretical level, elements, forms, spatial relationships, examples, organization, circulation, sequence, proportion, scale and ordering principles to make

clear three dimensional architectural ideas and concepts.

- Apply an architectural design logic that accounts for composition, order, analysis, precedent, experimentation, presentation, competition, independence and teamwork.
- Generate an analytical approach to the design process, and concept development, while considering implications for possible responses, problems and architectural outcomes.
- Employ the basic principles utilized in architecture, construction and building technologies, in the use of construction material products, components, and assemblies, based on their traditional and innovative characteristics and performance, including their environmental impact and reuse.
- Synthesize the principles of conceptualization, process, history, exploration, analysis, precedence, place, integration, sustainability, materials, construction compliance, creativity and imagination in response to architecture and architectural design in the natural and built environments.
- Use appropriate representational media such as traditional architectural graphic, modeling and digital technology skills and techniques to delineate, express and convey architectural ideas and concepts.
- Create technically clear architectural drawings and renderings that demonstrate knowledge of the conventional principles of architectural drafting and drawing to illustrate and identify the assembly of materials, systems and components.

Curriculum Requirements - 61 Credits

COURSES	CREDITS
ARCH 102 Introduction to Architecture	2
ARCH 101 Architectural Graphic Comm	2
ARCH 141 Architectural Design I	4
ARCH 142 Architectural Design II	4
ARCH 243 Architectural Design III	4
ARCH 244 Architectural Design IV	4
ARCH 151 Architecture: Prehistory to 1900	3
ARCH 252 Architecture: 1900 to Present	3
ARCH 271 Architectural Technology I	3
ARCH 272 Architectural Technology II	3
CAD 181 Intro to Computer-Aided Drafting	1
CAD 183 Architectural Computer-Aided Drafting & Design	2
MECH 211 Analytical Mechanics (Statics)	3
MECH 213 Strength of Materials	4
COMP 101 Composition and Research	3
COMP 102 Writing about Literature	3
MATH 151 General Calculus A (or higher)	3
PHYS 107 Introductory Physics I (or higher)	4
Liberal Arts (Social Science, American History, Western Civilization, Other World Civilization or Foreign Language (two different courses and prefixes))	6

Suggested Course Sequence

Year 1/Fall - 17 Credits

COURSE	CREDITS
ARCH 102 - Introduction to Architecture	2
ARCH 101 - Architectural Graphic Communications	2
ARCH 141 - Architecture Design I	4
COMP 101 - Composition and Research	3
MATH - Mathematics as Advised *A minimum of MATH 151 General Calculus A is required. Students placed in MATH 102 will require an additional semesters. This outline is based on MATH 103 being taken the first semester followed by MATH 147 then MATH 151 (3 semesters). Preferably a summer semester between years. They should take a Social Science, American History, Western Civilization, Other World Civilization, Foreign Language or mathematics course (as advised) during this additional semester.	3
Liberal Arts and Science as Advised	3

Year 1/Spring - 18 Credits

COURSE	CREDITS
ARCH 142 - Architectural Design II	4
ARCH 151 - Architecture: Prehistory to 1900	3
CAD 181 - Introduction to Computer-Aided Drafting	1
COMP 102 - Writing About Literature	3
MATH - Mathematics as Advised	3
PHYS 107 - Introductory Physics I	4

Year 2/Fall - 15 Credits

COURSE	CREDITS
ARCH 243 - Architecture Design III	4
ARCH 271 - Architectural Technology I	3
CAD 183 - Architectural Computer Aided Design	2
MECH 211 - Analytical Mechanics (Statics)	3
MATH - Mathematics as Advised	3

Year 2/Spring - 16 Credits

COURSE	CREDITS
ARCH 244 - Architectural Design IV	4
ARCH 272 - Architectural Technology II	3
ARCH 252 - Architecture: 1900 to Present	3
MECH 213 - Strength of Materials	3
Liberal Arts and Sciences as Advised	3

Art (ART)

ART

ART 101 - BASIC ART

Students will study visual perception through the use of drawing and painting media, stressing both technical skills and individual expression; and exploring both form and content. Students are assigned projects and critiques that are based on drawings from still life, interiors and the imagination.

2 credits (4 laboratory hours), fall or spring semester

ART 102 - ADVANCED ART

In this course the student will continue to develop competence in drawing and painting techniques with emphasis on developing work in an atmosphere of experimentation and exploration. Short, informal slide presentations on various artists will be given throughout the course. Group and individual problems and critiques will be given.

Prerequisite: ART 101 or permission of instructor 2 credits (4 laboratory hours), fall or spring semester

ART 110 – INTRODUCTION TO THE VISUAL ARTS

This course introduces students to the world of visual arts, including how to look at, interpret, analyze, and understand a variety of art forms, such as drawing, printmaking, painting, sculpture, architecture, design, and the camera arts. We study art from around the world and from the beginning of human civilization as a way of understanding the social, political, and cultural attitudes that influence how art is produced, viewed, and critiqued.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ART 120 - INTRODUCTION TO DRAWING

This course introduces students to drawing as artistic expression and communication, studio work in a variety of drawing media, emphasizing principles of line, shape, value and the fundamentals of perspective.

2 credits* (4 lab/lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ART 121 - INTRODUCTION TO PAINTING

An introduction to painting using various techniques and materials. Basic vocabulary of painting skills in value, color and composition with an emphasis on style and expression.

Prerequisite: ART 120 or ART 101

2 credits* (4 lab/lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ART 131 - INTRODUCTION TO PHOTOGRAPHY

An introduction to photography and the photographic processes, with an emphasis on the fundamentals of lighting, exposure, processing, printing and the composition of photographic prints.

3 credits (2 lecture hours, 2 laboratory hours) fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

Astronomy (ASTR)

ASTRONOMY

ASTR 101 - SOLAR ASTRONOMY

The study of planetary systems is covered in this course. Topics include the history of understanding the solar system and the celestial sphere, principles of telescope design, the nature of the solar system, sun, terrestrial and Jovian planets, Pluto, the various moons, comets, asteroids, and extra solar planets.

Prerequisite: Math at the level of MAGN 101.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ASTR 110 - STELLAR ASTRONOMY

This course studies stars, galaxies, and cosmology, constellations, the motions of the night sky, earth- and space-based telescopes, the nature of starlight, the classification, structure and evolution of stars and galaxies, distance scales, the large scale structure of the universe, cosmology, and extraterrestrial life.

Prerequisite: Math at the level of MAGN 101.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

Course Listing

This section is arranged alphabetically by program titles. The three-digit number is a code keyed to student records including transcripts. Courses indicated by an asterisk (*) are offered at off-campus sites.

ACCOUNTING

ACCT 100 - ACCOUNTING INFORMATION & MANAGEMENT DECISIONS

This course, recommended for non-business majors, is an accounting approach to measuring and reporting upon the economic activity, resources, and obligations of a business. Also discussed is the accounting approach to the application of accounting information to performance evaluation and the decision making process. Basic accounting processes, evaluation of financial position earnings, measurement in retailing and manufacturing, basic cost ac-counting and budgeting are discussed. This course is not available to accounting, business administration or computer information systems majors.

3 credits (3 lecture hours), fall or spring semester

ACCT 101 - PRINCIPLES OF ACCOUNTING I

An introduction to accounting theory and principles as applied to a business enterprise is covered in Principles of Accounting I. Principles and procedures as applied to the accumulation, processing and reporting of financial information resulting from business transactions are discussed. Students are exposed to manual and electronic media for the preparation of journals, ledgers, financial statements. Inventories, receivables, payables, plant assets and payroll accounting are also covered.

Prerequisite: MAGN 101

3 credits (3 lecture hours), fall or spring semester

ACCT 102 - PRINCIPLES OF ACCOUNTING II

This course covers the methods of accounting for corporate organization and operation including equity-related transactions, corporate income statement, and statement of cash flows. Financial statement analysis is also covered. Managerial accounting is also included

and covers such topics as product costing, short-run decision making, budgeting, and CVP analysis.

Prerequisite: ACCT 101 minimum grade of C

3 credits (3 lecture hours), fall or spring semester

ACCT 103 - COMPUTERIZED ACCOUNTING

Introduces students to the advanced automated accounting system used in today's business environment. Teaches skills to convert accounting data into a format that can be processed through contemporary accounting software packages. Exposure to advanced accounting problems incorporates knowledge from the Financial and Managerial Accounting courses. Students will work with spreadsheets, databases, Internet, presentation software, and general ledger programs.

Prerequisite: ACCT 102, minimum grade of C

3 credits (3 lecture hours)

ACCT 105 - MANAGERIAL ACCOUNTING

This course continues the presentation of managerial accounting topics from Principles of Accounting II. Emphasizes use of accounting data within an organization by its managers. The purpose of this course is to define the information needed, identify sources of information and explain how managers use the information in planning, control, and making decisions. A sampling of relevant articles from recent professional publications will focus on new management techniques necessary in today's changing business environment.

Prerequisite: ACCT 102, minimum grade C

3 credits (3 lecture hours), spring semester

ACCT 201 - INTERMEDIATE ACCOUNTING I

This course covers advanced accounting principles, practices of corporations, and current trends using publications of the leading accounting organizations such as the Financial Accounting Standards Board and AICPA. Topics include financial statements, current assets, investments, plant assets and current liabilities.

Prerequisite: ACCT 102 minimum grade of C

3 credits (3 lecture hours), spring semester

ACCT 205 - COST ACCOUNTING

Topics covered include elements of production cost, material, labor and overhead. Also covered are the job cost system, process cost system, standard cost system, and other miscellaneous cost accounting topics.

Prerequisite: ACCT 102 minimum grade of C

3 credits (3 lecture hours), spring semester

ACCT 212 - FEDERAL INCOME TAX ACCOUNTING

Basic principles of federal income taxation are covered. Topics include: federal and state income taxation for the individual including filing requirements exemptions, deductions, determination of taxable income, computation of tax, tax credits and tax payments. A project is required.

Prerequisite: ACCT 100 or ACCT 101

3 credits (3 lecture hours), fall semester

ACCT 301 - INTERMEDIATE FINANCIAL ACCOUNTING I

An extension of financial accounting to include advanced topics related to revenue recognition and measuring and reporting of assets that include cash, investments, receivables, inventories, plant, property, and equipment, and intangible assets. The course will emphasize both accounting theory and practice and the development of professional judgment and critical thinking skills. Designed to help achieve an in-depth understanding of financial accounting sufficient to practice the profession of accounting and to solve problems at the level tested on the Uniform CPA Examination, by the end of the semester, students are expected to understand the principles, assumptions, and constraints that guide financial reporting (as outlined in the FASB's conceptual framework), and to apply US GAAP in several settings. The International Financial Reporting Standards (IFRS) will be emphasized as there is an increasing convergence between US GAAP and IFRS.

Prerequisite: Enrolled in the Bachelor of Business Administration in Business Administration program, have completed 18 credit hours in 300 level or above business or business related course work, ACCT 101 with a grade of C or above or permission of instructor.

3 credits(3 lecture hours), fall semester

ACCT 302 - INTERMEDIATE ACCOUNTING II

Continuation of ACCT 301. Liabilities and equities, accounting for income taxes, pensions, leases, revenue recognition and statement of cash flows.

Prerequisite: Enrolled in the Bachelor of Business Administration in Business Administration program, ACCT 301 with a grade of C or above, BSAD 350 with a grade of c or above or permission of instructor.

3 credits (3 lecture hours), fall or spring semester

ACCT 303 - COST ACCOUNTING

Introduction to managerial accounting and methods used to report information to decision makers internal to the firm. Course topics include cost concepts and behavior, cost estimation, activity-based costing, job-order costing, process costing, joint product costing, budgeting, performance measures, transfer pricing, CVP analysis, customer profitability analysis, and linear programming.

Prerequisite: ACCT 102 with a C or above or permission of the instructor.

3 credits(3 lecture hours), fall or spring semester

ACCT 401 - AUDITING

Study of audit standards and techniques in the conduct of an audit examination. Theory and practice of auditing is studied from both internal and external audit points of view.

Prerequisites: ACCT 302 with a grade of C or above and BSAD 375 with a grade of C or above or permission of instructor

3 credits (3 lecture hours), fall or spring semester

AGRICULTURAL BUSINESS

AGBS 100 – AGRICULTURAL ECONOMICS

In this course, fundamental economic principles keyed to agriculture are discussed. Emphasis is placed on specialization and exchange, the commercial banking system, monetary and fiscal policy, and supply and demand. Units on gross national product and the consumer price index, Global international trade, United States and New York state economics are also discussed.

3 credits (3 lecture hours), fall and spring semester

AGBS 110 – INTRODUCTION TO AGRICULTURAL BUSINESS MANAGEMENT

AGBS 110 is a dual-credit course with designated high schools to acquaint selected high school students with the basic principles of agricultural business. Students will have the opportunity to gain valuable career planning skills through job shadowing experiences, resume writing and interviews. Students will learn about the various forms of business organizations, agriculture marketing, sales; consolidated and diversified agriculture business opportunities. Students will also be exposed to the financial management and decision making process of owning and operating an agriculture business.

Prerequisites: Junior or senior level standing

3 credits (3 lecture hours), spring semester

AGBS 200 – MARKETING AGRICULTURAL PRODUCTS

Supply and demand analysis, elasticity of demand, commodity futures exchange with emphasis on individual projects in futures trading are included in this course. Market structure, marketing orders, pricing, advertising, and approaches to studying marketing problems are also covered as well as units on cooperatives and marketing alternatives.

3 credits (3 lecture hours), spring semester

AGBS 225 - ENVIRONMENTAL ECONOMICS

This course covers application of basic economic principles to environmental problems, pareto optimality, efficiency, price theory, perfect competition, market intervention and failure, and how the neoclassical theory affects policy decisions regarding the environment. Economic concepts are presented in an environmental context.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

AGBS 230 – AGRICULTURAL BUSINESS MANAGEMENT

Fundamentals of small agricultural business operation. Forms of business organization. Sources and uses of long and short term credit and extending credit. Capital budgeting and investment analysis.

2 credits (2 lecture hours)

AGBS 240- FARM MANAGEMENT AND FINANCE

This course is designed to give students a broad understanding of the management skills required to be successful in 21st century agriculture. Students will study organizational behavior, human resource management and financial decision making as they relate to agricultural businesses with a particular emphasis on: dairy, equine, vegetable and fruit production. Major emphasis is on the fundamental principles underlying sound farm organizational and op-rational decision making. The principles and techniques developed are general enough to have validity through time, in any geographic area under any conditions. On the other hand, they are specific enough to be applied to an individual farm at a given time. This course requires a 15 page research paper (APA format) applying sound theoretical and practical research to an agricultural business of choice.

Prerequisite: ABGS 100 or permission of the instructor

4 credits: fall and spring

AGBS 250 – DECISION MAKING FOR AGRICULTURAL MANAGERS

Using economic models and managerial decision making processes, students will be responsible for completing weekly analysis of farm operations, identifying and solving problems and/or creating opportunities for improving farm operations. Students will be actively involved in the process of gathering, organizing, and analyzing financial, production, and labor efficiency data. Upon completion of data analysis, evaluation of alternatives and making final recommendations to management, students will be actively involved in the implementation and monitoring processes. Each semester, students will complete a comprehensive case study analysis.

3 credits, (2 lecture hours, 2 laboratory hours), fall and spring semesters

AGBS 305 – AGRICULTURAL FINANCIAL DECISION MAKING

This course involves case work and on-farm consulting with the Farm Credit System. All lectures will be taught at Morrisville State College. Most laboratory assignments will be completed at First Pioneer Farm Credit (the largest agricultural lender in the United States) in Sangerfield, NY, or at selected farms in which students will act as agricultural leaders.

Prerequisites: ACCT 101, AGBS 240

3 credits (2 lecture hours, 2 laboratory hours), fall semester

AGBS 350 – AGRICULTURE BUSINESS DEVELOPMENT

This course provides basic economic theories to help students understand issues related to agribusiness development. Following the study of economic theories, empirical issues will be discussed including agricultural tourism, pollution and environment, the green revolution and the new trends in alternative energy focusing on the economic impact of utilizing bio diesel and ethanol. Students will learn how to look at issues related to agribusiness development from an economic perspective, and will learn how to apply the basic tools of economic analysis to a wide range of issues relating to renewable and non-renewable natural resource use.

Prerequisites: AGBS 240 or permission of the instructor

3 credits (3 lecture hours), fall semester

AGBS 400 – DISTRIBUTION & MARKETING OF AGRICULTUIRAL PRODUCTS

Through a series of six modules--cooperatives in agriculture; agriculture commodity purchasing and selling; food processing; product distribution; consumer retail relations; and financial feasibility --students will gain valuable experience and insight into the rapidly developing value added sector of the agriculture industry. Students are required to take a field trip to New York City and numerous other consumer markets to meet course requirements. All laboratory exercises will be conducted at either Nelson Farms, the Agribusiness Dairy Processing facility or established off-campus collaborating businesses. Students will rotate through each module.

Prerequisites: AGBS 100 Agricultural Economics or ECON 100 Introduction to Macroeconomics or ECON 140 Introduction to Microeconomics, AGBS 200 Marketing of Agriculture Products or BSAD 112 Marketing, AGBS 240

4 credits (1 lecture hour, 6 laboratory hours), fall or spring semester

AGBS 405 – CAPSTONE FOR FARM MANAGERS & RURAL ENTREPRENEURS

Students will be introduced to successful rural entrepreneurs. They will work in teams and act as consultants to evaluate farm and rural agriculturally based businesses financial, human resources, and strategic management practices. Students interested in food and agricultural entrepreneurship will evaluate food processing techniques, packaging and food safety procedures. Upon identifying key problems, students will present their finding to both class and entrepreneur. All lectures will be taught at SUNY Morrisville. Most of the laboratory assignments will be completed at the farm or rural business in which the students will be serving as consultants.

Prerequisites: AGBS 100, AGBS 240, 305, ACCT 100 or ACCT 101

3 credits (2 lecture hours, 2 laboratory hours), spring semester

AGBS 450 – AGRICULTURE POLICY & DEVELOPMENT

This course will provide students with a foundation in the principles and practices of agricultural policy and the policy process. Students will develop an understanding for the policy process as it relates to agriculture, its interaction with other institutional arrangements, and an awareness of policy analysis. Specific emphasis will be placed on the National Farm Bill, New York State Agriculture Policy and its impact on the rural economy as well as the individual producer. Students are required to participate in field trips to the National Agriculture Outlook Conference in Arlington, Virginia, and Agriculture Awareness day in Albany, New York.

Prerequisites: AGBS 100 Agricultural Economics or ECON 100 Introduction to Macroeconomics or ECON 140 Introduction to Microeconomics

3 credits (3 lecture hours), spring semester ours), spring semester

AGBS 460 – INTERNATIONAL AGRICULTURE MARKETING

The globalization of markets for food and agricultural products makes it essential to understand how international food and agricultural markets function and how they influence the options and choices of food and agribusiness firms. This course examines emerging globalization issues, the global food and agribusiness environment, potential markets, global agribusiness strategy, and global agribusiness operations. The course will also examine the impact of our changing social demographics on domestic product sales. Students will be required to prepare and present an analysis of barriers to international trade and opportunities for emerging national and international markets, as well as develop an international marketing plan for a product of their choice.

Prerequisites: AGBS 100

3 credits (3 lecture hours), spring semester

AGBS 470 – INTERNSHIP IN AGRICULTURAL MARKETING AND MANAGEMENT

In this course, students will participate in supervised fieldwork in a selected agriculture business or agriculture service organization. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the agriculture business/organization. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation.

15 credits

AGBS 480 – RETAILING AGRICULTURE PRODUCTS

This course provides students with a comprehensive view of retailing and direct marketing of agriculture products. Students will study and analyze current multi-channel retail strategies among box stores, roadside/farms stands, farmer's markets, grocery stores and ecommerce activities. Students will be required to research and track the life of a value added product from the farm to the table, prepare and present a plan to market a valueadded agriculture product to a box store of their choice, as well as obtain experience working in a retail setting.

Prerequisites: AGBS 240

3 credits (3 lecture hours), spring semester

AGRICULTURAL ENGINEERING

AGEN 100 - EQUIPMENT CARE & MAINTENANCE

Care, adjustments and overall maintenance of gasoline and diesel power applications. Servicing, fuel systems, lubrication, cooling, exhaust systems, clutch and brake adjustments and hydraulic systems will be covered. Principles of safety as applied to mobile machinery are emphasized. The course is designed for basic competency skills in care and maintenance.

3 credits (2 lecture hours, 2 laboratory hours)

AGEN 102 - AGRICULTURAL EQUIPMENT OPERATION

Familiarize students with the safe and proper methods of operating, performing maintenance, managing and selecting equipment in an economically viable way. Equipment that will be covered includes stationary and mobile machines such as feed mixers, equipment normally found on dairy farm, and forestry and construction industries. Lectures highlight management considerations whereas laboratories emphasize proper machine operation.

2 credits (1 lecture hour, 3 laboratory hours), fall semester

AGEN 104 - ESTATE & SMALL FARM EQUIPMENT OPERATION

This course will familiarize the student with safe and proper methods of operating, performing maintenance, managing and selecting equipment in an economically viable way. Equipment covered will include stationary and mobile machines such as auxiliary power units and equipment found on small farms and horticultural applications. It does not include the in-depth study into any specific machine, but covers the basics.

2 credits (1 lecture hour, 3 laboratory hours), fall semester

AGEN 105 - PRINCIPLES OF FARM MACHINERY

Care, adjustment, operation and repair of tillage, planting and harvesting field machinery common to New York state farms with special attention to adjustment and maintenance in the laboratory are covered in this course. Efficient machinery selection and use is also investigated.

2 credits (1 lecture hour, 2 laboratory hours), fall semester

AGEN 110 - SMALL POWER EQUIPMENT

Principles of operation, service and repair of 2 and 4 cycle small engines and the equipment which they operate such as lawn and garden equipment, chain saws, small power generators and outboard motors. Laboratory practice in testing, servicing and rebuilding the equipment.

2 credits (1 lecture hour, 2 laboratory hours), fall semester Non-majors only

AGEN 115 - AGRICULTURAL ENGINEERING—INDUSTRY OVERVIEW

This course will expose the student to the many and varied opportunities that exist for graduates in Agricultural Engineering Technology and Agricultural Mechanics. The course will present a broad spectrum of speakers to describe their careers and the linkages that exist to their educational background.

1 credit (1.5 lecture hours), first 10 weeks of fall semester

AGEN 120 - WATER SUPPLY & SANITATION

Development of sources of water. Selection, servicing, installation of pumping equipment, and treatment of water. Designing and installing supply plumbing and sanitary disposal systems.

2 credits (1 lecture hour, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement.

AGEN 125 - RESIDENTIAL ELECTRIFICATION

Design, installation, and troubleshooting of alternating current circuits used in residential construction. Circuit planning and layout as per national electrical code is emphasized. A set of hand tools is required for this course.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

AGEN 131 – FUNDAMENTALS OF HYDRAULICS

Students will develop a foundation of hydraulic principles and system operation as found on mobile hydraulic systems. Topics studied will include the principles of flow and pressure and how force can be multiplied within a mobile hydraulic system. The student will be introduced

to components used in hydraulic systems: pumps (gear, vane and piston), valves, cylinders and accumulators. Students will also develop an understanding of how an open center hydraulic system functions.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

AGEN 135 - CONSTRUCTION SURVEYING

Basic concepts of construction surveying as it specifically relates to agriculture and conservation applications, including field work in land drainage, pipeline stakeout, building stakeout and road construction. Survey planning and associated survey computations. Emphasis is on the operation of modern land measurement equipment including dumpy, laser and automatic levels, theodolite and EDM.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

AGEN 140 - WELDING

Operation of oxyacetylene and electric welders. Laboratory practice in welding and cutting of ferrous metals by processes common and current to the industry. 3 credits (1 lecture hour, 1 recitation, 2 laboratory hours), spring semester

AGEN 145 - AGRICULTURAL BUILDING SYSTEMS

The design of agricultural production facilities as an integration of unique structural, environmental, and waste management systems is studied along with the principles of design and construction of the structure and associated environmental systems with emphasis on coordination of various systems. Laboratory exercises include construction of an exemplary structure on site.

3 credits (2 lecture hours, 3 laboratory hours), spring semester

AGEN 151 – APPLIED HYDRAULICS FOR HYDROPOWER GENERATION

This course covers the basic concepts of water hydraulics as applied to hydropower generation. The course is introductory in nature and is intended to provide basic review of fluid static and hydrodynamic conditions as applied to micro- and mini-hydro power

generation systems. Focus will be on the utilization of the conservation of energy principle to establishing the conditions that will impact the selection of a hydropower generation system along with the assessment of how to harness energy from flowing fluids (water).

Prerequisites: MATH 102

3 credit (2 lecture hour, 2 laboratory hours), spring semester

AGEN 161 - BASIC HYDRAULICS

This course will present the fundamental principles of hydraulic and pneumatic systems as used on mobile agricultural, construction and on-highway machinery. Disassembly and inspection of the various components in hydraulic systems will be completed throughout the course. Introduction to ISO graphic symbols and how they are represented in actual systems will be stressed. Additionally, diagnostics and testing of equipment will be discussed.

Prerequisite: AGEN 131 or permission of instructor

Pre- or Co-requisite MAGN 101 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGEN 210 - ADVANCED SMALL POWER EQUIPMENT

Students will learn technical and business aspects of operating a small engine repair business and technical theory covering design characteristics of different types of compact power units for lawn and garden, recreational vehicle, and commercial and industrial applications. Laboratory classes simulate repair shop conditions. Students are responsible for scheduling, servicing, performing repairs of equipment for the college community. A basic set of tools is required. Prerequisite: AGEN 100 or AGEN 110

3 credits (2 lecture hours, 3 laboratory hours), spring semester

AGEN 220 – MAINTENANCE, REPAIR, & PERFORMANCE TUNING OF ARCTIC CAT RECREATIONAL EQUIPMENT

This course will cover the maintenance, repair, and performance tuning of Arctic Cat Snowmobiles and All-Terrain Vehicles. The concepts taught will be common to many other sport equipment manufacturers' products. The systems studied will include; Suspension, EFI, Drivetrain, Electrical, Fuel, and 2 and 4 stroke engines. The course will include mandatory testing that will allow the student to be certified at the basic level of Arctic Cat CatMaster Technician Certification.

Prerequisite: AGEN 210 and successful completion of EETC 4-Stroke Cycle Test 4 credits (2 lecture hours, 4 laboratory hours), spring semester

AGEN 240 - ADVANCED WELDING

Bonding and fusion of metals including alloy steels and nonferrous metals. Metallurgical changes which ac-company welding and the fabrication of metals, TIG, MIG, Flux-cored and plasma-arc processes are stressed.

Prerequisite: AGEN 140 or AUTO 102

2 credits (1 recitation, 2 laboratory hours), fall semester

AGEN 261 - ADVANCED HYDRAULICS

This course will be an application of previously mastered principles of hydraulic systems to both farm and light industrial equipment. Inspection, testing and servicing hydraulic circuits, systems and components, such as pumps, lift systems, hydraulic transmissions and motors will be emphasized. Appropriate testing procedures and equipment will be used. System difficulties and common service problems will be diagnosed.

Prerequisite: AGEN 131, AGEN 161, MAGN 101 or permission of instructor. 4 credits (2 lecture hours, 1 recitation hour, 2 laboratory hours), fall semester

AGEN 270 - TRACTOR OVERHAUL & REPAIR

In this course, students study principles, overhaul and repair of multi-cylinder internal combustion engines and various types of engines used in farm and light industrial power applications. Design and construction of engine components and systems and fundamentals and principles of systems of power transmission are covered. There is a laboratory practice in which students may use their own machines.

Prerequisites: AGEN 100, AGEN 261, DTEC 250, or permission of instructor, agricultural engineering majors only

5 credits (2 lecture hours, 4 laboratory hours), spring semester

AGEN 300 - INTERNSHIP IN AGRICULTURAL ENGINEERING

Students work in an approved job in the agricultural engineering industry. Comprehensive written report required at the end of the work period. Employer and staff evaluation are due upon completion of internship.

Prerequisite: Completion of one semester in Agricultural Engineering and permission of staff, overall GPA of 2.0.

4 credits (12-Week, 480-hour minimum), fall or spring semester

AGRICULTURE & NATURAL RESOURCES

AGNR 200 – JOB PREPARATION SKILLS & RESOURCES

This course investigates career opportunities in the field of agriculture. Students learn how to prepare for a job interview in their specific field. They will prepare resumes, cover letters, and practice various types of interview skills.

Prerequisite: Senior Standing

1credit (2 hours lecture/seminar)

AGNR 399 – RESEARCH AND MANAGEMENT IN AGRICULTURE, SUSTAINABILITY AND NATURAL RESOURCES

Research and Management in Agriculture, Sustainability and Natural Resources

A mentored independent study that allows a student the opportunity to conduct research, collect and analyze data and/or develop management plans or recommendations for management in Agricultural, Sustainability or Natural Resources projects. Upon conclusion of this class, the student will complete a comprehensive database, write a comprehensive report,

conduct analytical research, develop a management plan, develop a poster presentation, and/or write or participate in the writing of a journal article. Projects are planned in coordination with a professor.

Prerequisite: Junior or Senior Standing

1-4 credits (as arranged with the Professor), fall or spring semester

AGNR 400 – INSTRUCTIONAL ASSISTANCE EXPERIENCE

Designed to concentrate students' knowledge in an Agriculture Science or Natural Resource discipline to the extent that they can convey that knowledge to associate degree level students. As part of their course work they will re-search class topics, lead discussions for 100 or 200 level course work, demonstrate practical applications during laboratory sessions, and assist the professor with class and lab preparation. Student is expected to meet regularly with a discussion or laboratory section, to gain instructional experience, and to regularly discuss course objectives, techniques, and subject matter with the Lead Faculty member. Prerequisite: "B" or better in the required course or by permission of the Instructor.

1-4 credits (as arranged with the Professor) fall or Spring Semester

AGRONOMY (CROPS & SOILS)

AGRO 105 - SOIL & WATER CONSERVATION

Principles of soil and water conservation are covered in this course as well as practical application through land use, runoff and erosion control and soil management practices.

2 credits (3 lecture hours, 2 laboratory hours), spring semester (8 weeks)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGRO 110 - SOIL SCIENCE

This course covers the fundamentals of soil science, origin, nature and formation of soils, physical and chemical properties and soil management practices.

3 credits (2 lecture hours, 2 laboratory hours), fall and spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGRO 115 – PRINCIPLES OF COMPOST MANAGEMENT

In this course students will learn the science behind compost production. They will implement the food waste compost program on campus from source material collection through final product production. New ideas of organic source material will be tested to continually improve and expand upon the composting program. This course will be conducted in a seminar style with associated lab.

3 credits (2 seminar hours, 2 laboratory hours), fall and spring semester

AGRO 210 - FIELD CROPS

Production of field crops, their importance, adaptation, varieties and cultural practices are covered in this course.

Prerequisite: AGRO 110 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

AGRO 215 - SOIL FERTILITY & FERTILIZERS

Principles involved in supplying essential elements for growing plants. Soil and tissue analysis, nutrient deficiency symptoms. Factors in manufacture, applications and economics of fertilizers, amendments and organic materials.

Prerequisite: AGRO 110

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGRO 310 - PASTURE MANAGEMENT & FORAGES PRODUCTION

Fundamentals of pasture management and forages production for maximum yield, quality, and longevity.

Prerequisite: AGRO 110

3 credits (2 lecture hours, 2 laboratory hours), fall semester

AGRICULTURAL SCIENCE

AGSC 120 - DOMESTIC ANIMAL BEHAVIOR

This course is designed to provide the student with an introduction to, and a general understanding of domestic animal behavior. The evolutionary aspects of behavior, learning theory, normal and abnormal behaviors will be studied. Material will be presented concerning dogs, cats, sheep, goats, hogs, cattle and horses with an emphasis on cattle and horses.

3 credits (3 lecture hours), spring semester

AGSC 115 - AGRICULTURAL SCIENCE AND CONTEXT

An introductory course in Agricultural Science intended for majors and students in related disciplines. This course will introduce students to the variety of industries and career paths within the agricultural science discipline as well as to the common skills necessary within these industries. Topics covered will include agricultural research from literature review through disseminating research results, computer literacy in agricultural science, and New York agriculture in context as compared to the North East, the United States as a whole, and the world.

1 credit (1 lecture hour), fall semester

AGSC 132 - INTRODUCTION TO COMPUTER APPLICATIONS IN PRECISION FARMING

Course introduces the student to site-specific crop management and precision farming. It involves the application of selective computer software and hardware in site-specific crop management. In addition, it focuses on providing the student with an overview of the basics of global positioning system (GPS), an introduction to geographic information systems (GIS), and an introduction to remote sensing.

2 credits (1 lecture hour, 2 laboratory hours) fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AGSC 135 - COMPUTER APPLICATIONS IN AGRICULTURAL RESEARCH I

Application of computer software in agricultural research including: statistical packages which include ANOVA, Duncan Multiple range test, correlation, etc.

1 credit, spring semester

AGSC 137 - AGRICULTURAL STATISTICS

This course involves the application of procedures and techniques for collecting, analyzing, and interpreting agricultural data. The course encompasses an introduction to statistical methods using examples and applications. The course also focuses on basic statistical analysis using the MS Excel spreadsheet program and other pertinent computer tools. Emphasis is placed on providing the student with problem-solving skills and the ability to interpret the results of basic agricultural statistical analysis.

Prerequisite: MAGN 101 or equivalent

3 credits (3 lecture hours), spring semester

AGSC 140 - COMPUTER APPLICATIONS IN PRECISION FARMING II

The student will pursue research projects in the area of GPS, GIS and other precision farming-related areas and then make presentations using PowerPoint. Prerequisite: AGSC 132 & 135 or consent of instructors

1 credit, spring semester

AGSC 145 - COMPUTER APPLICATIONS IN AGRICULTURAL RESEARCH II

The student will pursue projects in the areas of basic and applied research and then make presentations on the project using PowerPoint.

Prerequisite: AGSC 130 & 135 or consent of instructors 1 credit, fall semester

AGSC 246 - INTERNSHIP IN AGRICULTURAL SCIENCE

This internship involves students working in an approved job in agriculture. A journal, written report, and employer and faculty evaluation are required upon completion of the internship.

4 credits (12 weeks, 480 hours minimum), fall semester

AGSC 250 – CURRENT TOPICS IN AG SCIENCE

A capstone course in Agricultural Science intended for majors and students in related disciplines. Students completing the Agricultural science AAS degree and either moving into a bachelor's degree or entering the workforce will put the skills they've acquired over the preceding semesters into practice. Each semester a new issue facing agricultural production will be selected and students will develop proposals for how they would proceed to address the issue. This course will be conducted in a seminar style with associated lab.

3 credits (2 hours seminar, 2 hours lab), spring

AGSC 350 - ANIMAL GENETICS

This course provides an application of the principles of genetic selection for the improvement of dairy cattle and horses. The basic concepts of inheritance from both mathematical and biological perspectives are emphasized. Progeny and performance testing programs, pedigree analysis, mating systems and their application to selection and production of genetically superior animals are discussed.

Prerequisites: DAS 100 or ESCI 305 and DANS 120 or ESCI 110 with a C or better (prerequisite or co-requisite)

3 credits (3 lecture hours), spring semester for equine or fall semester for dairy students, alternate years, even years

AMERICAN SIGN LANGUAGE

AMSL 101 –AMERICAN SIGN LANGUAGE I

American Sign Language may be used to satisfy the SUNY General Education requirement for Foreign Language only by students in programs leading to certification in elementary and secondary education and in programs leading to careers where there is likely to be significant contact with the hearing impaired. This is an introductory course for students in American Sign Language with basic vocabulary, structure, syntax and grammar. Conversational skills will be emphasized from an expressive and receptive perspective, as well as the manual alphabet, numbers, colors and facial grammar. Exposure to Deaf Culture and culturally appropriate behaviors will be included in the course.

3 credits (3 lecture hours); fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

AMSL 102 – American Sign Language II

A continuation of AMSL I involves the study of advanced ASL vocabulary, linguistic structures, and Deaf culture. Students will develop advanced levels of receptive and expressive conversational skills.

Prerequisite: AMSL I or permission of instructor 3 credits (3 lecture hours); fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

ANIMAL SCIENCE

ANSC 100 - ANIMAL SCIENCE & INDUSTRY

Concurrent Enrollment

This is a concurrent enrollment course with designated high schools to acquaint high school students with animal science and industry. It offers an introduction to farm and companion animal production and its affiliated industries with emphasis on the biological nature of animals, infrastructures and economic uniqueness of affiliated industries, animal products and services, and the management of animal enterprises.

3 credits (minimum of 45 lecture hours), spring semester

ANSC 101: INTRODUCTION TO ANIMAL SCIENCE

An introductory course in Animal Sciences for students interested in a career path in the animal industries. This course will introduce students to the various animal industries, including both agricultural and companion animals. Topics covered will include housing, handling, reproduction, health, genetics and breeding, as well as current topics on welfare and sustainability.

3 credits (2 lecture, 2 lab)

ANSC 110: LIVESTOCK PRODUCTION MANAGEMENT/TECHNIQUES

Livestock Production Management and Techniques will provide an overview of animal agriculture with a focus on management practices related to health, husbandry, feeing, breeding, and marketing of beef cattle, small ruminants, swine, poultry, and alternative agricultural species. This will be accomplished through lectures and hands-on experiences during laboratory sessions. Live animals will be used during laboratories in accordance with federal regulations, and all laboratories will be conducted with respect for the animals.

3 Credits (2 lecture hours, 2 laboratory hours)

ANSC 150: LIVE ANIMAL EVALUATION

Live Animal Evaluation is a hands-on two credit hour lecture/laboratory course concentrating on the science and art of live animal evaluation. The lectures will cover all aspects of improving the selection of meat animals and the efficiency of meat animal production. Laboratory activities will include the evaluation of market animals and the evaluation and selection of breeding animals of all meat animal species. Worksheets on calculating carcass grades and performance data will be given to complement in class activities. This course is an excellent introduction for all livestock production courses and will provide a baseline of information for students interested in intercollegiate livestock judging.

2 credits (1 lecture hour, 2 laboratory hours),

ANSC 200: SHEEP INDUSTRY/PRODUCTION SYSTEMS

This course will teach the principles of modern sheep production including all aspects of sheep production management systems and the U.S./Global Sheep Industry. The course will incorporate genetics, nutrition, reproduction, disease control, management and marketing of sheep. Concentrating on the U.S. Sheep market, the course will include the international perspective of the industry. Students will gain an understanding of the world's sheep industry and how it affects the U.S market. From flock management to marketing strategies, students will leave ANSC 200 with a well round knowledge of the entire sheep industry.

Prerequisite: ANSC 110

3 credits (2 Lecture Hours, 2 Laboratory Hours).

ANTHROPOLOGY

ANTH 101 -INTRODUCTION TO ANTHROPOLOGY

An introduction to the study of human beings, ranging across the four fields of biological and cultural anthropology, archaeology and linguistics. Focus is placed on human evolution and origins, development of human culture, and description and comparison of differing ways of life around the world. Emphasis on basic anthropological concepts of evolution, culture, kinship, institutions, globalization and socio-historical change.

3 credits, fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

Students may not receive credit for both SOCS 122 and ANTH 101

ARCHITECTURAL STUDIES & DESIGN

ARCH 101 - ARCHITECTURAL GRAPHIC COMMUNICATIONS

This is a drawing course designed to teach students interested in architecture to recognize and graphically depict forms and textures in the natural and built environment. Instruction will be given in freehand and hardline drafting/ drawing; basic pencil, color and rendering techniques; orthographic projection, as well as the principles of pictorial (oblique, axonometric and perspective) drawing. These drawing techniques, methods and principles will aid students in the development of their architectural presentation, drawing, and rendering skills. The course will culminate in the execution and composition of individual comprehensive architectural presentations.

Pre- or Co requisites: ARCH 141, MATH 102 (minimum) or permission of instructor

2 credits (1 lecture hour, 2 laboratory hours), fall semester

This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

ARCH 102 - INTRODUCTION TO ARCHITECTURE

This course seeks to examine the questions, “What is an architect?” “What does an architect do?” and “What is architecture?” Addressed will be the development of the architectural education system in the United States, including an introduction to the internship development program, licensure and registration, and professional practice. Particular focus will be given to the wide range of tasks that architects are required to perform. Also studied through the exploration of the social, environmental, behavioral, aesthetic, technological and political influences, will be the place of architects in society and architecture in culture.

Pre or Co-requisite: COMP 100 (minimum) or permission of instructor

2 credits (2 lecture hours), fall semester

This course fulfills the Liberal Arts and Sciences requirement

ARCH 141 - ARCHITECTURAL DESIGN I

This course is will introduce the study of three dimensional design principles. The content of the course will address the design process, the vocabulary of design, rationale and meaning of design, as well as compositional and organizational strategies. Students will explore and express solutions to multiple design problems through different architectural media. The semester will culminate in a final project in which students will be expected to demonstrate their understanding of basic three dimensional design.

Pre-or Co-requisites: ARCH 101, MATH 102 (minimum) or permission of instructor

4 credits (2 lecture hours, 4 laboratory hours), fall semester

This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

ARCH 142 - ARCHITECTURAL DESIGN II

This course, the second in a series of four, is the sequential course to Architectural Design I. The principles of three dimensional design explored in Architectural Design I, will be applied to problems and analyses dealing with order and definition through the creation and manifestation of spatial volumes. In working through these problems, students are expected to develop and demonstrate a design logic that accounts for composition, precedent, organization and context. Students will also study the relationship of natural light and architectural volume - space. Anthropomorphism will be probed and constructed in response to the words of Vitruvius: firmness, commodity and delight. Ultimately the studio will conclude with a comprehensive final project. Prerequisite: ARCH 141

Pre- or Co- requisite MATH 102 (minimum) or permission of instructor

4 credits (2 lecture hours, 4 laboratory hours,) spring semester

This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

ARCH 151 - ARCHITECTURE: PREHISTORY TO 1800

This survey of architecture is an overview of the history of architecture from pre-history to the nineteenth century. The major architects and cultural forces shaping each era will be given primary focus. In addition, the social, environmental, behavioral, aesthetic, technological and political forces that influence and affect architectural forms, ideas and urban patterns will be studied. Pre- or Co-requisite: COMP 101 (minimum) or permission of instructor

3 credits (3 lecture hours), spring semester

This course fulfills the Liberal Arts and Sciences requirement

ARCH 243 - ARCHITECTURAL DESIGN III

This is the sequential course to Architectural Design II. It emphasizes the study of the relationship between facade, plan, and section as two-dimensional constructs, describing three-dimensional reality. This will be explored through a combination of analysis problems, and then through associated design problems. Throughout the

semester, each student will develop an architectural portfolio emphasizing their creative design process and documenting work from this course and other courses. The presentation of creative work in this portfolio will be ap-proached as a design problem. The portfolio will be created in a digital format.

Prerequisites: ARCH 142

Pre- or Co- requisite MATH 103 (minimum) or permission of instructor

4 credits (2 lecture hours, 4 laboratory hours) fall semester

This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

ARCH 244 - ARCHITECTURAL DESIGN IV

This is a final course in a four-course sequence. A series of architectural projects proposed and developed in response to the natural and built environment of which the principles of design developed in the previous architectural design courses and other courses will be synthesized. With the use of analyses, design presentations and critiques, students will employ a directed approach to the design projects. Projects will vary depending on the progress and approach to architectural design as deemed appropriate by the faculty member.

Prerequisite: ARCH 243

Pre- or Co- requisite MATH 103 (minimum) or permission of instructor

4 credits (2 lecture hours, 4 laboratory hours), spring semester

This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

ARCH 252 - ARCHITECTURE: 1800 TO PRESENT

This survey of the western tradition in architecture is an overview of the history of architecture from the nineteenth century through today. The major architects and cultural forces shaping each era will be given primary focus. The social, environmental, behavioral,

aesthetic, technological and political forces that influence and affect architectural forms, ideas and urban patterns will be explored through analytical study.

Prerequisite: ARCH 151, COMP 101 (minimum) or permission of instructor

3 credits (3 lecture hours), spring semester

This course fulfills the Liberal Arts and Sciences requirement

ARCH 271 - ARCHITECTURAL TECHNOLOGY I

This course is an introduction to building construction and materials with an emphasis on the various enclosure systems developed for wood. The student will explore floor, wall and roof assemblies including joists, rafters, studs, windows, doors and advanced pre-engineered products. Students will be expected to design appropriate solutions for specific loading configurations as determined through calculations and material criteria. Building code use and construction document creation will be integrated throughout the course.

Prerequisite: ARCH 101, CAD 181 or permission of instructor

Pre- or Co-requisite: CAD 183, MATH 103 (minimum) or permission of instructor 3 credits (1 lecture hour, 4 laboratory hours), fall semester

ARCH 272 - ARCHITECTURAL TECHNOLOGY II

Building upon knowledge developed in ARCH 271, students will investigate various interior and exterior enclosure systems, with an emphasis on materials such as concrete and steel. Student will study the principles of these materials from individual structural characteristics, industry uniqueness, to industry uses. This course will investigate in detail sitecast and precast concrete framing systems, concrete reinforcing and detailing, and steel framing systems and detailing. Also included will be site planning (interpolation and grading), traditional and innovative roofing systems, building accessibility and construction documentation (drawings, project manuals/specifications).

Prerequisites: ARCH 271, CAD 183, MATH 103 (minimum) or permission of instructor 3 credits (1 lecture hour, 4 laboratory hours), spring semester

ART

ART 101 - BASIC ART

Students will study visual perception through the use of drawing and painting media, stressing both technical skills and individual expression; and exploring both form and content. Students are assigned projects and critiques that are based on drawings from still life, interiors and the imagination.

2 credits (4 laboratory hours), fall or spring semester

ART 102 - ADVANCED ART

In this course the student will continue to develop competence in drawing and painting techniques with emphasis on developing work in an atmosphere of experimentation and exploration. Short, informal slide presentations on various artists will be given throughout the course. Group and individual problems and critiques will be given.

Prerequisite: ART 101 or permission of instructor 2 credits (4 laboratory hours), fall or spring semester

ART 110 – INTRODUCTION TO THE VISUAL ARTS

This course introduces students to the world of visual arts, including how to look at, interpret, analyze, and understand a variety of art forms, such as drawing, printmaking, painting, sculpture, architecture, design, and the camera arts. We study art from around the world and from the beginning of human civilization as a way of understanding the social, political, and cultural attitudes that influence how art is produced, viewed, and critiqued.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ART 120 - INTRODUCTION TO DRAWING

This course introduces students to drawing as artistic expression and communication, studio work in a variety of drawing media, emphasizing principles of line, shape, value and the fundamentals of perspective.

2 credits* (4 lab/lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ART 121 - INTRODUCTION TO PAINTING

An introduction to painting using various techniques and materials. Basic vocabulary of painting skills in value, color and composition with an emphasis on style and expression.

Prerequisite: ART 120 or ART 101

2 credits* (4 lab/lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ART 131 - INTRODUCTION TO PHOTOGRAPHY

An introduction to photography and the photographic processes, with an emphasis on the fundamentals of lighting, exposure, processing, printing and the composition of photographic prints.

3 credits (2 lecture hours, 2 laboratory hours) fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

ASTRONOMY

ASTR 101 - SOLAR ASTRONOMY

The study of planetary systems is covered in this course. Topics include the history of understanding the solar system and the celestial sphere, principles of telescope design, the nature of the solar system, sun, terrestrial and Jovian planets, Pluto, the various moons, comets, asteroids, and extra solar planets.

Prerequisite: Math at the level of MAGN 101.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ASTR 110 - STELLAR ASTRONOMY

This course studies stars, galaxies, and cosmology, constellations, the motions of the night sky, earth- and space-based telescopes, the nature of starlight, the classification, structure and evolution of stars and galaxies, distance scales, the large scale structure of the universe, cosmology, and extraterrestrial life.

Prerequisite: Math at the level of MAGN 101.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

AUTOMOTIVE SERVICE SPECIALIST – should these be deleted?

AUOS 121 - AUTOMOTIVE CHASSIS SERVICE

Construction, operation, service and repair of the chassis. Laboratory exercises include lubrication, brakes, suspension, steering, tires, manual transmission and differential service.

5 credit hours (3 lecture hours, 6 laboratory hours), fall semester

AUOS 127 - INTERNAL COMBUSTION ENGINES

Theory of the internal combustion engine including the fundamentals in nomenclature, measurement, wear analysis and repair procedures for all current automotive power plants. Laboratories focus on engine overhaul.

5 credit hours (2 lecture hours, 6 laboratory hours), spring semester

AUOS 129 - AUTOMOTIVE FUNDAMENTALS

A study of the physical aspects of our environment and automotive machines in order to better understand and interact with them.

3 credit hours (3 lecture hours), spring semester

AUOS 161 - AUTOMOTIVE CHASSIS SERVICE II

Designed to give the student extensive experience in the repair of front-wheel drive suspension and drive axle components, experience in 4-wheel alignment and experience in body panel and headlight adjustments.

Prerequisite: AUOS 121

5 credit hours (2 lecture hours, 6 laboratory hours), spring semester

AUOS 254 - FUEL SYSTEM SERVICE

Principles, nomenclature, construction, operation and repair of fuel metering systems. Carburetors, electronic fuel injection and crossfire injection systems. PCM sensor inputs will be covered.

5 credit hours (2 lecture hours, 6 laboratory hours), fall semester

AUOS 255 - EMISSION CONTROL SYSTEMS

Construction, operation and practices involved in controlling undesirable emissions (HC, CO and NO), resulting from the operation of gasoline engines. 3 credit hours (2 lecture hours, 6 laboratory hours, 9 weeks), fall semester

AUOS 256 - EXHAUST & COOLING SYSTEM SERVICE

Care, operation, testing and repair of automotive cooling and exhaust systems.

2 credit hours (2 lecture hours, 6 laboratory hours, 6 weeks), fall semester

AUOS 258 - ENGINE PERFORMANCE SERVICE

Application of basic principles, methods and procedures utilizing special tools for in-car diagnosis and engine repair. Includes TBI and PFI operations.

Prerequisites: AUOS 254, 255, 256

5 credit hours (2 lecture hours, 7 laboratory hours), spring semester

AUOS 259 - AUTOMATIC TRANSMISSIONS

Laboratory practice in the rebuilding and service of the different automatic transmissions in and out of the vehicle.

Prerequisites: AUOS 129 and AUOS 121

5 credit hours (2 lecture hours, 6 laboratory hours), spring semester

AUTOMOTIVE TECHNOLOGY

AUTO 100 - INTRODUCTION TO AUTO TECH

This course covers the basic fundamentals of automotive chassis. It will include wheels, tires, brakes, steering and suspension alignment.

1 credit (2 lecture hours, 4 laboratory hours), permission of instructor required

AUTO 102 - METALS

Characteristics and properties of metals, metallurgy, fabrication, oxyacetylene and arc welding. TIG and MIG welding and other industrial processes.

3 credits (1 lecture hour, 2 laboratory hours, 1 hour recitation)

AUTO 103 – INTERNAL COMBUSTION ENGINES I - THEORY

Operating principles and nomenclature of internal combustion engines used as automotive power plants. Laboratory emphasis is on technician level analysis and repair of mechanical components.

3 credits (2 lecture hours, 3 laboratory hours)

AUTO 104 - BASIC AUTOMOTIVE ELECTRICAL SYSTEMS

Direct and alternating current circuits, magnetism, inductance, electrochemical action, and semiconductors. Introduction to automotive wiring diagrams, using voltage, amperage, and resistance measurements to troubleshoot opens, shorts, and excess resistance problems in basic DC circuits. Introduction to automotive cranking and charging systems.

3 credits (2 lecture hours, 3 laboratory hours), fall or spring semester

AUTO 105 – CAR AND LIGHT TRUCK DIESEL FUNDAMENTALS

This course explores the operation and service of modern car and light truck diesel engines. Principles and theories are studied by running, testing, dissembling, and reassembling components, systems and engines.

2 credits (2 lecture hours, 2 laboratory hours), spring semester, meets for 10 weeks.

AUTO 109 - CHASSIS ANALYSIS I

Construction, operation and repair of modern chassis components. Including: Brakes (disc, drum, diagonal, quick take-up, and anti-lock); Suspensions (coil, leaf, McPherson, wishbone, and active); Steering systems including: linkage and rack & pinion. Tires, wheels and bearings.

4 credits (3 lecture hours, 3 laboratory hours), fall semester

AUTO 110 - SUMMER WORK EXPERIENCE

Work experience of at least 10 weeks in a transportation/mechanical area between the first and second year. Report will be due before the 10 week of the fall semester. A student my receive credit for this course from prior academic experience given appropriate articulation agreement.

3 credits

AUTO 138 - CAREER AWARENESS

Introduction to the complex and diverse automotive industry. Guest speakers will discuss the many career opportunities as well as the requirements for today's technicians.

1 credit hour (1 lecture hour), A student my receive credit for this course from prior academic experience given appropriate articulation agreement.

AUTO 155 - INTERMEDIATE AUTOMOTIVE ELECTRICITY & ELECTRONICS

Application of the principles of electricity to the Diagnosis, operation, service, and repair of automotive electrical and electronic systems troubleshooting, battery, starting, Charging, and accessory circuits with multimeters, labscopes, and scan tools is emphasized.

Prerequisite: AUTO 104 or ASET 115 or permission of instructor 3 credit hours (2 lecture hrs, 3 laboratory hours), spring semester

AUTO 171 - AUTOMOTIVE DRIVETRAINS

This course introduces the automotive student to the theory and repair of modern automotive drive trains. Emphasis is given to testing drivetrain system components to determine faults prior to removal from the vehicle. Topics include automatic transmissions, manual Transmissions, four wheel drive systems, all- wheel drive systems and final drive systems. Lecture and laboratory assignments are combined to give the students both theory and hands on experience.

Prerequisites: Auto 109, Auto 104 or Instructor Permission

3 credits (2 lecture hours, 3 laboratory hours), fall/spring semester

AUTO 202 - AUTO BODY FUNDAMENTALS

Construction, damage analysis, and repair of the modern automobile. Basic sheet metal repair, refinishing systems, panel adjustments, trim panel removal, plastic repair, and restraint systems.

Prerequisite: AUTO 102

3 credits (2 lecture hours, 1 recitation hour, 2 laboratory hours), fall semester

AUTO 203 - INTERNAL COMBUSTION ENGINES II

Practical experience in automotive engine rebuilding. Application of basic physical and thermodynamic principles in engine design. Laboratory emphasis is on utilization of special equipment involved in the rebuilding process.

Prerequisite: AUTO 103 and permission of instructor

3 credits (2 lecture hours, 3 laboratory hours), spring semester

AUTO 204 - AUTOMOTIVE ELECTRONIC SYSTEMS

Application of the principles of diagnostics to the design, operation, service and repair of today's sophisticated computerized automotive systems. Troubleshooting problems with the ignition system, sensors, and networks with multimeters, labscopes, and scan tools is emphasized Prerequisites: AUTO 103, AUTO 104, or permission of instructor.

Co-requisite: AUTO 205

3 credits (2 lecture hours, 3 laboratory hours), fall semester

AUTO 205 - ELECTRONIC FUEL SYSTEMS

Principles of service and repair of automotive fuel systems including TBI, PFI, SFI, EFI and pump circuits, together with the relationship of design as it affects service and repair.

Prerequisites: AUTO 103, 104, and permission of instructor. Co-requisite: AUTO 204

3 credits (2 lecture hours, 3 laboratory hours), fall semester

AUTO 209 - CHASSIS ANALYSIS II

Designed to give the student detailed instruction in the diagnosis and repair of modern suspension, steering and break systems and in the troubleshooting and repair of 4-wheel alignment systems. On car brake lathe and road force balance machines included.

Prerequisites: AUTO 109

Co-requisite: AUTO 102, AUTO 104

4 credits (2 lecture hours, 1 recitation hour, 3 laboratory hours), spring semester

AUTO 255 - DRIVABILITY & PERFORMANCE PROBLEMS

Methods and procedures used in the diagnosis and correction of performance issues, using advanced test equipment. Laboratory practice to ensure a degree of occupational proficiency.

Prerequisites: A grade of C or better in AUTO 204, AUTO 205, and permission of the instructor.

Pre- or Co-requisite AUTO 155 5 credits

AUTO 259 AUTO BODY NON-STRUCTURAL REPAIR AND REFINISHING

Designed to give the student extensive hands-on experience necessary to develop the skills required to repair collision damage to the modern unibody vehicle. Includes identification and analysis of damage as well as advanced repair and refinishing techniques.

Prerequisite: Must pass AUTO 202 with a grade of C or better and permission of instructor. 5 credits (2 lecture hours, 7 laboratory hours), spring semester

AUTO 260 – AUTO AIR CONDITIONING & REFRIGERATION RECOVERY

Introduction to the theory, operation, service, repair and diagnosis of factory installed air conditioning.

1 credit (1 lecture hour, 2 laboratory hours), 8 weeks, fall semester

AUTO 261 - AUTOMOTIVE AIR CONDITIONING & HEATING

Basic principles, nomenclature and operation as applied to the automotive air- conditioning and heating units. Labs prepare students for required certification in the handling of refrigerant as well as repairs.

3 credit hours (2 lecture hours, 3 laboratory hours), spring semester

AUTO 269 – ADVANCED AUTO BODY REFINISHING & STRUCTURAL MEASUREMENT

This course covers techniques required to properly repair multi-coat paint finishes, including spot and panel painting with HVLP spray equipment, fundamentals of color perception, color, light sources and tinting. It will also cover structural and non-structural analysis and collision repair of Unibody vehicles.

Prerequisite: Must pass AUTO 259 with a grade of C or better and permission of instructor. 5 credits (2 lecture hours, 8 laboratory hours), fall semester

AUTO 279 – AUTO BODY STRUCTURAL REPAIR

This course covers techniques required to properly analyze and repair Unibody and full frame collision damage. It will also include extensive hands-on experience for increased employability in many segments of the collision industry.

Prerequisite: Must pass AUTO 269 with a C or better and permission of the instructor. 6 credits (2 lecture hours, 12 laboratory hours) spring semester

AUTO 309 - ADVANCED AUTOMOTIVE CHASSIS

This course contains information about construction and geometry of modern automobile suspension systems. Topics include introduction to metallurgy, suspension design, suspension angles and future trends. The laboratory requirements include a group project, related to automotive vehicle steering and suspension. A laboratory practicum will be required in which the student will assist instructors in developing a training aid and presentation for class.

Prerequisite: A.A.S. in Automotive Technology or successful completion of the first 2 years of the BT program with a minimum of a “C” in Auto 109 & 209 or equivalent.

4 credits (2 lecture hours, 3 laboratory hours & laboratory practicum).

AUTO 355 - ADVANCED AUTOMOTIVE DIAGNOSTICS

This course focuses on automotive troubleshooting techniques and tools. Emphasis will be placed on diagnosing engine performance conditions related to mechanical, fuel injection, ignition, and emissions systems. Diagnosis of other computer controlled and networked automotive systems will also be covered. It includes theory of system operation with an emphasis on comprehension and systematic troubleshooting. Included is an emphasis on hands-on practice and familiarity with factory and aftermarket scan tools, and automotive labscopes.

Prerequisite: A.A.S. in Automotive Technology or successful completion of first 2 years of BT

3 credits (2 lecture hours, 3 laboratory hours)

AUTO 359 - COLLISION & BUSINESS MANAGEMENT

This course covers the operation and management of modern auto body collision repair facilities. Topics covered include: safety and environmental issues, terminology, duties of collision shop personnel, cost control, tools and equipment, collision estimating and shop layout. It also covers interaction with insurance companies, auto body products suppliers, new and recycled parts suppliers and mobile specialty repair businesses.

Prerequisite: A.A.S. in automotive or permission of instructor 3 credits (2 lecture hours, 3 laboratory or field trip hours)

AUTO 360 - AUTOMOTIVE SHOP MANAGEMENT & SUPERVISION

Practicum in shop management. Practical experiences in demonstrating leadership skills, problem-solving skills, motivational skills, goal setting, time management, counseling, implementing policy and procedures, conducting meetings, implementing codes of conduct, enhancing professional ethics, interfacing with customers, conflict resolution and dealing with personnel issues in the workplace, such as sensitivity skills, harassment issues and stress management.

Prerequisite: BSAD 116

3 credits (2 lecture hours, 3 laboratory hours)

AUTO 371 - ADVANCED POWERTRAIN MANAGEMENT

This course describes performance and design features, as well as diagnosis and repair procedures for the modern automatic transmissions. Emphasis is given to understanding electrical/electronic controls and the proper use of electrical/ electronic test equipment. Disassembly and reassembly of the transmission enables the students to understand and visualize the mechanical and hydraulic components.

Prerequisite: A.A.S. in Automotive Technology/successful completion of first 2 years of BT 3 credits (2 lecture hours, 3 laboratory hours)

AUTO 380 - AUTOMOTIVE PARTS INVENTORY MANAGEMENT & MERCHANDISING

Fundamentals of computer-based parts inventory and P.O.S. systems. Inventory management, core procedures, warranty claims, remanufactured vs. rebuilt parts, team concept of parts and repair departments, customer assistance, marketing strategy, sales techniques, identifying customer base, merchandising, and forecasting business with analysis of profit and loss statements.

Prerequisite: BSAD 112 and AUTO 360 3 credits (2 lecture hours, 3 laboratory hours)

AUTO 400 - AUTOMOTIVE FLEET MAINTENANCE

An overview of all automotive repair tasks will be reviewed. Analysis of pertinent tasks for fleet maintenance will emerge and be coupled with labor and price guides time on task evaluations, absolute necessity, intervals of inspection, safety concerns, failure records, component life cycles and environmental issues. Further analysis will reveal decision-making process for in-house repairs or out-sourcing component failure records and vendor responsibilities will be discussed along with fleet discount structure and avenues of saving time, inventory and other overhead to ultimately make the organization efficient. Record-keeping systems and the development of a fleet maintenance log will be implemented. Written report will include a fleet maintenance guide.

Prerequisite AUTO 360

3 credits (2 lecture hours, 3 laboratory hours)

AUTO 420 - AUTOMOTIVE INDUSTRY INTERNSHIP ORIENTATION

This course is designed to orient the student for successful completion of their internship. The orientation process will assist the student in developing a realistic time-line, to prepare him or her for meeting the responsibilities of an intern and exposing him or her to the various forms and reports related to the internship.

Prerequisite AUTO 360 1 credit

AUTO 421 - AUTOMOTIVE INDUSTRY INTERNSHIP

This course is based upon work experience acquired at a pre-approved manufacturer, dealer, distributor, repair facility, or other location with permission in Internship Program Coordinator. Orientation sessions must be competed the semester prior to the internship. The

work experience must have employer and program coordinator approval and will include a problem-centered project planned in joint agreement with the employer, student and coordinator and be presented as a written term paper.

Prerequisites: Successful completion of required courses, permission of Internship Program Coordinator, completion of orientation sessions (AUTO 420)

12 credits (1 lecture hour, 15-week internship)

AUTOMOTIVE TECHNOLOGY FORD ASSET OPTION

ASET 111 - INTRO TO AUTOMOTIVE SERVICE

This course covers the basic concepts and terms of automotive technology, work place safety, state inspections, pre-delivery, safety and environmental regulations, and use of service information resources. Topics include familiarization with automotive and shop components along with identification and proper use of various auto-motive hand and power tools. Upon completion, students should be able to describe terms associated with automobiles, identify and use basic tools and shop equipment, and use information sources and conduct basic safety/emissions and/or PDI inspections.

2 credits (64 hours combined lecture and laboratory), fall semester

ASET 112 – INTRO TO AUTO ELECTRICAL SYSTEMS

This course covers basic electrical theory and wiring diagrams, test equipment, and diagnoses/repair/replacement of batteries, starters, alternators and basic electrical accessories. Topics include diagnosis and repair of battery, starting, charging, lighting and basic accessory systems problems. Upon completion, students should be able to diagnose, test, and repair the basic electrical components of a car.

Prerequisite: ASET 111

3 credits, (96 hours combined lecture and laboratory) fall semester

ASET 113 – INTRO TO BRAKING SYSTEMS

This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disk brakes involving hydraulic, vacuum boost, hydra boost, parking brake, anti-lock and electronic stability control systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking system issues.

Prerequisite: ASET 111, 112

3 credits (100 hours combined lecture and laboratory), fall semester

ASET 121 - ENGINE REPAIR

This course covers the theory, construction, inspection, diagnosis and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis/repair of automotive engines using appropriate tools, equipment, procedures, and service information.

Prerequisite: ASET 113

3 credits (128 hours combined lecture and laboratory), spring semester

ASET 122 - ELECTRICAL & ELECTRONIC SYSTEMS

This course covers electrical theory and electronic systems, wiring diagrams, test equipment, and diagnosis/repair/replacement of electrical and electronic systems problems including networks and multiplexing. Upon completion, students should be able to use digital volt-ohm meters, oscilloscopes, Ford IDS test equipment, and repair automotive electrical and electronic components and systems.

Prerequisite: ASET 113

4 credits (128 hours combined lecture and laboratory), spring semester

ASET 125 - COOPERATIVE TRAINING 1

A supervised field work program with the students' sponsoring Ford or Lincoln dealer under the supervision of an experienced technician that is certified in the specialties area covered during the previous semester. Work experience to take place during break between fall and spring semesters.

Prerequisite: ASET 112,113

1 credit (2-3 weeks of combined experience), spring semester

ASET 160 - APPLIED ELECTRICITY & ELECTRONICS

The student will learn the rules governing basic direct current circuits and passive components, as well as the methods of measuring these properties. Fundamental analysis of basic automotive series and parallel circuits, and measurement with digital meters and oscilloscopes will be covered. Simple controlling elements such as basic relays, diodes and transistors used as switches will be examined. Practical troubleshooting using digital meters and oscilloscopes (voltage drops, current testing, and resistance checks) are covered.

Prerequisite: ASET 112 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

ASET 211 - CLIMATE CONTROL

This course covers the theory of refrigeration and heating, electrical/electronic/ pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis/repair of climate control components and systems, recovery/ recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to describe the operation, diagnose, and safely servicing of climate control systems using appropriate tools, equipment, and service information.

Prerequisite: ASET 122

2 credits (64 hours combined lecture and laboratory), fall semester

ASET 212- STEERING & SUSPENSION SYSTEMS

This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include wheel alignment angles and their dynamic properties, manual steering, hydraulically assisted power steering, electronic

power assisted steering systems along with standard and electronically controlled suspensions. Upon completion, students should be able to service and repair various steering and suspension components, check and adjust various alignment angles, perform NVH diagnosis and balance wheels.

Prerequisite: ASET 122

3 credits (96 hours combined lecture and laboratory), fall semester

ASET 213- MANUAL TRANSMISSION & DRIVE TRAINS

This course covers the operation of and diagnosis/repair of manual transmissions/transaxles, clutches, drive shafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory and diagnose and repair manual transmissions and drive trains.

Prerequisite: ASET 122

3 credits (80 hours combined lecture and laboratory), fall semester

ASET 222 - ENGINE PERFORMANCE

This course covers the principles of fuel delivery/management, exhaust/ emission systems, electronic engine control and procedures for diagnosing and restoring engine performance using appropriate test equipment. Topics include procedures for diagnosis and repair of fuel delivery/management and emission systems, Ford GTDI injection, basic Ford diesel performance and using appropriate service information and equipment to aid in diagnosis. Upon completion, students should be able to describe, diagnose, and repair engine fuel delivery/management and emission control systems using appropriate service information and diagnostic equipment.

Prerequisite: ASET 121 and 122

4 credits (128 hours of combined lecture and laboratory), spring semester

ASET 215 – ASSET COOPERATIVE TRAINING 2

A supervised fieldwork program with students' sponsoring Ford or Lincoln dealer under the supervision of an experienced technician that is certified in the specialties area covered during the previous semester. Work experience to take place during break between spring and fall semesters.

Prerequisite: ASET 121 and 122

4 credits (10-12 weeks of combined experience), fall semester

ASET 221 - AUTOMATIC TRANSMISSIONS

This course covers operation, diagnosis, service and repair of automatic transmissions/transaxles. Topics include hydraulic, mechanical, and electrical/ electronic operation of automatic transmissions and transaxles and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory and diagnose and repair automatic transmissions and transaxles.

Prerequisite: ASET 122

4 credits (128 hours combined lecture and laboratory), spring semester

ASET 225 - CO-OPERATIVE TRAINING 3

A supervised field work program with students' sponsoring Ford or Lincoln dealer under the supervision of an experienced technician who is certified in the specialties area covered during the previous semester. Work experience to take place during break between fall and spring semesters.

Prerequisite: ASET 211, 212, 213

1 credit (2-3 weeks of combined experience), spring semester

AUTOMOTIVE TECHNOLOGY MOPAR

MCAP 101: FUNDAMENTALS OF MOPAR

This class will act as an introduction to the MOPAR apprentice program covering the level 0 core curriculum with the basic skills necessary to become an entry-level technician in a MOPAR dealership. Topics will include understating your role as a dealership technician, service information on line resources, scan tool operation and new vehicle preparation.

1 Credit (2 lecture hrs. per week) Fall Semester

MCAP 102: MOPAR: LEVEL 1 TECHNOLOGIES

This class will act as the second class introduction to the MOPAR apprentice program covering the level 0-1 core curriculum with the basic skills necessary to become an entry-level technician in a MOPAR dealership. Topics will include understating your role as a dealership technician in how to perform service and repair on MOPAR vehicles.

3 credits (Hybrid class, 2 lectures, 3hr lab), spring semester

MCAP 103: MOPAR CORE SKILLS LEVEL 2 TECH

This class will act as the third class in the MOPAR apprenticeship program covering the level 1-2 curriculum with the skills necessary to become a technician in a MOPAR dealership. Topics will include understating your role as a dealership technician in how to perform service and repair on MOPAR vehicles.

3 credits (Hybrid, 2 lectures, 3hr lab) fall semester

MCAP 104: MOPAR NEW TECHNOLOGIES & UPDATES

This class will act as the forth class in the MOPAR apprenticeship program covering the level 2 curriculum with the skills necessary to become a technician in a MOPAR dealership. Topics will include understating your role as a dealership technician in how to perform service and repair on MOPAR vehicles.

3 credits (Hybrid, 2 lectures, 3hr lab) spring semester

BIOLOGICAL SCIENCE

BIOL 101 – INTRODUCTION TO BIOLOGY

This course provides a basic introduction to biological principals for non- biology related majors. Lecture topics in this course include: introduction to science, the chemistry of life, cellular organization of life, heredity and natural selection, biological diversity, and population and community ecology. The lab covers a variety of techniques and tools related to the investigation of selected topics in biology.

4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 102 - BOTANY, FORM & FUNCTION OF SEED PLANTS

Structure and function of higher vascular plants, with emphasis on cell structure, photosynthesis and respiration, anatomy, physiology, reproduction and Mendelian genetics.

3 credits (2 lecture hours, 2 laboratory hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 103 –BOTANY: PLANT DIVERSITY

An evolutionary survey of the plant kingdom with emphasis on the structure, life cycles, and significance of non-vascular and lower vascular plants.

Prerequisite: BIOL/ENSC 102 or permission of instructor. 3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 105 - HUMAN BIOLOGY

A course for non-majors that focuses on human structure, function, diseases and current health topics. Emphasis is on each of the organ systems. Included are lecture discussions on cancer, heredity, genetic engineering, cloning and evolution.

3 credits (3 lecture hours), fall or spring semester

Students planning to transfer BIOL 105 as a science course or continue to subsequent biology courses (BIOL 120 or higher) should enroll in the lab BIOL 105L.

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 105L - HUMAN BIOLOGY LABORATORY (optional)

An optional laboratory course that provides experiences to emphasize the biological concepts behind the lecture topics of Human Biology.

Prerequisite or Co-requisite, BIOL 105.

1 credit, (2 laboratory hours), fall or spring semester.

This course counts towards the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 107 - TOPICS IN CONTEMPORARY BIOLOGY

This course covers selected topics in Biology currently in public focus. The understanding and use of the scientific method is stressed. Students will apply their understanding of the scientific method while examining topics such as bioterrorism, stem cell research, and the human genome project and cancer biology. This course is primarily for non-science majors. (Actual topics change each semester).

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 120 - GENERAL BIOLOGY I

This course provides the first half of a typical two-semester sequence for biology- related majors. Topics in this part of the sequence are: organization of life, chemistry of living things (including cellular respiration and photosynthesis), cell biology and biological membranes, heredity and reproduction (including mitosis, meiosis and Mendelian genetics), molecular genetics, evolution and ecology. The lab covers a variety of procedures and microscopic studies applied to selected animals and plants. A variety of laboratory techniques and procedures relative to the study of selected plants, animals and microbes is also covered.

Prerequisite: Placement in BIOL 120 or higher, or successful completion of BIOL 101 or BIOL 105 & 105L with at least a C-.

4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 121 - GENERAL BIOLOGY II

This course is a continuation of BIOL 120, and assumes mastery of the material covered in it. This second half of the sequence covers: taxonomy of plants and

animals, viruses and bacteria, fungi, seedless and seed plants (including plant structure and physiology), animal diversity (an overview of animal phyla), and animal structure and function (including all the life functions and body systems with emphasis on the human.

Prerequisites: BIOL 120 with a C- or better

4 credits (3 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 135 - MYOLOGY I

The study of the muscles of the body; specifically the muscles of the head, neck and trunk with superficial and postural muscles emphasized. The actions of major muscle groups, origin and insertion of each muscle as well as the physical location via palpation. Nerve innervation will be discussed. Students will practice muscle palpation and muscle testing.

Pre- or Co-requisite: BIOL 150

3 credits (2 lecture hours, 3 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 136 - MYOLOGY II

This course continues the study of the muscular system with emphasis on the muscle groups and muscles of the extremities. Discussion will focus on the origins, insertion sites and functions of the muscles. Muscle testing will also be included.

Prerequisite: BIOL 135 with a grade of C or better

Pre- or Co-requisite: BIOL 151

3 credits (2 lecture hours, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 137 - NEUROLOGY

A detailed study of the nervous system including nerve origin, insertion and function. Topics include the anatomy and physiology of the nervous system including the brain and cranial nerves, spinal cord, nerves and plexuses, and the sensory, motor and autonomic nervous system. The laboratory component is composed of hands-on exercises including computer simulation, physiological testing, and nerve tracing as well as identification of anatomical structures on specimens, models, and microscopic slides.

Prerequisites: BIOL 151 with a C- or better

4 credits (3 lecture hours; 2 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 150 - HUMAN ANATOMY & PHYSIOLOGY I

Structure and function of the human body (a systems view). Covers: cells, tissues, skeletal, muscular and nervous systems. The lab includes practical experience with lecture topics including animal dissection.

Prerequisite: placement in BIOL 120 or higher or completion of BIOL 101 or BIOL 105 & 105L with at least a C-.

4 credits (3 lecture hours, 2 laboratory hours), fall and spring semesters

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 151 - HUMAN ANATOMY & PHYSIOLOGY II

Structure and function of the human body (a systems view). Covers: endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. The lab includes practical experience with lecture topics and dissection of animals.

Prerequisite: BIOL 150 with a C- or better,

4 credits (3 lecture hours, 2 laboratory hours), fall and spring semesters

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 230 - HUMAN GENETICS

Introduction to the study of heredity and developmental genetics of the human organism. History, problem-solving and statistical methods will be studied as well as contemporary social and ethical problems.

Prerequisites: BIOL 120, or BIOL 150 with a minimum grade of C- 3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 250, 251, 252 - BIOLOGY DEPARTMENT INTERNSHIPS I, II, III

A supervised internship to be undertaken in the summer or between semesters by students majoring in biology, medical laboratory technology, sports nutrition and fitness management or health-related transfer programs. Preparation for the internship will commence in the semester prior to the actual internship. A written and oral report of the internship will be presented. (Students who have completed Allied Health Partnership programs, New Visions, or similar academic internships may use their portfolios to satisfy the requirements of BIOL 250, 251, 252).

Prerequisite: Full-time enrollment in a Biology/Chemistry Department program. Satisfactory completion of at least the first semester of course work in the major: a GPA of at least 2.5 and no less than a C in all courses required in the student's program.

1 credit per course number. The number of courses to be determined by the supervising Biology Department faculty member. Fall, spring or summer

BIOL 260 - PRINCIPLES OF ZOOLOGY

This course offers a basic introduction to the animal kingdom, including specific studies pertaining to terrestrial and aquatic invertebrates and vertebrates. Emphasis on zoological organization, identification, structure and life histories.

Prerequisite: Successful completion of BIOL 120 or an animal life science course, from the School of Agriculture, with at least a C- or better, Environmental & Natural Resource Conservation and Natural Resources Conservation students by permission of instructor.

4 credits (2 traditional lecture hours plus 1 lecture hour with a 2-hour laboratory)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 280 - HERPETOLOGY

Herpetology is a course designed to investigate the thermal physiology, taxonomy, distribution and natural history of reptiles and amphibians. Emphasis is placed on local forms. Techniques of field identification, collection and preservation are covered in the laboratory component.

Prerequisite: Grade of 'C' or better in BIOL 120, or General Ecology NATR 101. 3 credits (2 lecture hours, 4 laboratory hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 285 - GENERAL MICROBIOLOGY

The biology of microscopic organisms including bacteria, fungi, protozoa, algae, and viruses. An introduction to basic principles of microbiology, with an emphasis on morphology, classification, cultivation, growth, physical, and chemical controlling agents, antibiotics, host-parasite interactions, and the benefits of microorganisms including genetic engineering applications. The lab includes proper technique in observation, identification of microbes, and reactions under various physical and chemical conditions.

Prerequisite: Placement in BIOL 120 or higher or one semester of a college-level biology course (ex. BIOL 101 or BIOL 105 and BIOL 105L with at least a C-).

4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 300 - BIOLOGY OF NORMAL & NEOPLASTIC CELLS

The biology of normal and tumor cells will be examined using current data from population, macroscopic, microscopic, and molecular perspectives. Cell biology topics include cell chemistry, basic genetic mechanisms, internal organization and physiology of the cell, and cell-cell interaction. The cancer biology portion of the course will examine these topics as they occur in neoplastic cells, along with epidemiology, heredity, causation, diagnosis, treatment, and prevention.

Pre-requisite: Completion of college biology course (BIOL 120 or higher) with lab, or DANS 120, or ESCI 110 with grade of C or better.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 301 – PATHOPHYSIOLOGY

This course is designed to increase the student's understanding of human diseases caused by alteration of physiologic processes. Emphasis is on advanced pathophysiologic mechanisms and manifestations of disease across the lifespan including genetic and cultural variations.

Prerequisites: C- or better in BIOL 151 or ESCI 430 and BIOL 285

3 credits (lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 302 - EPIDEMIOLOGY

The purpose of this courses it to introduce the student to key concepts and methods of descriptive and analytical epidemiology. The utilization of epidemiology by the health profession in culturally diverse populations is reviewed. Disease occurrences and patterns of disease entities including their progression will be examined. Application of epidemiological information will be stressed as well as its relationship to health promotion and disease prevention. Students will utilize critical thinking skills to correlate cause, frequency and distribution of disease processes to infection control, health planning and health policy intervention. Case findings surveillance and screening by health professionals is discussed. Assessing the validity and reliability of health care literature and research studies and it application to epidemiology is also covered.

Prerequisites: C- or better in BIOL 285 and MATH 141, MATH 123, BSAD 221, or other statistics 3 credits (3 lecture hours) fall semester

3 credits (3 lecture hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BIOL 405 - BASIC IMMUNOLOGY

This course is an introduction to the field of immunology for both majors and non- majors. Students will gain an understanding of how the human immune system guards against disease. Included are lecture/discussions on the components of the immune system, how these components interact, and the end results of these interactions. Relevant clinical topics, such as allergy, autoimmune disease, immunodeficiency diseases (including AIDS), organ transplantation, and cancer will also be discussed.

Prerequisites: C- grade or better in the lecture and lab of a college-level biology course (BIOL 120 or higher) with a lab.

3 credits, fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

BREWING

BREW 100 – OVERVIEW OF BREWING SCIENCE & TECHNOLOGY

This introductory course introduces students to the basic methodologies that produce beer and the metrics and procedures by which beer quality is analyzed. Upon completion of this course students will be able to describe the processes of beer manufacturing and explain the roles of different quality procedures as they reflect in a finished product. Special focus will be given to the language of brewing and the determining characteristics of beer ingredients.

3 credits, (3 lecture hours)

BREW 300 – SENSORY EVALUATION & BEER STYLES

This course instructs students in beer styles and evaluation. Topics include: palate matching; off-flavor analysis; flavor-based ingredient evaluation; beer styles of America, Germany, Belgium & Great Britain; and style-based ingredient composition. Upon completion of this course, students will be able to distinguish between beer styles, determine off flavors, describe culturally specific ingredients as well as preparation for the Certified Beer Server exam. Students will be required to sample beers, and to facilitate this a $50 course fee will be assessed.

Prerequisites: BREW 100.

3 credits, (3 lecture hours)

BREW 310 – WORT PRODUCTION & FINISHING PRACTICES

This course instructs students in the principles of production of wort and packaging of beer. Students will focus on the chemical processes that occur during different phases of the brewing process; the methods of tracking wort production; measurement and documentation of brewing data; procedures for finishing beer including filtration, pasteurization, force-and natural-carbonation, and transferring beer between vessels; and principles in beer packaging in large and small pack format. Upon completion of this course students will be able to function as shift brewers by producing beer on a commercial brewhouse.

Prerequisite: BREW 100 Overview of Brewing Science & Technology

4 credits (3 lecture hours, 2 lab hours), fall and spring semester

BREW 320 – OVERVIEW OF THE CRAFT BREWING INDUSTRY

This course is an examination of the issues that affect the operations and business of the craft brewing industry. Specifically the course will focus on: the history and growth of the craft beer market, brewery models, the ingredient supply chain, the environmental impact of brewery waste the legal requirements of breweries, marketing of alcoholic beverages and destruction models. Upon completion of this course students will be able to construct a business model for a brewery that utilizes best brewery practices.

Prerequisite: BREW 100 Overview of Brewing Science & Technology

3 credits (3 lecture hours), fall or spring semester

BREW 350 – PRACTICUM 1: CELLAR MANAGEMENT & BREWERY PROCESSES

This practicum course focuses on the maintenance and sanitation of the brewery, brewhouse and production space as well as the production of wort. Upon completion of this course students will be able to produce wort in 1/2 bbl and 3.5 bbl batches and maintain appropriate sanitation in the brewery.

Prerequisite: BREW 100 Overview of Brewing Science & Technology

3 credits (6 lab hours), fall or spring semester.

BREW 360 – PRACTICUM 2: QUALITY FOODS

This practicum course focuses on the quality assurance and control issues that are necessary in a brewery setting. Upon completion of this course students will be able to test quality assurance and quality control elements throughout the brewing process & maintain the functions of a mid-size brewery lab. The topics to be covered will include: training and running sensory panels including statistical analysis, lab assessment of microbiological stability, organizing and running stocks for QA, optimizing brewery performance based on quality data.

Prerequisite: BREW 350 Practicum 1: Cellar Management & Brewe1ly Processes(C or Better)

3 credits (6 lab hours), fall or spring semester

BREW 400 – BREWING TECHNOLOGY

This course is a deep examination of the mechanics and theory of varied brewhouse equipment through functionality. These include sweet w9rt production, bitter wort production, chilling, fermentation vessels, in-line measurement, critical process measuring points and packaging. Upon completion of this course students will be able to describe the different major options of beer production equipment and articulate the best choices for breweries of different sales and goals.

Prerequisite: BREW 310 Wort Production & Finishing Practices (C or Better)

4 credits (3 lecture hours, 2 lab hours) fall or spring semester

BREW 410 – RAW MATERIALS & MALTING

This course instructs students in key elements of ingredient use and selection as they pertain to brewing. Topics include: barley selection for malting and the malting process; flavor, aroma and biological outcomes of malting; hop cultivation, growth and measurement; hop selection; water chemistry and waste water management; and spicesm adjuncts and chemicals in brewing. Upon completion of this course students will be able to design specific beer styles based on ingredient selection that includes malt, hops, water profile and yeast strain to achieve specific flavor outcomes.

Prerequisite: BREW 100

3 credits (3 lecture hours)

BUSINESS ADMINISTRATION

BSAD 100 - BUSINESS IN THE 21ST CENTURY

An introduction to the essentials of American business is provided to students who have little familiarity with business or who may be considering a career in business. The course will explore broad areas of business such as entrepreneurship, forms of business organization operations management, marketing, money and banking, financial management, securities markets, human resources management, international business, and career opportunities in each field.

3 credits, (3 lecture hours), fall or spring semester

BSAD 102 - MATHEMATICS OF BUSINESS

This course incorporates the development of arithmetical tools in the mechanics of computation and the fundamentals of problem solving. Emphasis is on the application of acceptable business procedures. Topics include percent, invoicing, cash and trade discounts, principles of markup and markdown, payroll, simple interest, com-pound interest, consumer loans, property taxes, and insurance.

Pre or co-requisite: MAGN 101

3 credits (3 lecture hours), fall or spring semester

BSAD 104 - ORGANIZATIONAL BEHAVIOR

Introduction to organizational behavior and human relations with emphasis on developing skills in dealing with human behavior, particularly as it exists in business organizations. Motivation, leadership, communications, group behavior, organizational change, personality, negotiation and conflict management are topics covered in this course.

3 credits (3 lecture hours)

BSAD 107 - LEGAL & REGULATORY ASPECTS OF GAMING & HOSPITALITY

The course examines the legal aspects of operating a casino/resort with particular attention to liability, personal and property liability, labor laws, crimes, tortes, evictions and negligence. Also an examination of the laws and regulations particular to the gaming industry are explored with specific emphasis on the history and development of regulations in the casino industry as well as requirements for gaming licenses.

3 credits, fall semester

BSAD 108 - BUSINESS LAW I

This course incorporates the fundamental concepts of the law of business and commerce important to business. Contracts, agency, and negotiable instruments with emphasis on the Uniform Commercial Code become part of the course. An introduction to legal reasoning and the legal approach to business problems play an important role.

3 credits (3 lecture hours), fall or spring semester

BSAD 109 - PERSONAL FINANCE

This course covers the basic concepts relating to lifetime financial planning including setting financial goals, measuring financial performance, budgeting, reducing taxes, evaluating savings programs, acquiring and using credit, evaluating housing options, understanding insurance needs, and examining various types of investment opportunities including stocks, bonds, mutual funds, and estate planning.

3 credits (3 lecture hours)

BSAD 112 - MARKETING

An introductory course that provides insight into marketing techniques in a dynamic environment. Corporate, small business, not-for-profit and for profit business marketing are all discussed. Marketing terms and functions are a necessary part of the course. In addition survey construction and analysis are performed and students demonstrate knowledge of branding and packaging via presentations.

3 credits (3 lecture hours), fall or spring semester

BSAD 116 - BUSINESS ORGANIZATION & MANAGEMENT

This course covers the introduction to concepts of management, development of management thought, and management environments. Special emphasis is placed on the functions of managers including planning and decision making, organizing and staffing, leading, motivating, communicating, and controlling. Review of social responsibility management ethics, and workplace diversity is covered.

Pre-requisites COMP 100, CITA 101 or CITA 110 or OFFT 100 and OFFT 109, or HORT 110 or HORT 111, or permission of instructor.

3 credits (3 lecture hours), fall or spring semester

BSAD 117 - INTRODUCTION TO ENTREPRENEURSHIP

The objective of this course is to establish a basic understanding of the entrepreneurship process. Today's successful entrepreneurs need more than just a good idea. This course will introduce the student to the entrepreneurial mindset and explore entrepreneurial

opportunities. The student will be exposed to a brief overview of the various steps involved to bring an idea to reality. The class will incorporate several case studies and guest lecturers to expose the student to real life entrepreneurial situations.

3 credits, 3 lecture hours

BSAD 140 - BUSINESS COMMUNICATIONS

Fundamentals of effective English in written and oral business communications are discussed. Planning and writing effective business letters and memos, letters of application and resume, sales, credit collection, inquiry, order, acknowledgment, claims adjustments, and personnel letters are covered. Gathering and presenting in-formation for reports in written and oral form through research, interviewing, questionnaires, and conferences are presented. The course includes discussion and topics such as understanding the impact of international business teamwork, technology, and multiculturalism on business communications.

The course further incorporates networking as well as teamwork opportunities.

Prerequisite: COMP 101 with a C or better

3 credits (3 lecture hours), fall or spring semester

BSAD 203 - BUSINESS LAW II

This course is an in-depth study of business organizations including sole proprietorship, partnerships, limited liability companies and corporations. Basic concepts of property law including personal property (both tangible and intangible), intellectual property (including Internet issues), real property and securities regulation are covered.

3 credits (3 lecture hours), fall or spring semester

BSAD 206 - PROMOTION MANAGEMENT

Principles, concepts and techniques of personal selling, advertising, sales promotion, publicity, and public relations are covered in the course. The course develops the nature and role of promotion, marketing and management of the promotion program. The practice of promotion in a changing environment is an important aspect of this course.

Prerequisites: BSAD 100 or 112 or permission of instructor 3 credits (3 lecture hours)

BSAD 208 - INTRODUCTION TO TOTAL QUALITY MANAGEMENT

This course introduces students to the philosophy, concepts, and practices of total quality leadership. The course will introduce students to total quality philosophy and concepts, total quality teams, problem solving and decision- making techniques and tools used in total quality and the total quality focus on customers.

Prerequisites: BSAD 100 or 116 or permission of instructor 3 credits (3 lecture hours)

BSAD 209 - SALESMANSHIP

This course introduces students to the professional, trust-based sales process. Students will learn what is required to initiate, develop, acquire, and enhance customer relationships in the sales process. Topics include: earning trust, effective sales dialogue, communication and presentation development, creating value for customers and sales ethics. Students present team based sales presentations at the end of the semester.

3 credits (3 lecture hours), spring semester

BSAD 212 - PRINCIPLES OF FINANCE IN MANAGEMENT

A first course in finance, which develops an understanding of the links between economic theory, management theory, and the practical managing of the financial aspects of any organization are part of the course. Sources of money and credit for businesses, agriculture units, consumers, governments, and charitable institutions are related topics.

Prerequisites: BSAD 100 or permission of instructor 3 credits (3 lecture hours)

BSAD 215 - HUMAN RESOURCE MANAGEMENT

Human Resource principles and tools useful to any employee or prospective manager are part of this course. Additional topics include manpower needs, recruitment, selection, performance evaluation, personal development, compensation and benefits, the development and influence of labor unions and collective bargaining, public policy and laws in the labor and Human Resource Management field, and reconciliation of varying viewpoints. This course uses a case approach.

3 credits (3 lecture hours), fall or spring semester

BSAD 216 - CURRENT PROBLEMS IN HUMAN RESOURCE MANAGEMENT

This course introduces students to contemporary problems in Human Resource Management. Issues include AIDS testing, alcohol abuse, and sexual harassment problems in the workplace. The course is designed to allow students to critically analyze the relevant issues encompassed in contemporary business topics and problems.

3 credits (3 lecture hours)

BSAD 220 – INVESTMENTS

The course will provide the student with an understanding of the nature of the investment process. Students will grasp a fundamental understanding of portfolio management, asset allocation, risk assessment, the securities market and exchanges, equity and debt securities, and margin, futures and option trading. Students will have the opportunity to prepare and present a portfolio of investments.

3 credits (3 lecture hours)

BSAD 221 - BUSINESS STATISTICS

This course covers the principles and methods of elementary statistics theory and methodology with an under-standing of the role of statistics in business and practical affairs. Emphasis is on using statistical methods as an analytical tool. Topics covered include sources of basic data, tabular and graphic presentation, frequency distributions, averages, measures of dispersion, probability, sampling methods, confidence intervals, hypothesis testing, and, simple regression. Focus is on computerized calculations using Excel, and case studies. A background in Excel is recommended strongly.

Prerequisite: CITA 101 or OFFT 220 or OFFT 110 and MAGN 101, or permission of instructor.

3 credits (3 lecture hours), fall or spring semester

BSAD 224 - MANAGING DIVERSITY IN THE WORKPLACE

This entry-level management course explores the impact that a culturally diverse work force has on a business, industry and global/international environment. The course illustrates the manger's role/responsibility in managing a culturally diverse work force and develops

student awareness and understanding of the role of culture, values, social behavior and politics in managing diverse groups of employees.

3 credits (3 lecture hours)

BSAD 225 - INTERNATIONAL BUSINESS

This course examines the importance of: cultural understanding; international economics including current fiscal policy; international trade agreements and their effect on the American economy. The course will pay special attention to both the fiscal and human effects of new alliances and the influence on the future of American agriculture, production, banking, finance, communication, and professional services including the legal and medical profession. The American involvement in the growth of multi-international corporations focusing on American ventures in such areas as production and distribution will be discussed.

3 credits (3 lecture hours)

BSAD 226 - INTERNATIONAL MARKETING

This course emphasizes the importance of social, cultural, economic, political, and geographical concerns that international marketers have to deal with when marketing products in other countries. The effects of national policies, political elections and legal systems are discussed. Understanding the contribution that businesses make to underdeveloped nations and understanding trade restrictions are discussed in this course. Risk assessment of developing businesses in areas is evaluated in this course.

3 credit hours (3 lecture hours)

BSAD 291 - STUDENT INTERN PROGRAM IN BUSINESS

A field-based internship experience provides majors in the Department of Entrepreneurship and Business an opportunity to apply their knowledge in business situations. Students will work 125 hours at an approved business in the areas of accounting, finance, management, and marketing, and their work will be coordinated through a faculty member. Students will work on a business project/problem for the business. .

3 credits

BSAD 295 - BUSINESS MANAGEMENT AND DECISION MAKING

The course explores business strategy from two perspectives: Theoretical and practical. At the theoretical level, the student will examine the strategic discourse

– a rich exchange of competing ideas, highlighted with conceptual foundation of business, management, and contemporary decision-making. The “knowing” part involves learning concepts and techniques applicable to business administration and strategic management. The “doing” part of the course involves the student’s participation in Capsim Foundation®, a strategic management simulation. This simulation provides the student with the opportunity to acquire hands- on experience in managing a business as a member of a “senior management” team. This course allows students to participate in a computer application that simulates activities of a real business. In addition to experiential learning of business management decision-making competencies using the simulation, there will be emphasis on ethics and ethical decision-making in various functional areas, and on career portfolio preparation. This course is recommended for seniors, as it is a comprehensive business curriculum course.

Prerequisites: ACCT 102, BSAD116 and/or BSAD112 3 credits, fall or spring semester

BSAD 300 - MANAGEMENT COMMUNICATIONS

This course is designed to provide students 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: COMP 110 or 310 or BSAD 140, and BSAD 116 or AGBS 240 or permission of instructor.

3 credits, fall or spring semester

BSAD 310 - HUMAN RESOURCE MANAGEMENT

A course designed to analyze the problems, strategies and procedures in managing and assessing human resources in contemporary organizations. Special attention is 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: BSAD 116

3 credits, fall or spring semester

BSAD 320 - ENTREPRENEURSHIP

This course explores the basic framework of the beginning stages of a start- up business, starting with the development of an idea and going through the various stages of bringing the idea to market. The course will include assessing risk and reviewing various financing activities. Students will incorporate the class work into a workable business plan, which will address areas which need to be included in starting a new business. The course will use case studies to help reinforce the lecture material.

Prerequisite: two of the following, ACCT 100 or 101, BSAD 108, BSAD 112 or permission of the instructor

3 credits (lecture hours), fall or spring semester

BSAD 325 - MARKETING MANAGEMENT

This course primarily focuses on the marketing mix (price, product, promotion and distribution) and the management of marketing in an organization. Students will learn basic marketing principles, research techniques and strategies for understanding and managing the marketing needs in the 21st century. Students will gather and interpret information, assess marketing conditions, with market research, and suggest strategies for success. Additionally, students will complete marketing plans supported by appropriate analysis and execute a complete marketing plan presentation and presentation. This course Also incorporates a simulation to enhance the management experience.

Prerequisites: BSAD 116, ECON 100 or 140, or permission of instructor.

3 credits (3 lecture hours), fall or spring semester

BSAD 327 – ADVERTISING MANAGEMENT

This course examines advertising with a focus on managerial activities and decision-making in the advertising process. Topics include selection of target markets, establishment of communications objectives, selection of and working relationships with advertising agencies, creative strategy and execution, media selection, appropriations and budgets, and program evaluation procedures. The course will also cover ethical approaches to advertising and other promotional activities.

Prerequisites: BSAD 325, junior level standing or permission of instructor

3 credits (3 lecture hours), fall semester

BSAD 329 – CONSUMER BEHAVIOR

This course will examine managerial applications of consumer behavior and provide students with the conceptual, quantitative, and analytical skills necessary to develop strategies that directly address consumer behavior and the competitive environment. Topics include factors and trends in consumer behavior, consumer motivation and attitudes, decision-making, consumer relationships and consumer loyalty, and consumer value creation. The course will also cover researching and online consumer behavior.

Prerequisite: BSAD 325 or permission of the instructor.

3 credits (3 lecture hours), fall semester

BSAD 330 – LEADING AND MANAGING THE FAMILY BUSINESS

This course introduces students to family and closely held businesses, the strategic and operating challenges encountered, and the requirements for success. The course explores and analyzes unique issues and challenges relative to the family, the business, and ownership of these businesses. Designed to enhance student awareness of and appreciation for the unique challenges involved in leading and managing the family and closely-held business, topics include the nature, importance, and uniqueness of family businesses, strategy creation, succession and transfer of power, estate planning, financial, and family business governance.

Prerequisite: BSAD 116, or AGBS 240, or permission of the instructor.

3 credits (3 lecture hours)

BSAD 343 – INTRODUCTION TO SPORT MANAGEMENT

The course is designed to provide insight as to contemporary sport, such that the student clearly understands how three basic management structures (clubs, leagues, and tournaments) operate. The student of the Introductory Sport Management course will develop knowledge of the history and nature of sport management, along with how the principles of management, marketing, finance, strategy, ethics, law, and leadership are applied to this discipline. This course is also a prerequisite to the Sport Management Option Upper-Division courses in the Technology Management Program.

Prerequisite: BSAD 116 or by permission of instructor. This course is a Prerequisite of BSAD 353/Sport Marketing, BSAD 418/Sport Law, and BSAD 443/Strategic Management of Sport Business – Sport Management Option of the B. Tech. Technology Management Degree 3 Credits (3 lecture hours), fall or spring semester

BSAD 350 - PRINCIPLES OF CORPORATE FINANCE

This course introduces the areas of finance: financial markets, managerial finance, and investments and the importance each has on business transactions and operating performance. Overview of financial markets and financial instruments are important topics. Explanation of basic finance concepts including interest rates, time value of money, valuation, cost of capital, risk and rates of return. Role of finance in decision-making regarding managing daily operations, seeking financing, and providing financing. Incorporates spreadsheet modeling to apply financial concepts and conduct financial analysis. Prerequisites: ACCT 100 or ACCT 101, CITA 101 or CITA 110, and MATH 102, junior level standing, or permission of instructor

3 credits (3 lecture hours), fall or spring semester

BSAD 353 – SPORT MARKETING, A STRATEGIC APPROACH

This course will provide an intensive evaluation of marketing techniques and promotional strategy. In addition, the topical coverage will include the marketing mix, new product strategy and services, interactive promotion, event marketing and value-added marketing. The student of sport marketing will acquire extensive understanding as to consumers as spectators and participants. In addition to planning the sports marketing mix (product, price, pro-motion and place), the student will examine the execution and evaluation of the planning process, as part of an integrated marketing strategy. This course is designed primarily for student in the B. Tech Technology Management program, with the Sports Management Option.

Prerequisites: Co-requisites: BSAD 325, BSAD 343 or permission of instructor – may also be taken concurrent with BSAD 418. This course is also a Prerequisite of BSAD 443 – Sport Management of Sport Business.

3 credits (3 lecture hours)

BSAD 354 – FINANCIAL MANAGEMENT AND MODELING

This course examines financial modeling, forecasting and financial management through case study method. The students will examine valuation of companies, forecasting financial results to value companies, execute capital budgeting, and understand working capital management. The student will obtain understanding through using the case study methodology and modeling of financial problems in each area under consideration.

Prerequisite: BSAD 350

3 credits (3 lecture hours)

BSAD 375 - MANAGEMENT INFORMATION SYSTEMS

This course introduces students to solving business problems and developing new solutions using spreadsheet and database software. Topics include business information systems, E-business (how businesses use information systems), achieving competitive advantage with information systems, IT infrastructure, and foundations of business intelligence. Further topics include telecommunications (the Internet and wireless technology), securing information systems, achieving operational excellence and customer intimacy, E-commerce (digital markets and digital goods), improving decision making and managing knowledge, building information systems, and ethical and social issues in information systems.

Prerequisites: BSAD 310, BSAD 325, BSAD 350, ACCT 102 or permission of the instructor.

3 credits (3 lecture hours), spring semester

BSAD 380 - INTERNATIONAL BUSINESS

This course introduces students to management within an international context. Embracing culture and globalization as its foundation, discussions include the latest theories and concepts regarding business interactions within a global environment. Topics include the global business environment, national business environments, international trade and investment, international financial systems, and international business management. Course

discussions in-lude managerial risk implications arising from different cultural, socio-economic, political, and legal systems; volumes and patterns of international trade and investments; international finance systems including international markets and money systems; and international strategy and organizational structure design. Additional topics include identification of international opportunities and entry mode selection; and international management sub-issues including marketing, production and staffing within a global environment. The course incorporates recent, real-world examples, and integrates technology.

Prerequisites – BSAD 310, BSAD 325, BSAD 350 and junior level standing or permission of the instructor.

3 credits (3 lecture hours), fall or spring semester

BSAD 391 – INTERNSHIP IN BUSINESS

This is a 3-credit (300-hour minimum) approved company sponsored internship. This field-based experience pro-vides majors in business-related disciplines an opportunity to apply and gain additional relevant knowledge, skills and experience in the discipline

Prerequisites: Enrolled in the Bachelor of Business Administration in Business program, completed 18 credit hours in 300 level or above business or business related course work, and permission of instructor.

3 credits.

BSAD 400 - PRODUCTION AND OPERATIONS MANAGEMENT

This course examines the strategy and control processes that transform resources into finished goods and services. The primary focus is the use of quantitative techniques for analysis and decision-making, the role of productivity, quality, job design, human resources and other tasks to maximize operational performance. The emphasis is on principles of production system design and operation. Prior exposure to statistics is strongly recommended (MATH 141 or BSAD 221).

Prerequisites: MATH 102 or higher and CITA 101, CITA 110 or OFFT 110, and junior level standing or per-mission of instructor Student in Automotive Technology B.Tech have completed AUTO 360

3 credits (2 lecture hours, 2 laboratory hours), fall or spring semester

BSAD 408 – RESPONSIBLE BUSINESS OWNERSHIP

This course covers the issues involved in the responsible and ethical conduct of business. It explores responsibility issues from the viewpoint of all the stakeholders in a business. The consequences of irresponsible business behavior and non-compliance with business laws and generally accepted business standards are also explored. Course work will consist of case studies and textual readings in both Ethical and responsible business behavior. Areas of study may include (but not limited to): Business and Social Responsibility, Responsible practices in Human Resources, Ethics in the Marketplace, Financial Responsibility, and The Environmentally Friendly and Compliant Business.

Prerequisite: ACCT 100 or ACCT 101, BSAD 108 or BSAD 116 or FSAD 153, and junior level standing, or permission of the instructor.

3 credit hours (3 lecture hours), fall semester

BSAD 411 - LEADERSHIP IN ORGANIZATIONS

This course examines and analyzes the major theories and conceptualizations of leadership, wherein relevant consideration of the applicable approach of theoretical and conceptual models will be explored for real-world organizations. Major concepts include entrepreneurial leadership, team leadership, transformational leadership, women and leadership, and ethical/responsible business practices. There will be several leadership case problems and leadership action/skill-building and development exercises. Student leaders will perform research and conduct a thorough investigation of an Organizational Leader, as part of their integrating leadership learning objectives. A Leadership Simulation Program, vLeader™ is included in the course, to further augment experiential learning and training, for preparedness in effective communication, idealized influence, emotional intelligence, and creativity contribution to organizational success.

Prerequisites: BSAD 116, junior level standing or permission of instructor

3 credits (3 lecture hours), fall semester.

BSAD 415 - INTERNATIONAL HUMAN RESOURCES MANAGEMENT

This course will provide students with a unique blend of theory and practice to help them analyze the vast array of employment practices, employment structures, and human resources management strategies in a comparative and global context. The purpose of the course is to

provide the conceptual and practical tools necessary to address the impact of globalization on the practice of Human Resources. The course is taught from comparative and cross-national perspectives. Students will be asked to take a critical approach to Corporate Social Responsibility and Corporate Citizenship Behavior and the impact these have on business policy.

Prerequisites: Senior standing, BSAD 116 and either BSAD 215 or 310.

3 credits (lecture hours,) spring semester

BSAD 417 – INTERNATIONAL FINANCIAL MANAGEMENT

This course examines the international flow of money and financial markets. An important aspect of the course will focus on foreign exchange rates and the management of changes in currency rates. Students will learn about managing transaction, accounting and translation risks. In addition, students will cover trade financing and international cash management.

Prerequisite: BSAD 350

3 credits (3 lecture hours)

BSAD 418 – SPORT LAW

This course examines legal issues affecting amateur and professional sports. Students will analyze sports cases and materials that cover multiple disciplines, including contracts, torts, constitutional law, antitrust, labor and employment, intellectual property, and criminal law. Students will participate in problem- solving exercises and drafting and negotiation sessions, which explore areas such as player and coaching contracts, investigation of NCSS rules infractions and possible sanctions against universities. Students will augment their learning through analysis and discussion of up-to-the-minute professional and collegiate sports law developments. This course demonstrates how knowledge of the law creates a competitive advantage and helps build a more efficient and successful operation that better serves the needs of its constituents. Learning objectives will be organized around management functions rather than legal theory. This approach will allow students to understand how legal concepts relate to specific managerial functions and will help prepare them to assume a broad range of responsibilities in sport, education, or recreation. This course is designed primarily for students in the B. Tech Technology Management program, with the Sport Management Option.

Pre- or Co-requisites: BSAD 108 and BSAD 343 (Introduction to Sports Management) or by permission of instructor.

3 Credits (3 lecture hours), fall or spring semester

BSAD 419 – GLOBAL MARKETING

This course will examine culture and international trade reflecting on the impact of the marketing mix. Students will examine and assess different cultures as well as the political and legal environment of different countries. During the course, the examination of global marketing opportunities and strategies to exploit those opportunities will take place. A review of product and service marketing in an international setting will be emphasized during the course.

Prerequisite: BSAD 325

3 credits (3 lecture hours), fall semester

BSAD 443 – STRATEGIC SPORTS BUSINESS

The primary objective of this course is to provide students the opportunity to analyze and integrate business and managerial concepts, tools, techniques, and strategies in sport management. This course is the culmination of student learning in sport management. Students will effort to assess problems and to make decisions facing sport managers and business leaders. Emphasis will focus on the strategic, profit-oriented, and ethical decision-making that are necessary for sport managers to be successful. The course also focuses in detail on a senior thesis that will provide opportunities for in-depth analysis of a specific area in the field. Small group discussions, case studies, and experiential learning will be utilized in order to facilitate learning. This course will augment critical thinking and analysis skills through analytical essays and strategic group projects associated with the industry. This is a writing-intensive course, therefore the development of quality writing skills will be emphasized. Since the internship of Tech Management Students whose focus is in sport management is imminent at this point, this course will also attempt to provide an analysis as to effective management and leadership strategies and the body of knowledge associated with pursuing a career in sport management. Thorough class preparation and participation are critical for student success. This course is designed primarily for students in the B. Tech Technology Management program, with the Sport Management Option.

Prerequisites: BSAD 353 and BSAD 418 Sport Management Option of the B. Tech. Technology Management Degree.

3 Credits (3 lecture hours), fall or spring semester

BSAD 449 - MANAGEMENT POLICY AND 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.

Prerequisites: Must complete two of the following courses with a C or better: ACCT 101, BSAD 112, ECON 100 and BSAD 116; and six additional credits of 300/400 level BSAD or RRMT course work; be matriculated in a bachelor degree program with a GPA of

2.0 in business and related classes; or have permission of instructor.

3 credits (3 lecture hours), spring semester

BSAD 465 – MANAGEMENT CONSULTING

This course is designed to initially overview the consulting profession with a subsequent emphasis on organizational consulting issues. The application of theory from the various disciplines to business problems in a consulting environment is emphasized. Definitions of problems, analysis of appropriate variables, and recommendations are provided by students for implementation by management. Students may choose from two options: (1) Business Project: Students are assigned projects for problem analysis and solution or (2) Consultancy: Student develops a project that is of value with a client organization using academic theory. Student will provide a journal and present the written report to management, the faculty advisor, and class colleagues. Successful completion of CITA 405 is highly recommended.

Co and Prerequisites: BSAD 350 with a “B” or higher, concurrent enrollment in BSAD 470 or ENTR 417, or permission of the instructor

3 credits (3 lecture hours), fall or spring semester

BSAD 470 - STRATEGIC MANAGEMENT

This course is a capstone course in the Business Administration (B.B.A) degree program and is required of all seniors. Emphasis is given to the integration of subject matter from other business courses and disciplines in the discussion and analysis of organizational problems. The course attempts to balance theory, research, and practice within a coherent framework. Cases help students integrate and apply concepts and knowledge to actual real-world problems.

Prerequisite: Senior standing, admission into the Bachelor of Business Administration degree program, BSAD 350, BSAD 380 and Math 153.

3 credits (3 lecture hours), fall or spring semester

CANNABIS

CANA 101 – INTRODUCTORY CANNABIS

This course will provide students with a basic understanding of the many aspects related to the cannabis industry. Topics will include production and management practices. Emphasis will be on introducing students to cannabis biology, production techniques, Integrated Pest Management (IPM) strategies, and Best Management Practices (BMPs).

3 credits (2 lecture hours, 2 lab hours) fall semester

CASINO CAREERS PROFESSIONAL DEVELOPMENT

CAS 101 - INTRODUCTION TO THE CASINO INDUSTRY

This course surveys the history of gaming, casino regulations, organizational structure within gaming, daily casino operations, various types of games, financing and the future development of the industry.

3 credit hours, fall semester

CAS 102 - INTRODUCTION TO GAMING

This course is designed to familiarize individuals with the various games offered at typical casinos. It provides a survey of the games offered as well as a rather in-depth investigation of the most common games.

3 credit hours, fall semester

CAS 103 - CASINO SECURITY

This course is designed to familiarize individuals with the various types of security measures used in the casino industry to protect the agency from loss and maintain the integrity of the games. In addition to providing information relative to typical cheating methods in each game, the course will also provide information relative to the legal aspects of surveillance.

3 credit hours, fall semester

CAS 104 - CONTEMPORARY ISSUES IN HUMAN RESOURCE MANAGEMENT FOR THE HOSPITALITY INDUSTRY

This course surveys current issues, techniques and applications for managing human resources in the hospitality industry. Information strategies, team building, legislation and their impact on achieving service objectives will be studied. Development of a management philosophy appropriate for the service industry shall be the final outcome.

AHMA certification.

3 credits (3 lecture hours), fall semester

CAS 105 - FOOD AND BEVERAGE IMPLICATIONS FOR CASINO OPERATIONS

This course focuses on volume food service in multiple casino operations. Various performance, service and financial objectives as well as interface of the food & beverage department with other casino operations shall be presented. Prerequisite: Acceptance in the CAS program or permission of instructor

3 credits (2 lecture hours, 2 recitation hours), fall semester

CAS 230 - TECHNOLOGY AND CONTROLS IN GAMING

An overview of internal controls, computer applications technological advances and their impact on customer service strategies in the gaming industry. The applications of technology in various facets of gaming/casino operations.

Prerequisites: CAS 103, 251, and BSAD 107 or permission of instructor. 3 credits (3 lecture hours), fall semester

CAS 240 - HOSPITALITY SALES & MARKETING

Marketing in the service industries and developing strategies/processes necessary for successful gaming and hospitality operations will be the focus of this course. Interventions which facilitate desirable exchanges and the achievement of financial objectives in the hospitality industry will be examined.

3 credits (3 lecture hours), fall semester

CAS 251 - COOPERATIVE WORK EXPERIENCE

Cooperative Work Experience will be completed in an approved position in the gaming/casino industry (320) hours. Comprehensive written and oral reports are required at the conclusion of the work experience during the fall semester lecture hours.

2 credits (2 lecture hours), fall semester

CAS 280 - LEADERSHIP DEVELOPMENT STRATEGIES FOR THE HOSPITALITY INDUSTRY

This course focuses on leadership and developing strategies which result in a healthy organizational climate and the achievement of objectives. Competencies of great leaders, ethical leadership and the leader's role in addressing socio/ cultural concerns will be studied along with Baldridge Award criteria.

Prerequisites: 2nd year CAS standing, CAS 230, or permission of instructor. AHMA certification.

3 credits (3 lecture hours), spring semester

CAS 290 - PROFESSIONALISM, IMAGE AND PUBLIC RELATIONS FOR GAMING/HOSPITALITY MANAGEMENT

This capstone course is designed to integrate knowledge and skills into the critical thinking process required for corporate level decision making. Case studies and research of an existing corporation will be the basis for studying issues and presenting issues related to Casino

Management. Development of a framework and format for effective operation of a service sector business.

Prerequisites: 2nd year CAS standing, CAS 240, 250, 251, or permission of instructor. 3 credits (3 lecture hours), spring semester

CAS 311 - FUNDAMENTALS OF SURVEILLANCE & SECURITY TECHNOLOGIES

This lecture series will survey the security and surveillance controls and emerging technologies of the gaming industry. An overview of the daily operations of a gaming facility will be presented. Attendees will acquire an understanding of the gaming industry, its environment, and the role of technology.

Prerequisites: CAS 103 and BSAD 107 or permission of instructor 1 credit (15-hour lecture series), fall semester Offered as an elective

CHEMISTRY

CHEM 101 - BASIC CHEMISTRY

Primarily for students with no previous chemistry. Fundamentals of chemistry including mathematical concepts, classification and states of matter, chemistry symbols, formulas and equations, Chemical reactions, mole concepts, atomic structure, bonding and solutions.

Prerequisite: Knowledge of basic algebra strongly suggested. Co-requisite: CHEM 101L

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 101L - LABORATORY FOR BASIC CHEMISTRY

Correct techniques and methods for handling chemicals, equipment, and data. A laboratory experience that allows the first time chemistry student to be comfortable in a laboratory setting.

Co-requisite: CHEM 101

1 credit (2 laboratory hours), fall or spring semester

CHEM 110 - CONTEMPORARY CHEMISTRY

A descriptive, but non-mathematical approach to chemistry for non-science majors based on issues important to society and the chemical sciences. Topics to be discussed include, but are not limited to, atmospheric chemistry, gases, and air pollution; aqueous chemistry, water pollution, and acids and bases; thermodynamics, fossil fuels, and alternative energy sources; organic chemistry, plastics, and recycling; drugs, pharmaceuticals, and consumer chemicals; food, chemistry, and agricultural chemicals; biochemistry and biotechnology. Chemistry concepts are presented as needed to discuss a particular issue. The course is meant to fulfill a student's science/liberal arts requirement and does not serve as a prerequisite for CHEM 121 or 141. This course is not meant for students who have taken or will take CHEM 101, CHEM 121/122, or CHEM 141/142 as part of their program requirements.

Co-requisite: CHEM 110L

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 110L- LABORATORYFORCONTEMPORARYCHEMISTRY

Designed as a co-requisite for Contemporary Chemistry for those students also requiring a laboratory experience. Experiments are designed to reflect and amplify the concepts discussed in class as well as to afford students the opportunity to develop laboratory skills, powers of observation, an appreciation of safety concerns and proper disposal methods, and troubleshooting techniques. Experiments include synthesis, analysis, and the investigation of the properties of materials.

Co-requisite: CHEM 110

1 credit (2 laboratory hours), fall or spring semester

CHEM 121 - GENERAL COLLEGE CHEMISTRY I

A course using chemical principles to explain chemical phenomena. Units, significant figures, dimensional analysis, and math and calculators as tools; chemical symbols, atomic structure, bonding, and the periodic table; anions, cations, molecules, acids, bases, formula writing, and

nomenclature; classification of chemical reactions, equation writing, solutions, and stoichiometry. Additional topics to be taken from the gaseous state, the liquid state, the solid state, and thermochemistry.

Prerequisite: placement in CHEM 121 or higher and high school algebra, or placement in MATH 102 or higher, or CHEM 101 with a C- or better

Co-requisite: CHEM 121L

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 121L - LABORATORY FOR GENERAL COLLEGE CHEMISTRY I

Exercises to develop competence in basic laboratory techniques: to develop skills in proper methods of collecting, organizing, and handling of data; to develop preparation skills; to develop trouble shooting skills; to develop written communication skills. Experiments designed to reinforce and supplement lecture topics.

Co-requisite: CHEM 121

1 credit (2 laboratory hours), fall or spring semester

CHEM 122 - GENERAL COLLEGE CHEMISTRY II

A continuation of CHEM 121 emphasizing the practical aspects and applications of chemistry in the fields of health, medicine, agriculture, foods, biology, and engineering. Topics covered include chemical equilibrium, chemical kinetics, acid-base equilibrium, oxidation-reduction and electrochemistry, nuclear chemistry, and organic chemistry.

Prerequisite: CHEM 121 Co-requisite: CHEM 122L

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 122L - LABORATORY FOR GENERAL COLLEGE CHEMISTRY II

Reinforcement of lecture topics in the areas of equilibrium, acid-base chemistry, oxidation-reduction reactions, electrochemistry, and organic chemistry. Quantitative exercises in spectrophotometry and analysis. A short scheme of qualitative analysis is also included.

Co-requisite: CHEM 122

1 credit (3 laboratory hours), spring semester

CHEM 141 – CHEMICAL PRINCIPLES I

Theoretical in-depth approach to atoms, electronic structure, bonding, thermochemistry, behavior of gases, and solution behavior. Emphasis on problem solving.

Prerequisite: Placement into CHEM 121 or CHEM 141; three units of high school mathematics

Corequisite: CHEM 141L

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 141L – LABORATORY FOR CHEMICAL PRINCIPLES I

Use of precision equipment in collecting data. Experiments quantitatively oriented with considerable use of un-knowns.

Corequisite: CHEM 141

1 credit (3 laboratory hours), fall semester

CHEM 142 – CHEMICAL PRINCIPLES II

Theoretical approach to reaction kinetics, principles of equilibrium and their applications, oxidation-reduction reactions, thermodynamics, nuclear chemistry,

metal ion complexes, and organic chemistry.

Prerequisite: CHEM 141 or permission of instructor Co-requisite: CHEM 142L

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 142L – LABORATORY FOR CHEMICAL PRINCIPLES II

Experimental determination of reaction rates, activation energies, equilibrium, dissociation and solubility product constants. Qualitative scheme of analysis utilizing unknowns. Volumetric and gravimetric determinations with use of some instrumentation.

Corequisite: CHEM 142

1 credit (3 laboratory hours)

CHEM 220 - INTRODUCTION TO ORGANIC CHEMISTRY

This is a survey of organic chemistry utilizing functional group and mechanistic approaches. The course will review the basics of chemical bonding, thermodynamics, kinetics, and acid-base chemistry needed to understand the chemistry of organic molecules. The chemical and physical properties of the standard functional groups will be examined. Transformations of functional groups will be explored and the fundamentals of the spectroscopic identification of each functional group will be practiced. The three dimensional structure of molecules will be a point of major focus. Examples of the relevancy of organic chemistry to everyday activities will be stressed, and the relationship of organic molecules to the chemistry of life will be highlighted.

Prerequisite: CHEM 122 and CHEM 122L or CHEM 142 and CHEM 142L.

3 credits (3 lecture hours) fall and spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 220L – LABORATORY FOR INTRODUCTION TO ORGANIC CHEMISTRY

This is the laboratory component of Introduction to Organic Chemistry. The basic unit operations necessary for the practice of organic chemistry, such as melting point determination, index of refraction, density, crystallization, thin layer chromatography, column chromatography, gas-liquid chromatography, simple distillation, fractional

distillation, extraction, and infrared spectroscopy will be practiced by the student. Students will then apply these operations to the isolation and preparation of a variety of organic functional groups.

Prerequisite: CHEM 122 and CHEM 122L or CHEM 142 and CHEM 142L Pre- or Co-requisite: CHEM 220

1 credit (3 laboratory hours) fall or spring semester

CHEM 241 - ORGANIC CHEMISTRY I

Bonds and bonding, nomenclature, properties and methods of preparation of the aliphatic compounds as well as conjugation, resonance, stereochemistry and aromaticity. The study of the functional groups correlates with the study of reaction mechanisms, conformational analysis, concepts of resonance, transition state theory, and spectroscopic properties.

Prerequisite: CHEM 122 or CHEM 142 or permission of instructor Co-requisite: CHEM 241L

3 credits (3 lecture hours) fall semester

This course satisfies SUNY General Education Requirements for “Natural Sciences” as long as students also enroll in the lab.

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 241L - LABORATORY FOR ORGANIC CHEMISTRY I

Separations, purifications, and characterization methods such as distillation, crystallization, chromatography and spectrophotometry. Carrying out organic reactions, isolating, purifying, and characterizing products.

Co-requisite: CHEM 241

1 credit (4 laboratory hours), fall semester

CHEM 242 - ORGANIC CHEMISTRY II

A continuation of CHEM 241. Nucleophilic substitution, aromatic substitution, ethers, aldehydes, ketones, alcohols, carboxylic acids, amines, phenols and special topics. Emphasis on reactions mechanisms.

Prerequisite: CHEM 241 and CHEM 241L or permission of instructor

Co-requisite: CHEM 242L

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 242L - LABORATORY FOR ORGANIC CHEMISTRY II

A continuation of CHEM 241L. Emphasis is on synthesis and application of techniques learned in the first semester.

Co-requisite: CHEM 242

1 credit (4 laboratory hours), spring semester

CHEM 321 - QUANTITATIVE ANALYSIS, INORGANIC

Principles and practices of the quantitative treatment of chemical reactions and equilibria. Major emphasis on volumetric, redox and UV-VIS spectrophotometry in addition to other topics. Problem solving.

Prerequisites: CHEM 142, CHEM 142L or CHEM 122, CHEM 122L

Co-requisite: CHEM 321L

2 credits (2 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 321L - LABORATORY FOR QUANTITATIVE ANALYSIS, INORGANIC

Titrametic methods of analysis and basic experiments in spectrophotometry in addition to other topics. Problem solving.

Co-requisite: CHEM 321

2 credits (4 laboratory hours), fall semester

This course counts towards the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 322 - CHEMICAL INSTRUMENTAL ANALYSIS

Introductory principles and theories underlying modern chemical instrumentation for both inorganic and organic compounds.

Prerequisite: CHEM 321 or permission of instructor Co-requisite: CHEM 322L

2 credits (2 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

CHEM 322L - LABORATORY FOR CHEMICAL INSTRUMENTAL ANALYSIS

Analytical experiments including potentiometry, gas chromatography, and high pressure liquid-chromatography. Emphasis on spectrophotometry with work in UV, IR, NMR, AA, flame emission and fluorescence.

Co-requisite: CHEM 322

2 credits (4 laboratory hours), spring semester

CHEM 361 - BIOCHEMISTRY

A study of the molecular components of cells, catabolism, and biosynthesis with applications of principles from general and organic chemistry.

Pre- or Co-requisite: CHEM 242

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

COACHING

COAC 101 - COACHING EFFECTIVENESS TRAINING

Introduction to sport science including the fields of sport psychology, sport pedagogy, sport physiology, and sport management. Introduction to the rules and regulations of the New York State Public High School Athletic Association (NYSPHSAA). One of three courses fulfilling New York State requirements for coaching certification.

3 credits (3 lecture hours), fall or spring semester

COAC 102 – THEORY AND TECHNIQUES OF COACHING

This course introduces the student to the basic concepts of coaching in New York State including general instructional strategies, rules and regulation of play, and periodization of training. Topics to include athletic security and safety, organization and management of practices and sport specific training. One of three courses fulfilling New York State requirements for coaching certification.

2 credits (2 lecture hours) fall or spring semester

COAC 103 – HEALTH RELATED ASPECTS OF COACHING

Examines the responses of the body to exercise and the relationship between various physiological systems and athletic performance and improvement. Provides the basic principles of conditioning and nutrition to enable development of safe and effective training and nutritional programs for athletes. Includes basic first-aid and safety as related to athletic participation.

One of three courses fulfilling New York State requirements for coaching certification.

3 credits (3 lecture hours) spring semester

COMMUNICATION

COMM 101 - CRITICAL READING

The study of extracting and analyzing information. Content includes recognition of such concepts as analogies, metaphors, organizations and arguments. Issues from popular culture and politics are used as examples of how messages are tailored to influence us. Emphasis on

critical thinking skills, the recognition and avoidance of logical fallacies.

3 credits (3 credit hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement.

COMM 111 - INTRODUCTION TO SPEECH

Speech as communication. Composition and delivery of informative and persuasive speeches. Practice in ad-dressing a group in order to develop confidence and proficiency. Lectures and discussion of techniques of organization and presentation ideas.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMM 121 - THEORIES OF INTERPERSONAL COMMUNICATION

This course examines dyadic communication and the major variables that impact it. Some issues which will be examined are issues of gender, power, conflict, and culture. Nonverbal communication and the impacts of technology will also be included. Students are given opportunities through in-class exercises and writing assignments to learn new theories, apply them and to assess their competence in using them.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

COMM 131 - SMALL GROUP DISCUSSION

Introduction to the organization and behavioral characteristics of group interaction in oral decision making. Content includes the analysis of leadership, conflict and consensus, systems theory, and other issues in task-oriented groups. The course will closely examine the impact of communicating over distances on modern small group theory. The impact of technology on modern group theory will also be a covering concept throughout the semester.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement.

COMM 300 - VISUAL COMMUNICATION

This is a survey course that examines the evolution of visual communication from the invention of the printing press to the development of the World Wide Web. Students will learn the many ways information is produced and consumed in a modern, media-rich society. Typographic, graphic, informational, cartoon, still, moving, television, and computer images are analyzed within a framework of personal, historical, technical, ethical, cultural and critical perspectives.

Prerequisite: C or better in COMP 101 and junior or senior standing, or permission of instructors

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMPOSITION

COMP 100 – INTRODUCTION TO COLLEGE WRITING

Review of essay components and structure. Students will refine their mastery of Standard English by writing narrative essays that demonstrate college-level thesis construction and execution.

Pre-requisite: Placement in COMP 100; or C or better in SKLS 088 or equivalent

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement.

COMP 101 – COMPOSITION AND RESEARCH

College composition and research. Students practice modes of rhetoric by writing expository essays, culminating in an argumentative research paper.

Pre-requisite: Placement in COMP 101 or C or better in COMP 100 or equivalent

3 credits (3 lecture hours), fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMP 102 – WRITING ABOUT LITERATURE

Introduction to literature. Students learn the elements of literature by studying different genres to develop interpretive and analytical skills

Pre-requisite C or better in COMP 101.

3 credits (3 lecture hours), fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

COMP 110 - TECHNICAL COMMUNICATIONS

Designed to introduce students to internal and external workplace communications such as memos, manuals, instruction sheets, and proposals. Research and group projects are required and may include oral presentations and visual aids. Students cannot receive credit for both COMP 110 and COMP 310

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMP 220 - WRITING IN THE DISCIPLINES

Designed to strengthen students' writing and analytical skills by examining the written language used by arts and humanities, social sciences and public affairs, natural sciences and technology, and business professionals. Students will read and evaluate a diverse spectrum of published materials and contrast for fundamental assumptions, concerns, methodology, terminology, and goals. Imitative and analytical papers are required.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMP 221 - ADVANCED COMPOSITION AND RESEARCH

Rhetorical argument and critical thinking through writing and research are among the topics that will be covered in this course. Students will learn and develop skills of logic and argument in essays requiring rigorous critical thinking and synthesis of information in an argumentative research paper.

Prerequisite: C or better in COMP 101 and COMP 102 or equivalent, or by permission of the instructor

3 credits (3 lecture hours), spring or fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMP 230 – CREATIVE WRITING: SHORT STORY

This is a creative writing course. Students will study the elements of fiction and practice various techniques. Class will be conducted as a workshop and students will critique each other's writing. Submission of a portfolio and a completed short story is required by the end of the semester.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

COMP 231 – CREATIVE WRITING: POETRY

This is a creative writing course. Students will study the levels of poetry and its various elements. They will practice generating different poem forms to develop the craft of writing poetry. Class will be conducted as a workshop and students will critique each other's works. They will submit portfolio work throughout the semester.

Prerequisite: "C" or better in COMP 101.

3 credits (3 lecture hours), fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

COMP 232 - CREATIVE WRITING

A five-week, one-credit course in creative writing designed to encourage students to develop their creative writing skills and techniques, and to share and discuss their works in a workshop setting.

1 credit (5-week course), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement.

COMP 233 – CREATIVE WRITING: CREATIVE NONFICTION

What is “creative”? What is “nonfiction”? This is a creative writing course about the exciting field of creative nonfiction, which may include: memoir, lyrical essay, literary journalism, collage, nature and travel writing, fragment, creative biography, genre-bending, experimental writing, etc. This is not academic or technical writing. Class will be conducted as a supportive workshop experience in which students will read, discuss, create, share, and critique each other’s work and the work of published authors.

Prerequisite: COMP 101

3 credits (3 lecture hours), fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

COMP 240 - EDITING 1

Improve your written work. This course helps you identify and correct errors in grammar, punctuation, capitalization and spelling. Develop the editing skills of careful reading, good judgment and correct use of the English language.

Prerequisite: COMP 101

1 credit, offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement.

COMP 241 - EDITING 2

Improve your written work. This course helps you identify and correct errors in phrases, clauses, sentence structure and sentence punctuation as well as develop variety in your use of the various types of English sentences. This course will help you develop the editing skills of careful reading, good judgment and correct use of sentences.

Prerequisite: COMP 101

1 credit, offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement.

COMP 242 - EDITING 3

Fine-tune your written work. This course applies the editing skills learned in Editing 1 and Editing 2 and examines editing for appropriate use of diction and document format. Edit documents written for different audiences and purposes in areas relevant to a variety of college programs and career fields.

Prerequisites: COMP 240, 241

1 credit, offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement.

COMP 310 - ADVANCED TECHNICAL COMMUNICATIONS

Open only to students in bachelor degree programs, this course requires students to study workplace communication. Students will study and produce common workplace documents such as memos, letters, manuals, instruction sheets, abstracts, proposals, analytical reports, feasibility studies, etc. and will also consider ethical issues surrounding workplace communication. Research projects and the production and use of visual aids are required. Oral presentations and collaborative projects may be required. Students cannot receive credit for both COMP 110 and COMP 310.

Prerequisite: Junior or senior standing and C or better in COMP 101, or by permission of instructor

3 credits (3 lecture hours), fall and spring semesters

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

COMPUTER-AIDED DESIGN

CAD 181 - INTRODUCTION TO COMPUTER-AIDED DRAFTING

This is an introduction to the fundamental concepts and techniques of two-dimensional drawing using AutoCAD software. Topics include file management, the drawing environment, basic drawing and editing commands, multi-view object representation, text creation, dimensioning, and section views.

1 credit (2 laboratory hours), fall or spring semester

CAD 183 - ARCHITECTURAL COMPUTER-AIDED DRAFTING AND DESIGN

This course will introduce computer-aided drafting and design (CAD) software designed for the utilization in the field of architecture. By Using CAD software, students will learn to generate professional quality two-dimensional drawings and details. Ultimately by using multiple software packages, students will explore three-dimensional modeling, culminating in the creation of realistic color renderings of buildings and furnishings.

Prerequisite: CAD 181

Pre- or Co-requisite: ARCH 271, MATH 103 (minimum) or permission of instructor

2 credits (1 lecture hour, two laboratory hours), fall semester

CAD 184 - COMPUTER-AIDED DRAFTING FOR MECHANICAL DESIGN

A comprehensive introduction to two-dimensional drafting techniques. Topics include file management, drawing environment and coordinate systems, geometry construction and modification, inquiry techniques, text, dimensioning, sectional views, blocking and assembly drawing. Emphasis is placed on accuracy of object geometry construction.

Co-requisite: DRFT 151 or permission of instructor

2 credits (1lecture hour, 2 lab hours), fall semester

CAD 186 – 3D PARAMETRIC SOLID MODELING

Utilization of 3D parametric modeling software to develop and document mechanical part component and assembly models. Topics include the parametric model concept, dimensional and geometric constraints, feature-based modeling techniques, fits in assembly, and plotting dimensioned multiview drawings. Emphasis is placed on model integrity and documentation.

Prerequisite CAD 184 or permission of instructor

2 credits (1 lecture hour, 2 laboratory hours), spring semester

CAD 288 – ADVANCED SOLID MODELING

Advanced parametric solid modeling concepts and applications. Topics include solid modeling with 3D sketches, surface modeling, functional assembly modeling, simple mold design, sheet metal modeling, fasteners, visualization and animation tools, kinematic motion analysis, static stress analysis, and dimensioning with geometric tolerances. Emphasis is placed on model integrity and documentation.

Prerequisite: CAD 186, DRFT 252

2 credit hours (4 laboratory hours), spring semester

COMPUTER INFORMATION SYSTEMS

CITA 101 – PRINCIPLES OF COMPUTERS AND APPLICATIONS

This course covers the fundamentals of computer systems and is designed to progress students from an introductory skill level to an intermediate (proficient) skill level in word processing, graphics, communications, multimedia, and spreadsheets. It includes an overview of computer hardware components and examines the issues and trends in computing technology. This course moves students from early modeling instruction through project-based exercises similar to situations they may encounter in the workplace and requires students to use their critical thinking skills.

3 credits (3 lecture hours), fall and spring semester

CITA 110 – INTRODUCTION TO INFORMATION TECHNOLOGY

A survey of equipment and programs used in common computer systems. Topics include internal storage, in-put/output devices, operating systems, popular applications packages. Current and future trends will be discussed in reference to networks, mainframe and microcomputers. (Note: This course may be challenged with a formal test out process. Contact your advisor or CIT Dept. for information)

3 credits (3 lecture hours), fall and spring semester

CITA 112 – INTRODUCTION TO GAME DEVELOPMENT

This course involves game development, game concepts, design components and processes, game worlds, character development, storytelling and narrative, creating the user experience, core mechanics, game balancing, and leveling. The creation of 2D games is used to introduce the concepts of game design. No traditional programming languages are involved and no programming experience is required.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 120 - COMPUTER CONCEPTS AND OPERATING SYSTEMS

A study of the terminology and concepts associated with computer systems hardware and software. Topics include system hardware components, memory organization and management, operating systems, and troubleshooting fundamentals. Students will install, configure, test and troubleshoot system software to apply the various concepts covered in the course.

Prerequisites: CITA 110 or CITA 101, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 140 - INTRODUCTION TO PROGRAMMING

Programming in a high level language emphasizing problem-solving and object- oriented programming techniques. Topics include assignment, input/output, selection, looping, scalar and array data structures, string and numeric data and modular development.

3 credits (2 lecture hours, 2 lab hours), fall and spring semester

CITA 150 - DATA MANAGEMENT TECHNIQUES

Advanced object-oriented high-level language programming focusing on internal memory management techniques, programming structures, and programming style. Topics include character string processing, sorting, searching and lists.

Prerequisite: CITA 140 (with C or better) or equivalent, or permission of the instructor

3 credits (2 lecture hours, 2 lab hours), spring semester

CITA 190 – INTRODUCTION TO LINUX/UNIX OPERATING SYSTEMS AND ADMINISTRATION

Lecture and hands-on instruction in the installation, configuration, and use of the Linux and UNIX operating systems. Hands-on laboratory exercises are used to help students gain experience with practical application of concepts discussed in lecture. Upon successful completion of the course, students will understand basic Linux/UNIX terms and history, installation procedures, Linux/UNIX file systems, the command interface, X Windows, managing processes, common administrative tasks, and Linux/UNIX network services and security.

Prerequisite: CITA 110 or COSC 111 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 200 - DATA COMMUNICATIONS AND NETWORKING

A study of the terminology, hardware, and software associated with data communications and networking 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, networking components, and network topologies, routing and protocols.

Prerequisite: CITA 120, or permission of the instructor

3 credits (2 lecture, 2 laboratory hours), fall and spring semester

CITA 210 - VISUAL PROGRAMMING AND DEVELOPMENT TOOLS

Lecture and hands-on instruction in visual programming which is commonly defined as the visual expressions including drawings, animation, or icons that are directly manipulated by the user in an interactive way. Object oriented and event driven programming that include forms, controls, properties, and solutions. Solutions to application problems encountered in the typical business organization.

Prerequisite: CITA 140 (with a C or better), or equivalent, or permission of the instructor.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 212 – FUNDAMENTALS OF GAME DESIGN

The design of games, both for education as well as entertainment, is explored in detail. The course involves programming in a high-level scripting language. Topics include game concepts, design components and processes, game worlds, character development, storytelling and narrative, creating the user experience, core mechanics, game balancing, and leveling. A user-centric approach to design is emphasized.

Prerequisites: CITA 140 or COSC 111, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours) spring semester

CITA 220 - SYSTEMS ANALYSIS

This course explores the philosophy, objectives and organization of the systems analysis activity. Topics include: the justification of the need for information systems to support management decisions; the impact of information systems on individuals and organizations; life cycle and prototyping methodologies; tools and techniques of systems analysis. Emphasis is on transaction processing systems.

Prerequisite: CITA 140, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

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: CITA 200, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 240 - WEB AND E-COMMERCE DEVELOPMENT

A study of software, clients, and servers used in Web and E-commerce development. Topics include basics of server side programming, client side programming, and database programming. Students will install a web application server and implement basic application in the Model View Controller (MVC) framework.

Prerequisite: CITA 120 and CITA140 (with C or better), or permission of the instructor.

3 credits (3 lecture hours), fall semester

CITA 260 - PHOTOGRAPHY AND DIGITAL IMAGING

An introduction to the principles of photography. This course will include the use of the camera, processing and printing. Computer scanning and the manipulation of photographic images with software editing tools will be covered. Design and composition will be stressed. Students will be expected to have access to a good camera, and they must purchase additional materials. Prerequisite: CITA 110 or CITA 101 (with C or better), or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 270 – FUNDAMENTALS OF NETWORK SECURITY

Survey of fundamental knowledge needed to analyze security risks to systems and implement a workable security policy that protects information assets from potential intrusion, damage, or theft. Students learn to deploy effective countermeasures to thwart potential attacks in a hands-on laboratory environment.

Prerequisite: CITA 200, Math 103 eligibility or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 280 - TOOLS AND TECHNIQUES FOR APPLICATION DEVELOPMENT

This course includes lecture and hands-on instruction in application and database development. Topics include data modeling; database design; the use of database management software, screen and report generators; query languages; 4GLs. Current topics in application development are also discussed.

Prerequisite: CITA 220, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 300 - COMPUTER SYSTEM SUPPORT AND MAINTENANCE

This is a project-oriented course that focuses on the support and maintenance of PCs. Students will learn how 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, and how to build and repair PCs in a hands-on environment.

Prerequisite: CITA 120, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 305– INTRODUCTION TO COMPUTER CRIME AND DIGITAL FORENSICS

A study of computer crime and digital forensics providing an introduction to foundational terminology and concepts. Areas of study include current trends in computer crime, methodologies for computer crime investigation, and techniques for maintaining legal chain-of-custody and documentation, and application of basic digital forensics tools.

Students may not receive credit for both CITA 270 and CITA 305.

Prerequisites: CITA 101 or CITA 110, or permission of instructor

3 credits (3 lecture hours), fall and spring semesters

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 CGI's and ASP's, server maintenance and site security.

Prerequisite: CITA 110 and CITA 190, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 312 – INTERMEDIATE COMPUTER GAME DESIGN AND APPLICATIONS

The design of intermediate games and simulations, both for education as well as entertainment, will be explored in detail. Involves programming in a high-level scripting language and algorithmic development. Topics include 3D game/ simulation concepts, design components and processes, 3D game/ simulation worlds, 3D character/ vehicle/ terrain development, creating the user experience, core mechanics, and multi-tier client/ server support. A user- centric approach to design will be emphasized.]

Prerequisite: CITA 212 (with C or better), or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 320 - NETWORK ADMINISTRATION

Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Topics will include performance issues, end-user accounts, data security, disaster recovery, supporting applications and documentation.

Prerequisite: CITA 230 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 325 - NETWORK DEFENSE AND COUNTERMEASURES

Network Defense and Countermeasures provides the student with a solid foundation in network security fundamentals; while with the primary emphasis is on intrusion detection, the course also covers such essential practices as developing a security policy and then implementing that policy by performing Network Address Translation, packet filtering, and installing proxy servers, firewalls, and Virtual Private Networks. Students will learn to design, configure and deploy an IDS and analyze current network security risks.

Prerequisite: CITA 270 and eligibility for Math 103, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 330 - WEB PUBLISHING

This course provides a comprehensive survey of Web publishing technologies and design. Students create a professional quality Web site and publish projects to a hosting site. Topics include HTML5, CSS3, database driven content, and responsive web. Design considerations include Web 2.0 design, simplicity, usability, information, hierarchy, navigation, and visual message.

Prerequisite: CITA 210 or CITA 240, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 335 - INTERNET TECHNOLOGIES FOR ELECTRONIC DEPLOYMENT

This course provides instruction on how Internet technologies provide an information-sharing architecture for electronic commerce (EC). Focusing on the architectural level, this course provides students with an under-standing of how technologies enable business processes rather than how the technologies work. Strategy and management issues are examined in the context of important EC market segments. Case studies illustrate the skills students need to become managers of EC. An examination of commercial software package demonstrates how a team of managers, technologists, designers and others is required for commercial implementation of an EC strategy.

Prerequisite: BSAD 116 and CITA 125 or equivalent, and at least second-year status, or permission of the instructor.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 340 - DATABASE CONCEPTS

The course is a study of the theory, terminology, languages, and software associated with data base systems. Topics include data organization and structure, relational data-bases, data access methods, and database languages. Students will plan, analyze, design, develop, and test database systems. Current topics in database design and development are also discussed.

Prerequisites: CITA 210, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

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 the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 360 - OPERATING SYSTEMS AND SOFTWARE DEPLOYMENT

This is a project-oriented course which requires the installation and use of software found in business and industry. Students will gain experience implementing and deploying a variety of industry-wide software products including, but not limited to, operating systems (MS Windows, Macintosh, Linux, etc.), mail systems, backup, WSUS, office productivity suites, and virus protection software.

Prerequisite: CITA 200, CITA 190 recommended, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 370 - NETWORK DESIGN CONCEPTS

This is a laboratory-oriented course in which students will design and implement network systems utilizing the various topologies, media, protocols and network hardware, such as bridges, switches, hubs, and routers.

Prerequisite: CITA 230 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 375 - INTERNET AND INTRANET FIREWALLS

Firewalls are the primary tools used to prevent unauthorized access to network resources. This course focuses on protecting the network using various firewall designs. Students will gain extensive hands-on experience installing and configuring firewalls. Students will learn how to allow access to key services while maintaining information security.

Prerequisite: CITA 325 and Math 103 eligibility or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 380 - DYNAMIC GRAPHICS AND ANIMATION

This is a survey of the use of dynamic graphics in user interfaces and animation in the simulation and visualization of information. Tools and techniques for the production of computer graphics and animation will be introduced and student projects will be required.

Prerequisite: CITA 210 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

CITA 385 – USER INTERFACE DESIGN

Design, evaluation, and prototyping of user interfaces for a variety of computing devices will be covered. This course focuses on user-centered design for interfaces that promote usability, interactivity, and accessibility. A range of interface types will be considered to include those for desktop applications, Web applications, mobile devices, turnkey systems, and others as technology continues to advance. Design and prototyping projects will be included. Evaluation techniques will be applied to existing interfaces and those created by students as part of this course.

Prerequisites: CITA 210, or permission of the instructor

3 credits (3 lecture hours), fall semester

CITA 395 - INTERNSHIP ORIENTATION SEMINAR

This course will be taken in the semester prior to the student's internship experience. Topics include the role of the internship in the student's professional development, formulating personal and professional goals, the current employment outlook in the Information Technology field, employer expectations of an intern, formulating a job search strategy, the role of networking through the use of personal contacts and referrals, interviewing skills, the work environment in large, medium and small organizations. The documents and methods that will be used to evaluate the student during the internship will be clearly defined. Prerequisite: At least junior status, or permission of the instructor

1 credit (1 lecture hour), 15 weeks, fall and spring semester

CITA 405 - PROJECT MANAGEMENT

This course provides an introduction to project management. Students learn project management concepts and how to use appropriate tools and software to manage various types of projects from start to finish. Students are challenged with the wide range of issues professional project managers are required to master: planning, prioritizing, scheduling, budgeting, negotiation, organizing, controlling cost, and handling change. Project management applies to a wide spectrum of real-world projects both within and outside the technical sciences. This course emphasizes learning through lecture, homework, student participation and presentations. Class projects give students hands-on experience applying project management skills and use of software tools.

Prerequisites: CITA 110 or CITA 101 and BSAD 300 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), fall and spring semester

CITA 410 - MULTIMEDIA 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 inter-active or self-running computer presentations.

Prerequisite: CITA 380 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 412 – ADVANCED GAME DESIGN AND APPLICATIONS

An in-depth study of complex, object-oriented, 2D and 3D game development including, but not limited to: animation, character modeling, textures, terrains, collision detection, particle effects, lighting, audio, and net-working. Students work in teams to produce a functional digital game suitable for distribution.

Prerequisite: CITA 312 or permission of the instructor

3 credits (2 lecture hours, 2 lab hours), spring semester

CITA 420 – PROGRAMMING FOR THE WEB

This course combines server-side, client-side and database programming to develop a dynamic Web application. Web technologies include HTML5, CSS3, OOP design, and SQL programming. Mobile/responsive web applications are emphasized. A Model View Controller

(MVC) framework is developed. A semester long development project includes topics of database design, user authentication, roles, and privileges, managing user requests, dynamic forms, security/data filtering, many-to-many design, unit testing, and naming conventions.

Prerequisites: CITA 240 and CITA 330, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 425 - OPERATING SYSTEM SECURITY

The course will provide in-depth explanations of operating system security features as well as systematic configuration guides for proper operating system

configuration. This course also provides the knowledge and skills students need to maintain the integrity, authenticity, availability and privacy of data. Through extensive hands-on lab exercises, students will gain experience establishing user, file system, and network security for enterprise computing environments. Students will learn to use tools and utilities to assess vulnerabilities, detect configurations that threaten security and provide effective access controls.

Prerequisites: CITA 325 and Math 103 eligibility or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 430 - COMPUTER INTEGRATION AND 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 the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 440 - DESIGNING AND MANAGING ORGANIZATIONAL TRAINING

In this course students will apply theories of adult learning and instructional development to the design, delivery, and evaluation of training for organizational and end-user information systems. Topics include: needs assessment, instructional design and strategy, live and

mediated instruction, implementation management, evaluation and follow-up methods, and evaluation of training strategies.

Prerequisite: BSAD 300, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 450 - APPLIED DATABASE MANAGEMENT

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 will be used.

Prerequisite: CITA 340 and CITA 350, or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

CITA 460 - ORGANIZATIONAL AND END-USER INFORMATION SYSTEMS

This course is a study of the management of organizational information systems. Relevant information technology and business concepts will be used to explore the role of information systems within organizations and the relationship of information systems to the external organizational environment. Emphasis will be on organizational results, attaining efficiency and effectiveness, and achieving competitive advantage in the global economy. In-formation systems management case studies will be utilized.

Prerequisite: BSAD 300, senior status, or permission of the instructor

3 credits (3 lecture hours), fall semester

CITA 480 - INTERNSHIP IN INFORMATION TECHNOLOGY

Supervised fieldwork 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 in-formation technology in an organization. Each intern will be supervised by a member of the CIT Department faculty in accordance with CIT Internship Guidelines. Written and oral reports of work experience activities will be required.

Prerequisite: Enrolled in CIT Bachelor Degree Program, CITA 395 and senior status, or permission of the internship committee.

12 credits, fall, spring, or summer semester

COMPUTER SCIENCE

COSC 111 - INTRODUCTION TO COMPUTER SCIENCE

An introduction to algorithms and programming using a contemporary programming language such as Python. Students learn object-oriented problem-solving, properties and qualities of algorithms, the software life cycle, data types, flow control, arrays, events, input, output, and interaction. By the end of the course, students will have written several computer programs and will have been exposed to many of the issues of interest to computer scientists. Co-requisite: MATH 102 or higher

3 credits (3 lecture hours), fall semester

COSC 111L - INTRODUCTION TO COMPUTER SCIENCE LABORATORY

Hands-on sessions where students apply the concepts and techniques covered in the lecture portion of the course. Students develop interactive applications with an object-oriented language such as Python that include graphics, user interfaces, simple games, and calculations.

1 credit (2 laboratory hours), fall semester

COSC 112 – ELEMENTARY DATA STRUCTURES

Continuation of COSC 111 with emphasis on abstract data types and their implementation. Includes linked lists, stacks, queues, and trees, design and testing principles and software interfaces.

Prerequisite: COSC 111 or equivalent with a grade of ‘C’ or better

4 credits (4 lecture hours), spring semester

COSC 201 - PROGRAMMING WITH C

General introduction to fundamentals of programming with the C programming language in a UNIX environment. Topics include: syntax and semantics, identifiers, data types, functions, arrays, strings, pointers, structures, unions, macros, and applied data structures. Emphasis is on systems programming and the use of standard libraries.

Prerequisite: COSC or CIS major with programming experience or permission of instructor

3 credits (3 lecture hours), spring semester

COSC 211 - COMPUTER GRAPHICS TECHNIQUES

General introduction to the elements and techniques of creating programs that produce graphic images or analyze graphic content. Covers the basic shapes (points, lines, poly-objects, text, and circles) and transformations, and then advances to user interaction, animation, three-dimensional images, fractals and scene analysis.

Prerequisite: Knowledge of Java or similar language and permission of instructor

3 credits (3 lecture hours), fall semester

COSC 221 - ASSEMBLY LANGUAGE PROGRAMMING

Basic concepts of computer systems, computer architecture, and programming in an assembly language. Representation and storage of information; components of the hardware; CPU architecture; instruction sets; addressing modes; using the debugger, linking modules, and macros; I/O ports and interrupts; DOS and BIOS services.

Prerequisites: COSC 111 or equivalent, and MATH 145, or permission of instructor

3 credits (3 lecture hours), fall semester

COSC 231 - ADVANCED PROGRAMMING TECHNIQUES

Utilization and expansion of analysis and programming techniques developed in previous courses. This course covers various topics of current interest such as neural networks, genetic algorithms, artificial intelligence, finite state machines, and non-procedural languages. More sophisticated problem-solving techniques are utilized to address typical computing situations.

Prerequisite: COSC 112 with a grade of C or better, or permission of instructor

3 credits (3 lecture hours), spring semester

COSC 232 - SOFTWARE DEVELOPMENT INTERNSHIP

Interns develop instructional interactive software applications for use by other departments on campus. Working as a team, interns learn firsthand about designing, creating, delivering, documenting, and maintaining software in a business-like environment.

Prerequisite: COSC 112 and permission of instructor

1-3 credits (1-3 laboratory hours), fall or spring semester

CRIMINAL JUSTICE

CJUS 101 - INTRODUCTION TO CRIMINAL JUSTICE SYSTEMS*

A survey course which examines the linkages which exist between and among the police, courts, prosecutors, corrections, probation and parole.

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement.

CJUS 201 - CORRECTIONS

An introduction to community, county, state and federal correction procedures and administration. This course examines punishment, rehabilitation and incarceration. Legal issues and the complexities of prison management are also explored.

Prerequisite: CJUS 101: Introduction to Criminal Justice

3 credits (3 lecture hours) spring semester

CJUS 202 - POLICING

This course will examine the role of policing in a democratic society. The roles, responsibilities and behaviors of police will be studied. This course also gives attention to ethics and appropriate use of discretion.

Prerequisite: CJUS 101 Introduction to Criminal Justice

3 credits (3 lecture hours) fall or spring semester

CJUS 220 - CRIMINAL INVESTIGATION I

An introduction to the science of criminal investigation. Students learn information/evidence gathering, surveillance, interview, interrogation, use of informants and instrumentation techniques used in investigations of arson, narcotics, sex offenses and larceny crimes.

Prerequisite: CJUS 101 Introduction to Criminal Justice CJUS 202 Policing or permission of the instructor

3 credits (3 lecture hours); fall or spring semester

CJUS 221 - CRIMINAL INVESTIGATION II

A continuation of the science of criminal investigation. This course addresses the information gathering, inter-rogation and instrumentation used in investigations of homicide, assault and explosions. Rules of evidence, fingerprints, castings, firearms, trace minerals and criminal profiles are emphasized.

Prerequisite: CJUS 220 or permission of instructor

3 credits (3 lecture hours) fall or spring semester

CJUS 230 – BASICS OF PENAL LAW

An examination of the penal code and legislatively imposed legal parameters on law enforcement and citizens. Students will learn how to read and evaluate laws, to differentiate between numerous degrees of similar offenses, and apply the laws appropriately.

Prerequisite: “C’ or better in COMP 101 Prerequisite or Co-requisite: CJUS 101

3 credits (3 lecture hours) fall semester

CJUS 231 - CRIMINAL PROCEDURE LAW

An examination of Criminal Procedure Law and its impact on law enforcement. Topics will include arrests, warrants, and rules of evidence. Court and Grand Jury procedures will be addressed.

Prerequisite: “C’ or better in COMP 101 Prerequisite or Co-requisite: CJUS 101

3 credits (3 lecture hours) spring semester

CJUS 235 – JUVENILE DELIQUENCY

Social pressures on children in our society that push them toward deviant behavior are focused on in this course. Power structure, class and caste urbanization, minority groups, and the effects of technological change concurrent with urban growth. Family, peer group, gang and slum subcultures as influences in development of the delinquent role. Methods of prevention, treatment and correction.

Prerequisite: PSYC 101 or SOCI 101

3 credits (3 lecture hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement.

CJUS 301 – CRIME SCENE INVESTIGATION AND MANAGEMENT

This course addresses the scientific and legal components of crime scene management and investigation. Methods of scene control, evidence collection, documentation, photography, and investigation are explored. Laws and court decisions and admissibility of evidence are emphasized.

Prerequisite: CJUS 221

3 credits (2 lecture hours, 2 lab hours) fall or spring semester

CJUS 310- SERIAL MURDER AND CRIMINAL JUSTICE

This course will examine the unique phenomenon of serial murder. Distinct from other forms of multiple murders, various types of serial murder will be studied along with definitions and ramifications and difficulties of apprehension. Other topics include the serial killer myths, race and gender, the impact of the media, profiles and possible criminological explanations. Students should be aware that due to the nature of the topic, graphic sexual and violent descriptions and images may be presented as part of this course.

Prerequisite: CJUS 202 Policing

3 credits (3 lecture hours), spring semester

CJUS 311- INTERVIEWING TECHNIQUES IN CRIMINAL JUSTICE

Interviewing Techniques in Criminal Justice addresses interviewing techniques of suspects and witnesses. Overcoming resistance, interviewing people under adverse or stressful circumstances and the detection of lies will be emphasized. Prerequisite: CJUS 221

3 credits (3 lecture hours) spring semester

CJUS 312 - VICTIMIZATION

This course examines the plight of victims and their relationships with the criminal justice officials and agencies, policymakers, victim right advocates, the news media, offenders, security businesses, and service providers. Practical responses to victimization will be discussed.

Prerequisite: CJUS 202 Policing or permission of the instructor.

3 credits (3 lecture hours), fall semester

CJUS 313 – SEXUAL OFFENSES

This course examines the roles of the criminal justice, treatment, and victim advocacy communities in the management of sexual offenses. The practical application of emerging research ad best practices will be appraised.

Prerequisite: CJUS 202

1 credit (1 lecture hour)

CJUS 314 – DIVERSITY WITHIN CRIMINAL JUSTICE SYSTEMS

This course will examine the issues surrounding diversity within the criminal justice employment and its relations within the community and clientele, encompassing racism, sexism, ageism, and bias against the disabled. The role of media and special interest groups will be evaluated. The practical application of emerging research and best practices will be appraised.

Prerequisite: COMP 101 and CJUS 101 or permission of the instructor

1 credit (1 lecture hour), spring semester

CJUS 315 - WHITE COLLAR CRIME

White Collar Crime addresses the illegal, unethical or deviant activity of institutions or individuals conventionally considered respectable or of high status. Students will explore the policing, prosecution and impact of white collar crime.

Prerequisite: CJUS 202

3 credits (3 lecture hours) fall or spring semester

CJUS 316 – ANIMAL ABUSE INVESTIGATIONS

This course explores the complex physical and emotional components of animal abuse. Students will learn the basics of animal abuse investigations and the limitations of law.

Pre-requisite: CJUS 101 Introduction to Criminal Justice or permission of the instructor

1 credit (1 lecture hour)

CJUS 401 – EMERGENCY PLANNING AND RESPONSE

Emergency and security staff strategize and execute plans to prevent loss of persons and property for communities and businesses. This course will focus on planning considerations and technology, including the use of the Internet, GIS and GPS tools, direct and remote sensing, and warning systems.

Prerequisite: CJUS 221

3 credits (3 lecture hours) fall or spring semester

CJUS 402 – TERRORISM AND LAW ENFORCEMENT

This course addresses terrorism and its implications on law enforcement and domestic tranquility. The class will examine the terrorist profile and motivations. The impact of law enforcement's response on civil rights will be emphasized. Prerequisite: CJUS 221 and junior status

3 credits (3 lecture hours) fall semester

CJUS 403 – PRIVATE SECURITY

This course will introduce students to the US Private Security Industry. Focusing on practical, real-world concepts, this course will address retail, business, employment, personal, premises, and other forms of security with professionalism and ethics.

Prerequisite: CJUS 301 Crime Scene Investigation and Management.

3 credits (3 lecture hours), fall semester

CJUS 404 – USE OF FORCE CONTINUUMS

Appropriate application of use of force to gain lawful compliance and personal protection impacts law enforcement and citizens. This course examines use of force continuums, emotional and physical impacts, the courts, and the public response.

Prerequisite: CJUS 202

1 credit (1 lecture hour), spring semester

CJUS 405 – CRIME SCENE PHOTOGRAPHY

The specialized skills of crime scene photography encompasses an understanding of cameras, lighting, filters and crime scene priorities. Video cameras will also be examined.

Prerequisite: CJUS 220 Criminal Investigation I

1 credits (1 lab hours)

CJUS 412 ARSON AND BOMB INVESTIGATIONS

This course addresses arson and bomb investigations including the science of combustion of liquid, gas, and solid fuels in fire and bombs. Specific scenes, such as vehicles, structures, and the wilderness, will be examined as a means to study the behavior of fires and the courses of investigation.

Prerequisite: CJUS 221

3 credits (3 lecture hours) spring semester;

CJUS 414 - INVESTIGATION OF STAFF MISCONDUCT AND WORKPLACE VIOLENCE

This course provides the theoretical and practical tools to investigate staff misconduct and workplace violence.

Prerequisite: CJUS 221

3 credits (3 lecture hours) fall semester

CJUS 449 - CRIMINAL JUSTICE INTERNSHIP PREPARATION

This course prepares the student for a full time internship in the criminal justice field. Also reviewed are career options within the discipline including law enforcement and private security. Job skills will be discussed.

Prerequisite: Successful completion of at least 90 credits of criminal justice degree requirements. Usually taken in the semester immediately preceding internship.

1 credit (3 lecture hours/5 weeks) fall or spring semester

CJUS 450 - CRIMINAL JUSTICE INTERNSHIP

The full-time internship is designed to immerse students into the Criminal Justice profession through an assignment at a pre-approved site.

Prerequisite: Grade of “C” or better in CJUS 449 and successful completion of 107 credits of criminal justice degree requirements.

15 credits, fall or spring semester

CJUS 498 – SPECIAL TOPICS IN CRIMINAL JUSTICE

This course examines current and special topics impacting the field of criminal justice. Offerings will vary each semester to address multiple topics such as Restorative Justice, Organized Crime, Technology in Law Enforcement and other current issues.

Prerequisite: CJUS 202 Policing or permission of the instructor.

1 credit (1 lecture hour, online, hybrid or lab hours) fall or spring semester

CJUS 499 – SPECIAL TOPICS IN CRIMINAL JUSTICE

This course examines current and special topics impacting the field of criminal justice. Offerings will vary each semester to address multiple topics such as Restorative Justice, Organized Crime, Technology in Law Enforcement and other current issues.

Prerequisite: CJUS 202 Policing or permission of the instructor.

3 credits (3 lecture, online, hybrid or lab hours)

CULINARY ARTS

CUL 101 CULINARY ARTS I

An introduction to the principles, skills and techniques necessary for basic food preparation. Areas of culinary study will include the understanding and performing of a wide variety of cooking techniques. Broiling, Roasting, Sautéing, Grilling, Braising, Steaming and Stir Frying will be studied and learned to prepare basic and advanced menu items. The proper use of commercial kitchen equipment and recipes, basic sanitation and safety techniques in the kitchen will be practiced. Culinary terminology and product identification will be a focus. Majors Only

4 Credits (1 lecture hour, 6 lab hours), fall semester/spring semester

CUL 111 PROFESSIONAL BAKING

An introductory course in the principles of baking, with emphasis on bakeshop ingredients, their function, measurement, and scaling. Scratch baked items to include quick breads and muffins, yeast breads, cookies, Danish pastries, cakes, pies, custards, creams and sauces. Majors Only

3 Credits (1 lecture, 4 lab hours), fall/spring semester

CUL 201 ADVANCED CULINARY ARTS

A continuation on the principles, skills and techniques learned in Culinary Arts I. Areas of culinary study will include intense concentration on the understanding and performing of a wide variety of cooking techniques. Students will prepare advanced menu items while utilizing scratch cooking for all recipes whenever possible. Students will be able to convert recipes to provide purchasing lists and then fabricate portions from primal and sub primal cuts of meat and then produce those food items. Students will also continue to use basic sanitation and safety techniques in the kitchen.

Prerequisite: CUL 101 Minimum grade of C

4 Credits (1 Lecture Hour, 6 Laboratory Hours), fall semester

CUL 211 CULINARY RESTAURANT

This course is designed to give students a realistic view of a functioning restaurant operation. Students receive hands on experience in how to effectively manage, operate, and maintain a fine dining restaurant operation at the Copper Turret Restaurant in the village of Morrisville. Working alongside professional chefs, servers and bartenders, students will plan, prepare and serve a fine dining menu in an upscale facility. Students will be tasked with developing menu items from a variety of cuisines. Students will learn how to construct menus, pair wines with the menus, and present food products properly for service. Students will rotate through all positions in the restaurant to gain practical experience. Emphasis is placed on menu authenticity, proper management techniques as well as fiscal responsibility.

Prerequisites: CUL 101, CUL 111, and FSAD 102

6 Credits Spring (1 lecture hour, 12 laboratory hours), spring semester

CUL 301- ADVANCED CULINARY SKILLS

This course focuses on refining the students culinary skills learned in previous classes. Students will master skills in cold platter presentation, glazing meat and fish, carving, and garnishing. Students will refine their skills in fabrication of beef, poultry, veal, lamb, game meats, lobster, round fish and flat fish. Menus for various types of dinners will be created. Vegetable knife cuts will be a focus as students demonstrate mastery of the various cuts required to meet industry standards. Basic baking and pastry skills will be practiced and students will demonstrate mastery of producing a short dough and pastry cream. The course will prepare the student for the exciting and challenging aspect of the culinary competition and teach students how to successfully prepare for various competitions. Students build on

previously learned skills and will train to meet the demands of culinary competition. The student will work on developing a mental thought process and understanding of the discipline needed to be properly prepared for culinary competitions. Each student will learn how to craft a professional entry packet for hot food competitions following American Culinary Federation requirements. Students will complete a cold food entry for an in–house competition. Opportunities may exist for students to take part in official American Culinary Federation competitions.

Prerequisites: CUL 111 and CUL 201 or permission of instructor.

4 Credit Hours (1 lecture hour, 6 lab hours) fall semester

DAIRY - ANIMAL SCIENCE

DASC 100 – DAIRY CATTLE FEEDING MANAGEMENT – SHORT COURSE

An introduction to the management of feeding cattle, including forage storage, feed rates from storage, management of the feed bunk, mixing of feed, body condition scoring, lameness, cow comfort, and sampling of feed for analysis. The 2 credit option offers more in-depth exposure and analysis on all topics and will contain additional course material.

1 credit option (1.5 lecture hours, 1.5 lab hours per week for 6 2/3 weeks) 2 credit option (1.5 lecture hours, 1.5 lab hours per week for 13 1/3 weeks)

Offered during a winter term from November 1 – April 15

DASC 111 - DAIRY BREEDING - SHORT COURSE

This course covers breeding, including animal reproduction, male and female reproductive anatomy and physiology, hormonal control of the reproductive system, the estrous cycle, fertilization, and reproductive failures.

DASC 111 combined with DASC 112 will substitute for the three-credit DANS 110.

2 credits (1.5 lecture hours/week, 1.5 laboratory hours/week), total of 20 lecture hours plus 20 laboratory hours, 13 1/3 weeks

Offered during a winter term from Nov. 1-March 15.

DASC 112 - DAIRY BREEDING II - SHORT COURSE

This course covers animal breeding including animal reproduction and offers an in-depth look at reproductive programs to achieve cattle pregnancies. The course provides a hands-on approach where students will be practicing reproductive management daily. Introductory dairy cattle genetics will be discussed.

DASC 112 combined with DASC 111 will substitute for the three-credit DANS 110.

1 credit (10 lecture hours/week, 10 laboratory hours/week), total of 10 lecture hours plus 10 laboratory hours, 1 week

Offered during a winter term during one week of January

DASC 211 – DAIRY HERD HEALTH – SHORT COURSE

Physiology, anatomy and health of the dairy cow. Emphasis on hygiene, disease prevention, her health programs, and routine disease and injury treatment.

Prerequisite: Sufficient diary experience as determined by the instructor

1-2 credits (1.5 lecture hours per week, 1.5 laboratory hours per week) Offered during a winter term from November 1 to April 15.

DANS 100 - DAIRY NUTRITION

Functions and properties of nutrients, comparative digestive anatomy of non-ruminants and ruminants, the effects of proper nutrition on health and reproduction. Labs will deal with the composition and nutritive value of feeds and ration balancing for different classes of livestock. Emphasis on dairy cattle. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

DANS 110 - DAIRY BREEDING

Animal breeding including animal reproduction and basic genetics. Male and female reproductive anatomy and physiology, hormonal control of the reproductive system, the estrous cycle, fertilization, reproductive failures, diseases and management practices associated with reproduction and artificial insemination. Mendelian genetics utilizing simple dominance, sex influenced inheritance and systems of mating.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

DANS 115 - DAIRY ARTIFICIAL INSEMINATION

Provides students with skills associated with the modern concept of artificial insemination. Topics include history, economic importance, equipment, techniques, estrous cycle of the cow, timing of insemination, and record keeping. 1 credit (1 lecture hour), spring semester

DANS 120 - ANATOMY AND PHYSIOLOGY OF THE DAIRY COW

A systematic introduction to the anatomy and physiology of the dairy animal, emphasizing structure and function. The practical aspects that relate to type, production, health, management and general knowledge are stressed. The laboratory follows the lecture course with a more in-depth application of lecture material in regards to functional anatomy. Lab includes dissection of fresh tissues.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

DANS 140 - DAIRY CATTLE JUDGING

Judging, selecting and evaluating dairy cattle according to breed type qualifications to develop a well-balanced breeding program for milk production and type.

1 credit (2 laboratory hours), spring semester

DANS 150 - DAIRY FARM PRACTICUM

Hands-on practical experience in a commercial dairy operation at the college farm.

1 credit, fall and spring semester

DANS 151 - DAIRY TECHNIQUES

This course will focus on the refinement and development of Dairy Management skills involving all aspects of the dairy operation. Students will be responsible to attend to various needs of the dairy animals to include birth, calf raising, feeding, heat detection, animal comfort, data collection and entry. Increased emphasis will be placed on facility and employee management placing students in roles of supervisors in charge of action lists and student work schedules.

1 credit (5 laboratory hours), fall and spring semester

DANS 160 - INTRODUCTION TO DAIRY SCIENCE

An introductory course to the dairy industry with a focus on its evolution and the scope of New York's, United States' and the world's industry. It will include discussion of farm types, production techniques, breeds of cattle, cattle behavior and selection, economics and trends. Dairy products will be studied, as well as consumer trends, milk quality and processing, a section on farm organization, cooperative careers, farm management structure and the future of the industry will be included. The lab will supplement the lecture and will include animal behavior, marketing, performing milk quality tests, and field trips.

3 credits, (2 lecture hours, 2 laboratory hours), fall semester

DANS 200 - NUTRITIONAL MANAGEMENT OF DAIRY CATTLE

Complete nutritional program assessment emphasizing analysis of crop production, forage analysis, ration balancing, pasture management, feeding strategies and feeding systems for optimum production and profit on a dairy farm. Computer applications, on-farm visits, and introduction to advanced technology will be included.

Prerequisite: DANS 100

2credits (1 lecture hour, 3 laboratory hours), spring semester

DANS 210 - DAIRY HEALTH

Physiology, anatomy and health of the dairy cow. Emphasis on hygiene, disease prevention, herd health programs, and routine disease and injury treatment.

Prerequisite or Co-requisite: DANS 150 or 151

3 credits (3 lecture hours), fall semester

DANS 220 - DAIRY HERD MANAGEMENT

The focus is on the dairy industry as a business enterprise, its history, future, productivity trends, milk production and management strategies to be competitive and profitable. Discussion on the application of scientific principles associated with progressive dairy cattle management including breeding systems, feeding systems, herd health practices, dairy herd replacements and heifer programs. Lab will include computer applications on the farm, de-horning, hoof trimming, herd health monitoring, dairy records interpretation and analysis, and assessing housing and cow comfort.

Prerequisite or Co-requisite: DANS 150 or 151

3 credits (2 lecture hours, 2 laboratory hours), fall semester

DANS 225 - DAIRY PRODUCTION AND MANAGEMENT

This course is designed to study bovine mammary system, anatomy and physiology, milk secretion and ejection, milking machines, mastitis and prevention to attain high efficiency milk production. Herd record evaluation and use of Dairy management software will be used for production analysis. Students will work in teams and become assistant herd managers. The course will also include topics on housing systems and cost effective housing. Guest speakers, professional conferences and filed trips will be part of the course.

Prerequisite or Co-requisite: DANS 150, DANS 151

3 credits (2 lecture hours, 2 laboratory hours), spring semester

DANS 235 - DAIRY PRODUCTION SEMINAR

A course in seminar format where students, with the help of faculty and guest speakers, complete a study of dairy production literature and applications on topics in the dairy industry. The course is intended for students to gain technical and production knowledge of contemporary topics in the dairy industry by reinforcing course work with real-life applications.

Prerequisites: DANS 100, DANS 115, DANS 210, DANS 220

1 credit (1 lecture hour), spring semester

DANS 240 – DAIRY FARM DATA MANAGEMENT

Data management on a dairy farm is critical for the success of the operation. This course will familiarize students with the dairy management software Dairy Comp 305, the software used on the majority of dairy operations in the U.S. Students will learn how to enter data, generate lists and reports, and monitor performance measure on dairy operations using this software. Students will also be able to extract files from Dairy Comp 305 into Microsoft Excel and generate spreadsheets, charts, and graphs with the data. In addition, students will examine farm performance factors and compare them to benchmarks within the dairy industry.

1 credit (1 lecture hour), spring semester

DANS 255 - DAIRY MANAGEMENT FELLOWSHIP

The program is for students with a serious interested in farm management. Objectives are to gain a better under-standing of the integration and application of dairy farm management with respect to principles and programs with respect to progressive dairying and related industries. Topics include the trends, challenges, and positioning of dairy managers in businesses for competitiveness and profitability. Topics will integrate technical and management aspects of a farm business including establishing personal and business goals, business and planning development, business capital investment analysis, cash flow planning, and feeding efficiencies.

Prerequisites: At least two of the following: DANS 100, DANS 115, DANS 210, DANS 220, AGBS 240

2 credit hours (2 lecture hours), spring semester

DANS 260 - INTRODUCTION TO THE STUDENT HEIFER APPLIED RESEARCH AND RAISING PROGRAM (SHARRP)

The program is designated for students who have a sincere interest in dairy replacement management and applied research and demonstration. Objectives are to gain further understanding of the integration and application of technical principles in a management setting involving the dairy replacement program at SUNY Morrisville.

Prerequisites: DANS 100, DANS 115, DANS 210; DANS 220, and AGBS 240

2 credits (limited to seniors), spring or fall semester

DANS 300 - INTERNSHIP IN DAIRY HUSBANDRY

This internship involves students working in an approved job in the dairy industry. A journal, written report, employer and faculty evaluation are required upon completion of the internship.

May be taken 2 times for credit if each is a different learning experience. Instructor permission required for each internship.

Prerequisites: DANS 150 or 151

4 credits (12 weeks, 480 hours minimum), fall and/or spring semester

DANS 301 - DAIRY MANAGEMENT EXPERIENCE

The Cornell Dairy Management Experience (CDME) consists of courses and the modules that are required for the Bachelor of Technology in Diary Management. Students, in the spring semester of their junior year, will spend one semester in residency at Cornell University taking courses through the Department of Animal Science. The syllabus consists of courses and modules that place emphasis on practical technical and management applications in dairy herd management, herd health, dairy nutrition, and farm finance.

Prerequisites: DANS 100, DANS 110, DANS 120, DANS 140, DANS 151, DANS

160, DANS 210, DANS 220, DANS 225, DANS 250, AGBS 100, AGBS 200,

AGBS 240

16 credits (limited to juniors in the BT Dairy Management), spring semester

DANS 305 - DAIRY HEIFER REPLACEMENT AND MANAGEMENT

This course is designed for students who have a sincere interest in dairy replacement management and the production practices associated with economical rearing of heifer replacements. Those considering career positions as calf and heifer managers should strongly consider taking this course. The objectives are to gain further understanding of the integration and application of management and technical principles associated with the heifer enterprise from the time the calf is born to the first calving. This includes the economics, feeding, health, facilities and management of the heifer enterprise in today's industry.

Prerequisites: DANS 100, DANS 115, DANS 210, DANS 220, AGBS 240

3 credits (2 lecture hours, 2 laboratory hours), spring semester

DANS 340 - ADVANCED DAIRY REPRODUCTION

This course is designed to study the dairy cattle reproductive system and provide students with expertise in managing herd reproductive programs effectively. Students will study in depth the anatomy and physiology of the male and female reproductive tracts, understand hormonal controls of the estrous cycle and be able to manipulate the estrous cycle with approved hormone therapies. Students will be responsible for herd heat detection and some artificial inseminations. Students will work with reproductive records, herd managers and artificial insemination technicians to manage the dairy herd's reproductive program.

Prerequisites: DANS 110, DANS 115, or permission of instructor

3 credits (2 lecture hours, 3 laboratory hours), alternate years, odd years

DANS 450 - ADVANCED DAIRY HERD MANAGEMENT

Students will gain experience in managing a dairy herd with major emphasis placed in the areas of milking management, dairy nutrition, herd health and labor relations. Students will form a direct working relationship with dairy/ farm managers, farm staff and industry professionals to effectively manage the dairy facilities at Morrisville State College. Students will be actively involved in gathering, organizing and analyzing data and records on the college farm. Students will use this information to generate weekly reports and will make effective weekly reports and recommendations for improvements in different areas on the dairy operation. Students will have additional opportunities to attend professional meetings in preparation for a career in the dairy industry.

Prerequisite: A "C" or better in DANS 100, DANS 110, DANS 115, DANS 120, DANS 150, DANS 151, DANS 210, DANS 220, DANS 225 Or permission of

Instructor

4 credits (1 lecture hour, 9 laboratory hours), fall semester

DANS 451 - ADVANCED DAIRY HERD MANAGEMENT II

This course is a continuation of DANS 450, Advanced Dairy Herd Management

I. Students will gain a practical, hands-on experience in managing a dairy herd with a more detailed major emphasis in the areas of milking management, dairy nutrition, herd health and labor relations. Students will work directly with the dairy herd manager at Morrisville State College to gather, organize and analyze data and records on the college farm. Students will also be actively involved in working independently with industry personnel and representatives to gain additional hands-on experience and knowledge of relevant topics in the dairy industry. Students will have opportunities to attend professional meetings in the dairy industry that prepare them for a professional career in the dairy industry. Prerequisites: DANS 450 or permission of instructor

4 credits (1 lecture hour, 9 laboratory hours), spring semester

DIESEL TECHNOLOGY

DTEC 105 - DIESEL POWERTRAINS I

A course covering the operation, diagnosis, and repair of power transmission components on Heavy Equipment and Over-The-Road Tractors. Topics addressed will include: Clutches, Standard Transmissions, Torque Converters, Automatic Transmissions, and Drive shafts.

4 credits (3 lecture hours, 2 laboratory hours), spring semester

DTEC 110 - DIESEL POWERTRAINS II

A course covering the operation, diagnosis, and repair of chassis components on Heavy Equipment and Over-The-Road Tractors. Topics addressed will include: Chassis systems, alignment, PTOs, single and tandem rear axles, springs, shocks and other suspension components, tires, wheels, and bearings, and braking systems including ABS and brake chamber servicing.

4 credits (3 lecture hours, 2 laboratory hours), spring semester

DTEC 125 - DIESEL ELECTRICAL SYSTEMS

An introduction to the fundamentals of electricity and their application in diesel engines and equipment. Basic theory of AC and DC systems used for charging, starting, lighting, and accessory circuits is covered. Lectures emphasize understanding of common circuit configurations and sample wiring schematics. Labs emphasize testing of components, troubleshooting circuits, and common repair techniques.

4 credits (3 lecture hours, 2 laboratory hours) fall semester

DTEC 150 - DIESEL SYSTEMS

Theories and principles of diesel operation and construction. Engine removal, inspection, disassembly, part analysis, and rebuilding. Engine run-in, dyno testing, and principles of troubleshooting will be discussed.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

DTEC 151 - SEMINAR IN CATERPILLAR POWER SYSTEMS

Theories and principles of caterpillar diesel engines, operation and construction, engine removal, inspection dis-assembly and rebuild are covered in this course. Caterpillar-specific software and reference material will be used.

Co-requisites: DTEC 150 or permission of the instructor.

2 credits (1 lecture hour, 2 laboratory hours), fall semester

DTEC 250 - MECHANICAL INJECTION SYSTEMS

Principles of injection systems, design, and construction of different systems. Inspection, tear down, and service of various components. Use of special testing and calibrating equipment. Special emphasis on diesel equipment used on farm tractors and power equipment.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

DTEC 225 - DIESEL ELECTRONICS

A continuation of DTEC 125. Expanding on basic AC and DC theory, to include multiplexing, active and passive sensors and digital electronics, this course addresses more complex wiring schematics, sensor troubleshooting and wiring harness repair. Students will use diagnostic

equipment, lap top computers and current manufacturers' software and communication adapters to analyze and repair digital electronic systems fund on construction, on highway, agricultural and electric power generation systems.

Prerequisite: DTEC 125

Pre-or Co requisite: MAGN 101, or by permission of instructor

4 credits (3 lecture hours, 2 laboratory hours) spring semester

DTEC 290 - DIESEL EQUIPMENT TECHNOLOGY INTERNSHIP 1

This course is designed for Diesel Equipment Technology majors to complete a limited time internship as part of their program. The student must select a diesel industry employer to work for during a college break most likely during the winter break. Students will be introduced to on-the-job skills as well as interpersonal skills necessary to maintain a job.

Prerequisites: DTEC 150, AGEN 100, permission of instructor, overall GPA of 2.0.

1 credit, spring semester (internship to take place during winter break)

DTEC 295 - DIESEL EQUIPMENT TECHNOLOGY INTERNSHIP 3

This course is designed for Diesel Equipment Technology majors to complete a limited time internship as part of their program. The student must select a diesel industry employer to work for during a college break most likely during the winter break. Students will be introduced to on-the-job skills as well as interpersonal skills necessary to maintain a job. Concentration will be on advanced skills and management systems.

Prerequisites: Final semester status in diesel program, permission of instructor, overall GPA of 2.0.

1 credit, spring semester (internship to take place during winter break)

DTEC 300 - DIESEL EQUIPMENT TECHNOLOGY INTERNSHIP 2

This course is designed for Diesel Equipment Technology majors to complete a summer internship as part of their program. The student must select a diesel industry employer to work for during the summer (or other extended break from college) between their first and

second year of study. Students will learn on-the- job skills as well as interpersonal skills necessary to maintain a job.

Prerequisites: DTEC 150, AGEN 100, DTEC 125, DTEC 105, permission of instructor, overall GPA of 2.0.

4 credits, fall semester

DTEC 325 – ELECTRICAL POWER GENERATION

Students will develop the knowledge and skills necessary to install, troubleshoot and service on-site power generation systems up to 50kW. This course emphasizes various generator types driven by both typical and atypical methods. Instruction is provided in the areas of diesel and gaseous fueled engines, control systems and governors. Advanced instruction is provided in electrical components necessary in the generation, storage, conversion, switching, and transmission of electric power. Students develop the practical skills needed to work with on-site electrical power generation equipment and related systems. Prerequisites: DTEC 125 or ELEC 190 & DTEC 150 or AGEN 210 or by permission of instructor

Co-requisites: MAGN 101

3 credits (2 hours lecture, 2 hour lab), fall semester

DTEC 350 - ADVANCED DIESEL FUEL SYSTEMS

A continuum of DTEC 250 involving more advanced concepts of diesel engines, injection systems, two and four cycle engines, use of advanced testing and calibration equipment. Electronic control of diesel fuel injection systems, operating principles and computer diagnostics will be addressed.

Prerequisite: DTEC 250

3 credits (2 lecture hours, 2 laboratory hours), spring semester COMPUTER-AIDED DESIGN TECHNOLOGY

DRFT 151 - ENGINEERING DRAWING

Introduction to the graphic language, conventions, and tools of sketching and technical drawing. Topics include lettering, geometric constructions, multiview projection, dimensioning, sectional and auxiliary views, and geometric tolerancing.

Co-requisite: MAGN 101

2 credits (1 lecture hour, 2 laboratory hours), fall semester

DRFT 252 - GEOMETRIC DIMENSIONING AND TOLERANCING

This course covers functional dimensioning, tolerancing and design principles and applications based on ASME Y14.5M - the international engineering language used to communicate the size, form, orientation, and location of part features. Topics include fundamental rules, symbology, tolerance expression and interpretation, datums, fit systems, inspection techniques and design for manufacture.

Prerequisite: CAD 186, MATH 102

2 credits (4 laboratory hours), fall semester

EARLY CHILDHOOD

ECHD 101 – INTRODUCTION TO EARLY CHILDHOOD

This course is an introduction to the essentials of quality early childhood programs, current issues and career opportunities in early childhood education. It provides a comprehensive overview of learning theories, family involvement and contemporary issues in the field including diversity, classroom inclusion and integration of curriculum. Students will observe early childhood programs and/or classrooms.

Prerequisites or Co-requisite: None

3 credits (3 lecture hours), fall semester

ECHD 102 - SOCIALDEVELOPMENTANDPOSITIVEGUIDANCE

This course examines the social development of young children from birth to age eight from a positive child guidance perspective. Theoretical foundations related to child development will be explored in conjunction with the implementation of various models to effectively support young children in a global community. Topics will include: stages of social/emotional development of children from 0-8 years old, defining and distinguishing problem behaviors, adopting appropriate guidance techniques for developing self-control and accountability in young children and structuring the classroom environment and curriculum to teach pro-

social skills. Understanding and working with children with special needs in an inclusive setting, identifying and promoting culturally sensitive guidance, working with families and communities as partners and resources will be integrated throughout the course.

Prerequisite: ECHD 101

3 credits (3 lecture hours), spring semester

ECHD 103 - TECHNIQUES OF OBSERVATION AND ASSESSMENT- FIELD I

This course introduces students to observation and assessment techniques that are needed to understand and interpret young children's growth and development in order to meet the individual needs of children in a diverse population. Students will examine formal and informal assessments of physical, cognitive, language and social/emotional development. Current methods, confidentiality and professionalism will be stressed. Students will have the opportunity to practice the techniques and assessments through the semester in a field placement setting.

Prerequisite: ECHD 101

Prerequisite or Co-requisite: ECHD 102, PSYC 241 or Permission of Instructor

3 credits (2 lecture hours/2 lab hours), spring semester

ECHD 201 - FAMILY AND CHILD HEALTH, SAFETY, AND NUTRITION

This course will examine the health, safety and nutritional needs of children birth-8 years. The unique needs of early childcare settings will be addressed and include the following topics: personal hygiene, safety practices, nutritious meals, chronic conditions and health policies. In addition, students will explore the variety of environmental, behavioral and constitutional factors which influence health within the family, the childcare setting and the community. Investigation of current issues and community agencies will be included

Prerequisites: ECHD 101

3 credits (3 lecture hours), fall semester

ECHD 202 - LANGUAGE, LITERACY AND LITERATURE IN EARLY CHILDHOOD

This course examines the development of language and literacy in young children from birth through the primary years. Theoretical foundations and various models that support young children's early literacy will be explored. Other topics included are: working with families to support literacy development, assessing early literacy development, integrating literacy throughout the curriculum, and selecting quality literature that addresses cultural, racial, linguistic, religious, gender, age and family diversity. Students will be given the opportunity to explore all genres, and a student-created children's book will be a culminating project. A two hour community project involving reading to children is required.

Prerequisites: ECHD 103 or Permission of Instructor

3 credits (3 lecture hrs.), fall semester

ECHD 203 - INFANTS AND TODDLERS

This course focuses on the development of high quality programs for infants and toddlers in group care, providing for their physical, social/emotional and cognitive needs. Understanding the significance of providing sensory rich and stimulating environments, experiences and relationships with infants and toddlers will be the foundation for developing programs. Developmentally and culturally diverse approaches, techniques and materials will be emphasized as well as setting up positive and nurturing learning and growing environments. Students will learn the importance of the caregiver's role, building relationships with parents and the significance of early intervention. The role of a professional and professionalism will be stressed. There will be a minimum of one infant and one toddler observation experiences in child care settings.

Prerequisites: ECHD 103, PSYC 241 or Permission of Instructor

3 credits (3 lecture hours), fall semester

ECHD 204 – CHILDREN WITH SPECIAL NEEDS

This course is intended to provide students with knowledge of the nature and requirements of children and families with special needs in the areas of health, sensory, physical, developmental, learning and behavior disorders as well as traumatic brain injuries and giftedness. The significance of early identification, assessment and intervention will be emphasized. Students will learn about Federal and State laws and regulations including the Individuals with Disabilities Education Act and the placement of students in special education settings and mainstream classroom inclusion. The emphasis will be on ways to adapt curriculum and the environment to meet the needs of a diverse population of children within

the context of an inclusive classroom. Students will have the opportunity to observe children in different settings and participate in the development of developmentally appropriate anti-bias activities for children.

Prerequisites: ECHD 201, ECHD 202, ECHD 203 or Permission of Instructor

3 credits (3 lecture hours), spring semester

ECHD 205 - CREATIVE ACTIVITIES IN THE ARTS

This course addresses the creative arts process and curriculum integration of art, drama, literature, music and movement for students preparing to work with young children. It is a participation rich, hands-on course giving all members of the class many varied experiences in the arts both as teachers and as students. Students will learn the value of the arts for growth and development of children as well as ways to integrate the arts into planned programs. Through class discussions, activities, readings and research, students will create specific arts activities that address the needs of a diverse population of children and provide rich multicultural experiences.

Pre-requisites: ECHD 103 or Permission of Instructor

3 credits (3 lecture hours), spring semester

ECHD 206 – CURRICULUM METHODS, MATERIALS, AND MANAGEMENT

Thiscoursefocusesoncurriculumdevelopmentforpreschoolandprimaryschool children (through second grade). Students will learn to plan developmentally appropriate learning experiences, design positive learning environments and incorporate play for young children's cognitive, emotional, social, linguistic and physical growth and development. Students will develop materials and activities that address all content areas of early childhood while integrating cultural awareness, diversity and inclusion. Linking the family and community with the early childhood program will be emphasized. A.A.S Degree students in Early Childhood will incorporate some of the activities and materials into the Practicum-Field Experiences Course. This course is to be taken concurrently with ECHD 212 (Practicum-Field Experience II).

Prerequisites or Co-requisites: ECHD 204, ECHD 205, ECHD 212 or Permission of Instructor

3 credits (3 lecture hours), spring semester

ECHD 212 - PRACTICUM IN EARLY CHILDHOOD- FIELD EXPERIENCE II

This course provides each student with direct experience working in a high quality early childhood setting. The experience will connect students' educational theory with actual classroom experience. The student will work with an experienced early childhood professional as his/her cooperating teacher for a minimum of 90 hours during the semester. In addition, students will attend weekly hour seminars. This is the culmination of college work for students in the A.A.S. Degree Program for Early Childhood. Successful completion of this course and the personal portfolio are requirements for this Degree.

Prerequisites or Co-requisites: ECHD 206; Restricted to students enrolled in the final semester of the program; 2.0 GPA, satisfactory criminal background check, and current CPR certification required.

4 credits (1 lecture/3 lab); spring semester

ECONOMICS

ECON 100 - INTRODUCTION TO MACROECONOMICS

Basic macroeconomics related to the development of the American economics system. Factors which determine prices in a market economy, the use of budgets, efficiency in business and government, the role of money and monetary institutions and monetary policy in our economy, the measurement of economic activity, the principles of taxation, business cycles, and the determination of income and employment, economic security and economic stability, and economic growth and ecology.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

ECON 140 - INTRODUCTION TO MICROECONOMICS

Basic micro-economics related to the development of today's American economic system. Principles of production, operation of the price system, the competitive market model, oligopoly, monopoly and the role of government, allocation of economic resources, income distribution, role of the U.S. in the international economy.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

ECON 300 – MONEY, BANKING AND FINANCIAL MARKETS

This course is a study of essentials of the domestic monetary system, banking structure, and financial markets. It focuses on monetary practices, theory, and policy. Included in the course are an analysis of the nature, functions, and theory of money; an overview of the commercial banking system and the structure of the Federal Reserve System; and an examination of monetary policy as related to fiscal policy, economic activity, and international financial activities.

Prerequisite: ECON 100 or permission from the instructor.

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

ECON 370 - INTERNATIONAL ECONOMICS

This interdisciplinary global course interrelates various elements of economics, government and history into the traditional economic analysis. Topics will be related to individuals, families and organizations. Current debates, problems and issues are examined along with an analysis of production, money, finance and trade.

Prerequisite: ECON 100, Junior-level status (or permission of instructor)

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

EDUCATION

EDU 101- INTRODUCTION TO TEACHING

This course introduces students to the requirements for becoming a certified teacher, including academic coursework, degrees, certification areas and requirements, NYS Teacher Certification Exams, fieldwork requirements and current issues in education. Emphasis is on

reflective thinking needed to make an informed career choice. Written and oral reports and ten hours of guided fieldwork are required. This course is designed primarily for Liberal Arts and Sciences/Teacher Education Transfer majors.

Prerequisite: Admission to the Teacher Education Transfer Program or by permission of instructor.

1 Credit (One lecture hour), fall or spring semester

EDU 201 - FOUNDATIONS OF EDUCATION

This course provides an introduction to teaching as a career by exploring sociological, philosophical and historical aspects of education and the profession of teaching. Emphasis will be placed on the topics of the school environment, student diversity, teacher effectiveness, curriculum, and contemporary issues in education. Written and oral presentations, critical thinking, reflective reading, research and discussion are integral parts of this course.

Prerequisites: Cumulative GPA of 2.7 or better and admission to the Teacher Education Transfer Program or permission of instructor.

Co-requisite: EDU 202

3 credits (3 lecture hours), fall or spring semester

EDU 202 - GUIDED FIELD WORK IN EDUCATION

In this course, students learn introductory guided field work in an elementary or secondary school. This course provides a clinical experience to help students see the connection between educational theory and the actual classroom experience. It also helps students decide if teaching is an appropriate career choice. Field work experience includes observing, interviewing, assisting, and interacting with students, teachers, administrators, and staff. Thirty hours of field work and a reflective journal are required.

Prerequisites: Cumulative GPA of 2.7 or better. Co-requisite: EDU 201

1 credit (30 field work hours) fall or spring semester

ELECTRICAL ENGINEERING TECHNOLOGY

ELEC 190 - ELECTRICAL THEORY IB

An introductory electric circuits course for non-electrical majors. Course material covers basic DC and AC circuits utilizing resistors, inductors, capacitors, relays, and transformers. Students are taught to work competently with sinusoidal voltage expressions, sinusoidal phase displacement, complex numbers, complex impedance and circuit power factors.

Pre or Co-requisite MATH 102, or permission of the instructor.

4 credits (3 lecture hours, 2 lab hours), fall semester

ELEC 290 - DIGITAL CIRCUITS AND MICROPROCESSORS

An introduction to the digital circuits and microprocessors for non-electrical majors. Topics include basic electrical circuits using LEDs and switching transistors, use of the oscilloscope, number systems, logic gates, registers, memory devices, data transmission and programming applications.

3 credits (2 lecture hours, 1 recitation hour, 2 laboratory hours), spring semester

ELEC 291 – ELECTROMECHANICAL ENERGY DEVICES

The analysis of AC and DC power system components including rotary generators, motors, transformers and transmission lines. Single and poly-phase systems will be considered. The student will learn the theory of operation and methods of analyzing various electrical machines using algebra based phasor analysis.

Prerequisites: ELEC 190; Math 102 or permission of instructor

3 credits (3 lecture hours), spring semester

ENGINEERING SCIENCE

ENGR 100 – INTRODUCTION TO ENGINEERING

An introduction to the engineering profession followed by a survey of PC-based computer tools applicable to new Engineering Science students. These tools range from standard word processing through graphics and CAD to analysis tools such as spreadsheets and computer

math packages. These tools are applied in project context providing an introduction to the engineering design process from initial identification of need through specification and communication of final design.

Pre- or Co-requisite: MATH 103 or equivalent

3 credits (2 lecture hours, 2 laboratory hours), fall semester

ENGR 135 – COMPUTING AND NUMBERICAL TECHNIQUES

Introduction to a modern, math oriented programming language and to the computer-assisted solution of engineering problems. Introduction to more advanced programming topics including the handling and manipulation of complex numbers, the solution of large systems of equations and unknowns, and numerical searches and root finding. Structured programming methodology will be emphasized. This problem- oriented course will use a current programming language as recommended by the Engineering Science program coordinator. Prerequisite: MATH 151 or permission of instructor

Pre- or Co-requisite: MATH 152

3 credits (3 lecture hours), spring semester

ENGR 201 -STATICS

Students will gain knowledge of composition and resolution of forces and couples, equivalent systems, equilibrium of simple structures, trusses and frames, friction, properties of areas. Free body diagrams and vector algebra will be used.

Prerequisite: PHYS 154

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

ENGR 202 - DYNAMICS

Kinematics of motion, Cartesian, path and polar coordinates, rigid body motion and relative motion analysis. Kinetics of particle and rigid body motion using force-acceleration, work-energy, and impulse-momentum approaches. Vector calculus used throughout.

Prerequisite: ENGR 201, MATH 261

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

ENGR 210 - ELECTRICAL SYSTEMS

Analysis of linear one-dimensional electric circuits including DC, AC and transient solutions. Basic network principles and theorems, loop and node solutions, transfer functions, frequency response, analogs, zero-pole concepts and coupled circuits. Computer analysis.

Pre- or Co-requisite: MATH 262

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

ENGR 212 – MECHANICS OF MATERIALS

Examination of stress-strain relationships, physical properties of engineering materials. Analysis of mechanics of deformation, stress and strain for axial, torsion, and transverse loadings, combined stress, buckling of columns.

Pre- or Co-requisites: ENGR 202 and MATH 262

3 Credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

ENGINEERING TECHNOLOGY

ENGT 100 - INDUSTRIAL INTERNSHIP

A supervised internship program for students majoring in Architectural Studies and Design, Engineering Technology and related programs. Course enrollment and preparation for the internship will commence in the student's first year. Student will work a minimum of 10 weeks or 400 hours, full-time or part-time equivalent, in the field. A written and oral report of

the internship project will be presented to the engineering technology faculty and participating company representatives by the middle of March or October following the semester of enrollment.

3 credits (10 weeks in industry), fall or spring semester

ENTREPRENEURSHIP & SMALL BUSINESS MANAGEMENT

ENTR 317 – THE ENTREPRENEURIAL PROCESS

The course will focus on the issues involved in the theory, process, and practice of Entrepreneurship. It is offered as the beginning course for the BBA in Entrepreneurship/Small Business Management. Subject areas covered include (but are not limited to) the current entrepreneurial environment, the individual as an entrepreneur, entrepreneurial planning, and creating and managing the venture.

Prerequisite: Admission into the BBA Entrepreneurship and Small Business Management program

3 credits (3 lecture hours)

ENTR 320 – ACCOUNTING FOR ENTREPRENEURS

This course examines the basics of accounting and accounting relationships. The course will cover the accounting cycle, Quick Books, financial analysis, cash flow, cost analysis, and budgeting. The student will obtain the fundamentals of accounting skills needed for entrepreneurs to use accounting in their business and be able to begin making financial decisions that are important to a newly created firm.

Prerequisites: MATH 102 and Junior Standing

3 credits (3 lecture hours), fall semester

ENTR 327 – GUERILLA MARKETING TACTICS FOR SMALL BUSINESS

This course will provide the student with the marketing fundamentals necessary in the startup, development, and operation of a small business. Students will develop successful marketing strategies with limited or nonexistent budgets. Guerilla Marketing tactics, innovation, and the incorporation of social media are emphasized.

Prerequisites: ENTR 317, or BSAD 320 and BSAD 325.

3 credits (3 lecture hours, 1 laboratory hour), fall semester

ENTR 335– ENTREPRENEURIAL FINANCE

This course examines the basics of financial analysis, cash flow, credit and lending, the process of financing and financial growth of a new venture. The student will be introduced to obtaining and using various financial re-sources. The student will also learn how to create value using financing and financial structure as well as how to measure the value of a firm that might be used to purchase the operations. Topics include financial statements, forecasting, banking, venture capital, financial resources, business plan as related to financial information, and management of the financial resources of the firm.

Prerequisites: Admission into the Entrepreneurship and Small Business Management BBA program, ENTR 317, BSAD 116, BSAD 221, ENTR 320, and ECON 100 or 140

3 credits (3 lecture hours)

ENTR 338 – LEGAL ISSUES FOR THE ENTREPRENEUR

This course focuses on several areas of the law that may affect Entrepreneurial success. The course will start with a discussion of contracts basics. From there we will cover the legal issues concerning; funding and finance, location issues (zoning, leasing, purchasing), types of business organizations (proprietorships, partnerships, limited liability companies, corporations), franchising, buying a business, product liability, insurance, intellectual property (patents, copyrights, trademarks), taxes, harvesting, and how, when and where to get legal help.

Prerequisites: ENTR 317, BSAD 116, BSAD 221, ENTR 320, and ECON 100 or 140

3 credits (3 lecture hours), spring semester

ENTR 342 – INNOVATION AND NEW VENTURE CREATION

This course examines product and venture creation for the entrepreneur. The student will also learn about innovation that would lead toward the creation of ideas for future ventures or businesses. The student will learn how to identify new opportunities and screen those opportunities for success versus failure. The student will also learn how to build a model for a future business and handle rapid growth of a business. The course will also look at the feasibility of the ideas generated by the student in order for the student to identify possible future businesses.

Prerequisites: ENTR 317 or BSAD 320, BSAD 116, BSAD 221, ENTR 320 or

ACCT 102, and ECON 100 or 140

3 credits, spring semester 3 credits, spring semester

ENTR 352 – ENTREPRENEURIAL VALUE CHAIN MANAGEMENT

This course examines the management and optimization of various operations of a business. The student will learn how to handle vendors and purchasing, managing quality and project as well as logistics and inventory. The student will understand the various aspects of the supply chain in order to reduce the obstacles and maximize the efficiency and effectiveness of the operations of a new venture. The student will learn how to identify and assess risk concerning the business and learn how to manage the resources of the business so that the business is efficient and effective.

Prerequisites: ENTR 317, BSAD 116, BSAD 221, ENTR 320, and ECON 100 or 140

3 credits (3 lecture hours)

ENTR 417 – CREATING THE BUSINESS VENTURE

This course will require the student to use all of the entrepreneurial tools and business skills acquired in the Entrepreneurship and Small Business Management program by preparing two complete business plans. To that end, the course will cover the sections of a business plan in detail including: Executive Summary, Mission

Statement/Business Description, Business Environment, Marketing Plan, Operations Plan, Management Team, Financial Section (forecasts), Legal/Insurance Section, Critical Risks, Assumptions/Conclusions, and Harvest Strategy. Each Student will be required to research and complete two full and detailed business plans for their chosen ventures. Students will also be required to give a 15-minute presentation of one of their business plans. Prerequisites: ENTR 335, 342, 352, and 338

3 credits (3 lecture hours), fall semester

ENTR 474 – PREPARATION FOR FIELD STUDY

This course is designed to prepare the student for the capstone course in the Entrepreneurship and Small Business Management degree program, ENTR 475. The student, with the guidance of a faculty member, will explore their options for applying their prior coursework, both as an entrepreneur and an intrapreneur. They will develop several field experience plans to complete during the field study, their outcomes for the experience, and what skills and knowledge they anticipate deriving from the field study. The course culminates in a presentation and committee approval of the student's field study plan. Prerequisite: Junior standing in the Entrepreneurship and Small Business Management degree program or permission of instructor.

Co-requisite: ENTR 417

1 credit, fall semester

ENTR 475 – PRACTICUM IN ENTREPRENEURSHIP/BUSINESS CONSULTING

This course serves as the capstone experience in the Bachelor of Business Administration (BBA) in Entrepreneurship and Small Business Management degree program. This course requires students to undergo a practicum in business consulting or in creating their own business. The practicum will require student interns to work directly with successful entrepreneurs in high-growth, innovative companies or to engage in faculty-mentor supervised activities associated with starting their own business. ONLY students of senior status in good standing enrolled in the BBA in Entrepreneurship and Small Business Management degree program are eligible for the practicum. The students must complete at least 480 hours of activities for at least 12 weeks with their host company. Students choosing to create their own businesses must devote a commensurate number of hours toward creation, start-up, and/or management of their own company.

Prerequisite: ENTR 417 (grade of C or better) and ENTR 474 or permission of instructor.

15 credits (15 laboratory hours) spring semester

ENVIRONMENTAL SCIENCE

ENSC 100 - INTRODUCTION TO ENVIRONMENTAL SCIENCE

A dual-credit course with designated high schools to acquaint selected high school students with the basic principles of environmental science-topics such as soils, water, air, energy, wildlife, IPM, population ecology, forestry and waste management will be covered. Students will design and carry out a long-term project which will be based on a current environmental issue.

3 credits (minimum of 45 lecture class hours), spring semester

ENSC 101 - AGRICULTURAL SCIENCE

Basic introduction to general agricultural and life science principles as an aid to the understanding of plant, animal and soil functions, as well as fundamental computations as applied to agricultural production. This course is intended for non-ENSC majors.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ENSC 102 - BOTANY: FORM AND FUNCTION OF SEED PLANTS

Structure and function of higher vascular plants, with emphasis on cell structure, photosynthesis and respiration, anatomy, physiology, reproduction and Mendelian genetics.

3 credits (2 lecture hours, 2 laboratory hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ENSC 103 –BOTANY, PLANT DIVERSITY

An evolutionary survey of the plant kingdom with emphasis on structure, plant life cycles, ecological significance, and importance of non-vascular and lower vascular plants.

Prerequisite: BIOL/ENSC 102 or permission of instructor

(3 credits; 2 lecture hours and 2 laboratory hours per week), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ENSC 106 - PESTICIDE USE AND HANDLING

Basic principles of pesticide use, handling and application, including laws, safety, the environment, storage and disposal. Students will be given the opportunity to be tested by the Department of Environmental Conservation to receive certification at the end of the course.

2 credits (1 lecture hour, 2 laboratory hours), spring semester

ENSC 107 - INTEGRATED PEST MANAGEMENT

Principles of pest control emphasizing biological, cultural, and regulatory control methods in a sound ecological and economic manner. Introduction to integrated pest management tactics of monitoring, forecasting, determining thresholds and control options. The course will also survey pest management programs used in various agricultural environments.

1 credit (1 lecture hour), fall semester

ENVIRONMENTAL TECHNOLOGY

ENVT 100 - INTRODUCTION TO ENVIRONMENTAL TECHNOLOGY

A study of the basic concepts of water pollution control, air pollution control, and solid waste management. Review of regulations relating to Environmental Protection and waste minimization/pollution prevention activities are covered. This is a hybrid course: online lectures with in-person laboratory.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

ENVT 201 - FIELD OVERSIGHT

Students will be introduced to job responsibilities of field personnel, including construction, investigating and remediation. The course provides fundamentals required for field oversight personnel to enhance their observation and reporting skills in such areas as Brownfields and construction sites. Topics include field observation and notes, inspection reports, field sampling, health and safety issues, construction equipment and plan and specification review.

3 credits (short course, 45 contact hours), scheduled periodically through Morrisville State College and the SUNY Center for Brownfield Studies

ENVT 250 - INTERNSHIPINENVIRONMENTALTECHNOLOGY

Student will work at an approved job in the environmental technology industry. A comprehensive written report and employer evaluation are required at the end of the work period.

Prerequisite: Permission of instructor

Up to 4 credits, fall or spring semester

ENVT 345 - SURFACE AND GROUNDWATER MANAGEMENT

An examination of the methods and strategies available for the delineation, assessment and characterization of confined and unconfined groundwater aquifers, as well as their recharge areas. Introduction to groundwater extraction and well functions. Surface water management issues, including watershed delineation and protection. Issues in surface and groundwater contamination and remediation. Approaches to water rights and allocation. Brownfields. Federal, state and local regulatory issues.

Prerequisite: NATR 250

3 credits (3 lecture hours), spring semester

EQUINE SCIENCE & MANAGEMENT

ERID 102 - INTERMEDIATE EQUITATION - WESTERN

This course is an introduction to intermediate skills in western equitation. It provides a reinforcement of western equitation for the rider with basic skills, a review of AQHA guidelines, and a continuation of the basics of grooming, tack, bits, and safety as well as proper position and skills while riding.

Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course.

2 credits (1 lecture hour, 1- 2 hour laboratory of riding-western seat), fall semester

ERID 103 – INTERMEDIATE WESTERN EQUITATION II

A continuation of ERID 102, Intermediate Western Equitation II, emphasizing development and advancement of skills necessary to communicate effectively to the horse to prepare the student for riding intermediate maneuvers Prerequisite: ESCI 150 with a C or better, and ERID 102 with a grade of B or better or ERID 104 with a C or better, and permission of the instructor

1 credit (2 laboratory hours), spring semester

ERID 104 - ADVANCED EQUITATION - WESTERN

This course is an introduction to advanced skills in western equitation. It provides a reinforcement of western equitation for the rider with intermediate skills and includes a review of AQHA guidelines, and a continuation of grooming tack, bits, and safety as well as proper position and skills while riding.

Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course.

2 credits (1lecture hours, 1 - 2 hour laboratory of riding- western seat), fall semester

ERID 105 -ADVANCED WESTERN EQUITATION II

A continuation of ERID 104, Advanced Western Equitation II, emphasizing development and advancement of skills necessary to communicate effectively to the horse to prepare the student for riding advanced maneuvers

Prerequisite: ESCI 150 with a C or better, and ERID 102 with a grade of A or ERID 104 with a B or better, and permission of the instructor

1 credit (2 laboratory hours), spring semester

ERID 109 – INTERMEDIATE EQUITATION – HUNT SEAT

This course is an introduction to intermediate skills in hunt seat equitation. The student will continue to develop and advance the basic riding skills of the hunt seat involving the horse and rider working as a team. Particular attention is given to the development of a light set of hands and a balanced seat for the rider through a series of maneuvers and exercises. The student will continue to advance their flat work skills to prepare to jump small courses.

Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course.

2 credits (1lecture hours, 1 - 2 hour laboratory of riding- Hunt seat), fall semester

ERID 110 – ADVANCED EQUITATION – HUNT SEAT

This course is an introduction to advanced skills in hunt seat equitation. It provides a reinforcement of basic intermediate hunt seat equitation for the rider with intermediate skills and includes a review of the student's ability to walk, trot and canter the horse with light hands and a balanced seat. The student will continue to develop an improved and independent seat, feel for the horse, and will develop and advance the skills necessary to jump a course of fences.

Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course.

2 credits (1lecture hours, 1 - 2 hour laboratory of riding- Hunt seat), fall semester

ERID 111 - INTERMEDIATE HUNT SEAT EQUITATION II

This course, a continuation of ERID 102, emphasizes development and advancement of skills necessary to safely jump a two-foot course of fences.

Prerequisites: ESCI 150 with a C or better; and ERID 102 with a B or better or ERID 104 with a C or better; and permission of instructor

1 credit (2 laboratory hours), spring semester

ERID 112 - ADVANCED HUNT SEAT EQUITATION II

In this course, which is a continuation of ERID 104, development and advancement of skills necessary to safely jump a three-foot course of fences is emphasized.

Prerequisites: ESCI 150 with a C or better; and ERID 102 with an A or ERID 104 B or better

1 credit (2 laboratory hours), spring semester

ERID 200 - WESTERN RIDING

Development and advancement of basic riding skills of western horsemanship involving the horse and rider working as a team with particular attention to the development of a light set of hands and a balanced seat for the rider.

Prerequisites: ERID 103 with a B or ERID 105 with a C, ESCI 150 and ESCI 151 with a C grade or better, and permission of instructor

1 credit (2 laboratory hours), fall semester

ERID 210 - ENGLISH DRESSAGE

Development and practice of the horse and rider in the basic schooled riding techniques.

Prerequisites ESCI 150 and ESCI 151 with a C or better and either ERID 111 with a B or better or ERID 112 with a C or better and by permission of instructor

2 credits (1 lecture hour, 30 contact hours of riding), spring semester

ERID 220 - WESTERN DRESSAGE

Advanced training of the western horse and rider. This course is designed to develop and refine the student's skills and techniques in riding western horses. Emphasis on the rider's ability to develop correct movement at all gaits. Training theories and horse psychology will be explored as it relates to the enhancement of effective riding and getting the desired response from the horse.

Prerequisites: ERID 200 with a B grade or better, and by permission of instructor

2 credits (1 lecture hour, 30 contact hours of riding), spring semester

ERID 240 – INTRODUCTION TO THE TRAINING OF HUNTERS AND JUMPERS

The introduction of Hunt Seat Riding techniques to establish the foundation for the student to continue with more intensive training in advanced courses. The students will gain a broad working knowledge of the psychology of horses and different theories on the breaking and training of horses Theory and intensive work on the riders form and function; introduction and advancement of lateral and longitudinal bending techniques; introduction to training horses over cavaletti, lines, and courses. Management of the training horse's health care and maintenance techniques and barn management and equipment knowledge and care will be introduced.

Prerequisites: ESCI 150, ESCI 151, ERID 111 with a B grade or better or ERID 112 with a B grade or better and permission of instructor.

4 credits (1 lecture hour and 12 laboratory hours), fall semester

ERID 250 - BREAKING AND TRAINING

The training of young, unbroken horses. Emphasis on the techniques to break and train these horses to ride or drive. Students are also responsible for the complete care of both the horses and the training facility.

Prerequisites: ERID 103 with a B or better or ERID 105 with a B or better and permission of instructor, ESCI 150and ESCI 151with a C or better

3 credits (1 lecture hour/week, total of 60 laboratory hours), fall semester

ERID 255 - INTERMEDIATE BREAKING AND TRAINING

The training of young horses utilizing techniques learned in ERID 250 as well as advanced techniques. Management of young horses, record keeping, health care and stable management are emphasized.

Prerequisite: ERID 250 with minimum grade of 'B' or better and permission of instructor

4 credits (12 laboratory hours/week for 15 weeks), spring semester

ERID 260 - INTERMEDIATE TRAINING OF HUNTERS AND JUMPERS

An exploration of Hunt Seat riding techniques to train the young, spoiled or difficult horse on the flat and over fences. Functions and applications of cavaletti and gymnastics; the systematic progression in training from cavaletti and through jumping lines, more difficult obstacles, full courses and cross country work. Procedures for marketing the jumping horse and showing it in competitive situations. Management of the training horse's health care and maintenance techniques and barn management and equipment knowledge and care will be continued.

Prerequisite: ERID 240 with a B or better or ERID 250 with a B or better and permission of instructor

4 credits (12 laboratory hours), spring semester

ERID 300 - ADVANCED EQUINE SPECIALIZATION I

This is the first of three intense courses in a specific concentration (hunt seat, western, or draft/driving). Advanced principles and practices of breaking, training and management will be emphasized. Students will help manage the horses and facilities in the particular area of concentration.

Prerequisites: ERID 255 or 260 or 170 with a minimum grade of B and ESCI 130 with a B or better and permission of instructor

4 credits (1 lecture hour and 9 laboratory hours), fall or spring semester

ERID 330 - EQUINE INSTRUCTION METHODOLOGY

A study of effective teaching techniques relating to equine riding and driving courses with consideration of the physical and psychological factors involved. Appropriate class preparation, teaching methods and student evaluation will be covered. Opportunities for observation, assisting and teaching experience. Prerequisite: Equine major with at least 60 credit hours

1 credit (1 lecture hour, 2 laboratory hours), fall semester

ERID 350 - ADVANCED EQUINE SPECIALIZATION II

This is the second of three intense courses in a specific concentration (Hunt seat, western, draft/driving or breeding) the horse will be brought to its best possible level of management/performance. An analysis of the horses' physical and mental capabilities will be used to develop them to their fullest. Horses may be prepared for competition and exhibitions. The management of groups of competitive show horses will be taught. In some options, students will participate in the supervision of underclassmen.

Prerequisite: ERID 300 with a B or better or ESCI 320 and 340 with a B or better and permission of instructor

4 credits (1 lecture hour and 9 laboratory hours), fall or spring semester

ERID 400 - ADVANCED EQUINE SPECIALIZATION III

This is the third course in a three-course sequence designed to enhance the students' skills in hunt seat, western, or draft horse training and management. Designed to utilize the skills taught in ERID 300 and 350. This course focuses more on the student's own managerial abilities. Students may assist in teaching students at the freshman and sophomore levels.

Prerequisite: ERID 350 with a B or better and permission of instructor

4 credits (1 lecture hour, 9 laboratory hours), fall or spring semester

ESCI 110 - EQUINE ANATOMY AND PHYSIOLOGY

The study of the anatomy and physiology of horses' body systems: skeletal, muscular, respiratory, cardiovascular, neurological, endrocrinological, digestive, and reproductive systems.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ESCI 130 - EQUINE AND STABLE MANAGEMENT

Lecture subjects include general knowledge and observation of horse health, e.g., condition, dentistry, internal and external parasites, limb and hoof care, and shoeing and trimming, as well as stable management and employee success. Laboratory skills include, leg wraps, basic restraints, equipment applications, hoof trimming and shoeing, and fitting and showmanship.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

ESCI 140 - EQUINE JUDGING

Evaluating and placing conformation and performance classes of various breeds of horses with an emphasis on the stock breeds. Proper use of terminology as it applies to conformation and performance classes will be taught. Video and live classes will be used as a tool for properly evaluating horses and their performance.

2 credits (1 lecture hour, one 2-hour laboratory), spring semester

ESCI 150 - FARM PRACTICUM I-EQUINE

Hands-on practical experience in stable, farm management. Mucking, grooming, feeding, general maintenance of arena, paddocks, stable, and stable.

2 credits (3 hours per day, 7 days per week for 2 2-week sections), fall semester

ESCI 151 - FARM PRACTICUM II-EQUINE

Hands-on practical experience in stable and farm management as well as supervising work details and management of horses.

2 credits (3 hours per day, 7 days per week for 2 2-week sections), spring semester

ESCI 170 - DRAFT AND DRIVING HORSE MANAGEMENT

Lecture topics emphasize a survey of today's industry, breeds, history, and conformation, principles of harnessing and hitching, and management of draft horses. Also included are showing procedures, breeding, foaling and training. Laboratory consists of hands-on experience in the handling, harnessing, hitching, driving, care and management of draft and driving horses.

2 credits (1 lecture hour, 3 laboratory hours), spring semester

ESCI 210 - EQUINE NUTRITION

Functions and properties of nutrients, the digestive system of the horse as compared to simple stomached animals and ruminants, the effects of proper nutrition on horses of different ages and levels of exercise. Labs on the composition and nutritive value of feeds, the use of feeding standards in balancing rations and forage and

concentrate identification. Yearly feed costs under set conditions.

3 credits (2 lecture hours, one 2-hour laboratory), fall semester Prerequisite: ESCI 110 with a C- or better or permission of instructor 1 credit (2 laboratory hours), spring semester

ESCI 225 - EQUINE ARTIFICIAL INSEMINATION

The artificial insemination of horses. Topics and competencies include A-V types and preparation, stallion col-lection, semen evaluation, teasing and mare preparation, and insemination techniques.

Co-requisite/Prerequisite: ESCI 305

1 credit (2 laboratory hours), spring semester

ESCI 235 - FITTING AND MARKETING OF THE EQUINE

The fitting and marketing of various breeds of horses. Topics include records, pedigree evaluation. Actual experience in the sales preparation of horses and mechanics of sales operation through direct participation in the annual fall college standardbred auction.

1 credit (3 laboratory hours), fall semester

ESCI 300 - INTERNSHIP IN EQUINE SCIENCE

Students work in an approved job in the equine industry in this internship. Comprehensive oral and written reports are required as well as an employer and staff evaluation. The student will give an oral presentation.

Prerequisite: Completion of one semester in Equine Science and approval/ permission of staff

4 credits (12-week, 480-hour minimum), fall or spring or summer semester

ESCI 305 – EQUINE REPRODUCTION AND BREEDING MANAGEMENT

Anatomy and Physiology related to the functional performance of the male and female reproductive systems. Processes involved with the formation of the sperm and ova; estrous cycle of the horse; methods of semen collection and insemination. Breeding problems and the importance of selection and management are also emphasized. Basic Genetics applicable to the improvement of horses, color genetics and inherited abnormalities are covered.

Prerequisite: ESCI 110 with a C- or better, ESCI 130 or approval from instructor.

3 credits (2 lecture hours, 2 Laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

ESCI 310 - APPLIED EQUINE NUTRITION

Review of basic nutrition principles. Application of theoretical principles of nutrition as applied to feeding groups of horses. Ration balancing for different classes of horses combined with feeding trials to assess ration efficiency. Emphasis on feeding for growth and performance within economic parameters. Avoidance of metabolic and nutritional disorders. Discussion of nutrient metabolism and biochemistry of nutrition. Labs on ration balancing, group feeding, performance analysis relating to rations.

Prerequisites: ESCI 210 with a C or better

3 credits (2 lecture hours, 2 laboratory hours), fall semester

ESCI 312 - EQUINE HEALTH AND LAMENESS

Emphasis on etiology, diagnosis and treatment of lameness. Metabolic, bacterial, viral, fungal and parasitic diseases of the horse.

Prerequisite: ESCI 110 with a C- or better or permission of instructor 3 credits (3 lecture hours), spring semester

ESCI 313 - LABORATORY IN EQUINE HEALTH AND LAMENESS

Application of the principles learned in Equine Health and Lameness to the health care of the college's horse herd. Subjects covered will include routine vaccination and deworming, blood testing, dental care and lameness evaluation. Prerequisite/co-requisite: ESCI 312

1 credit (2 laboratory hours), spring semester

ESCI 315 - EQUINE BUSINESS MANAGEMENT

Content will emphasize equine enterprise management. Topics to include equine inventories, measurement and cost determination of enterprise inputs, employer labor responsibilities, employee evaluation, contractual and billing procedures, insurance, facility evaluation and work reports.

Prerequisite or co-requisite: ERID-ESTB 300 or ESCI 320-340; AGBS 240 Farm Management and Finance

3 credits (3 lecture hours) fall semester

ESCI 320 - EQUINE YOUNG STOCK MANAGEMENT

This course provides hands-on and management skills needed by working equine farm managers. It will include such skill areas as weaning foals, young stock management, identification, record keeping and sales preparation of yearlings. The course will also deal with pre-breeding season techniques such as, semen evaluation in stallions and photoperiod regulation in mares.

Prerequisites: ESCI 305 with a B or better, , ESCI 225 with a B or better, and ERID 250 or ERID 240 with a B or better, or permission of the instructor .

1 credit (2 laboratory hours), fall semester

ESCI 325 – EQUINE REHABILITATION I

This course will provide an introduction to modalities in the field of equine physical rehabilitation. Common equine soft tissue and orthopedic conditions and injuries will be discussed along with the role of physical rehabilitation in the treatment of these conditions. Equine anatomy, biomechanics, and physical assessment with respect to physical rehabilitation will be presented.

Therapeutic modalities will be studied in conjunctions with observation, hands- on interaction and practical sessions. Current scientific research in the field of equine rehabilitation will be discussed. Students will be involved in the day to day management of horses and maintenance of facilities. Students will be evaluated on effectiveness, knowledge of

therapies, work ethic, and communication skills. Prerequisites: ESCI 312 and ESCI 313 with a B or better and one of the following: ERID 240 (Hunt Seat), ERID 250 (Western, Draft or Breeding section), ESTB 200 (STBD) or ESTB 210 (TB) with a B or better and permission of instructor.

4 credits (1 lecture hour, 9 laboratory hours), fall and spring semester

ESCI 330 - FARRIER SCIENCE

This course is designed to teach students the science of trimming, shoeing and resetting shoes on a variety of horses, based on an understanding of the anatomy of the horse's hoof and lower leg structure. Students will learn to use a forge to make different shoes.

Prerequisite: ESCI 110, ESCI 130

2 credits (1 lecture hour, 3 laboratory hours), fall semester

ESCI 335 – EQUINE AQUATIC THERAPIES

This course will provide an introduction to the aquatic modalities used in equine rehabilitation and athletic conditioning of horses. Students will gain practical experience working with the underwater treadmill, cold salt water spa, and swimming. Current scientific research on aquatic therapies as they relate to both rehabilitation and conditioning will be discussed.

Pre-requisites: ERID 250 or ERID 240 or ESTB 210 or ESTB 200 and, ESCI 312 with a C or better or permission of instructor

2 credits (1 lecture hour, 6 laboratory hours), fall and spring semesters

ESCI 340 - EQUINE PROMOTION AND SALES

This course is designed to provide students with the opportunity to get the "hands on" skills needed to prepare a horse for private of public sale. Discussions on the economics of public sales, bookkeeping procedures, forms needed, advertising, legal responsibilities of sales companies, buyer and owner interaction and auction variations among different breeds.

Prerequisites: ESCI 305, ESCI 130, ESCI 235

3 credits (1 lecture hour, 4 laboratory hours), fall semester

ESCI 345 – ADVANCED EQUINE ANATOMY FOR EQUINE REHABILITATION

This course will provide a focused examination of equine anatomy as it relates to rehabilitation. Musculoskeletal anatomy will be presented in detail, as an understanding of the relevant anatomy is crucial for effective rehabilitation in horses. Skeletal structures will be presented within the context of equine biomechanics and muscles will be grouped by both function and region. Anatomical models and live hoarse will be utilized to provide context and hands-on study of the information presented.

Prerequisites: ESCI 312 with a C or better or permission of instructor

2 credits (4 laboratory hours), fall and spring semesters

ESCI 350 – ADVANCED EQUINE AQUATIC THERAPIES

This course will serve as a continuation of ESCI 335 Equine Aquatic Therapies. Students will gain additional practical experience working with the underwater treadmill, cold salt water spa, and swimming, including learning to start new horses in the equipment and working with more difficult cases. Students will learn how to assess improvement in athletic fitness and develop treatment protocols for both rehabilitation and athletic conditioning.

Pre-requisites: ESCI 335

2 credits (4 laboratory hours), spring semester

ESCI 370 – CONCEPTS FOR DIAGNOSIS IN EQUINE REHABILITATION

This course introduces the various diagnostic methods used to diagnose rehabilitation cases. Students will discuss lameness and neurologic evaluations as they relate to the common cases seen in equine rehabilitation. Imaging modalities and their differences will be presented to enable students to understand their role in diagnosis and evaluation throughout rehabilitation.

Prerequisites: ESCI 312 with a C or better or permission of instructor 1 credits (1 lecture hour), fall and spring semesters

ESCI 380 - EQUINE REHABILITATION THERAPIES

This course will provide and instruction to the various modalities used in equine rehabilitation. Students will gain practical experience working with the therapeutic laser, therapeutic ultrasound, MagnaWave, and GameReady. The scientific basis for using these treatments will be presented and students will gain an understanding of the physiologic effects of these treatments as well as indications and contraindications for their use.

Prerequisites: ESCI 345 with a B or better, ESCI 312 with a C or better of permission of instructor

3 credits (1 lecture hour, 6 laboratory hours), fall and spring semesters

ESCI 390 - CURRENT RESEARCH IN REHABILITATION

This discussion-based course focuses on current research papers related to the equine rehabilitation field. Research papers will be presents and discussed on laser therapy, acupuncture, underwater treadmill, cold therapy, therapeutic ultrasound, and various other rehabilitation modalities as well as major causes of lameness in horses.

Prerequisites: ESCI 335 with a C or better and permission of instructor, Co-requisite: ESCI 380

1 credits (1 lecture hour), fall and spring semesters

ESCI 400 - ADVANCED EQUINE REPRODUCTION AND STUD MANAGEMENT

This course is designed to provide an advanced level of management for breeding farm operations. It deals with the management of stallions, brood mares and foals and all related activities. A general knowledge of computers, record keeping, equine health, reproductive physiology and horse handling skills is needed prior to admittance.

Prerequisites: ESCI 340, ESCI 320, ESCI 310, ESCI 225,

4 credits (1 lecture hour, 9 laboratory hours), spring semester

ESCI 405 – PROBLEMS AND DISEASES IN EQUINE REHABILITATION

This course focuses on the major causes of lameness in houses and the process of diagnosing and treating them. Students will work through clinical cases in a discussion format to determine the cause of the lameness and develop treatment plans for each case.

Prerequisites: ESCI 370, ESCI 335, and ESCI 380 or permission of instructor 2 credits (2 lecture hours), fall and spring semester

ESCI 410 - EQUINE EXERCISE PHYSIOLOGY

This course will cover technology and methodology of conditioning horses used in sport. Emphasis will be placed on the state of fitness of the equine athlete and its effect on the bodily systems.

Prerequisites/co-requisite: ESTB 350, or ERID 350 or ESCI 325, and ESCI 312 and ESCI 110 all with a C or better

2 credits (2 lecture hours), spring semester

ESCI 415 – EQUINE REHABILITATION III

This course will apply knowledge and skills developed during ESCI 325 and ESCI 365. Students will be involved with implementing physical rehabilitation programs for horses, documenting the horses' progress as well as facility maintenance, equipment operation, budget development, ordering of supplies, billing, and client communication. Students will also assist students enrolled in ESCI 325/365. Current research papers regarding physical rehabilitation will be discussed. Students will be evaluated on skills, effectiveness, leadership, work ethic, and communication skills. Presentations by students on the uses of therapies in equine rehabilitation/training will be required.

Prerequisites: ESCI 365 with a B or better, and ESCI 410 with a C or better, and permission of instructor

4 credits (1 lecture hour, 9 laboratory hours), fall and spring semester

ESCI 420 - EQUINE INTERNSHIP

A supervised field work program in a selected equine field. Students will carry out a planned program of educational experiences, under the direct supervision of an owner, manager, supervisor, or educator. This Internship must be pre- approved by an internship coordinator. Students and employers must submit weekly reports and evaluations while on internship. The

student will be required to submit a written report and give an oral presentation. A student must complete 15 credit hours of academic study or the equivalent of supervised work (40 hours of supervised work is equal to one credit hour). A combination of academic study and work experience totaling 15 credit hours is acceptable. An international equine exchange program is acceptable and available in fulfilling this requirement. “Visiting student” status may be granted to students enrolled in other United States equine programs who wish to pursue an international exchange program.

Prerequisite: RREN 450 Internship Orientation

15 credits, (minimum 15 weeks minimum 40 hours/week)

ESCI 430- CLINICAL APPLICATION OF EQUINE REHABILITATION

This course allows students to implement all the information gained in their previous equine rehabilitation courses in a clinical setting. Students will perform daily treatments of horses in a clinical setting. Each student will be assigned care horses, which they will be responsible for assessing daily for changes related to treatment. Students will present assigned cases during rounds each week and will provide insight into progress seen and suggest changes in treatment plans. Students will become more involved in the management of the facility and learn to use veterinary records software to monitor cases, manage inventory, etc.

Pre-requisites: ESCI 370, ESCI 335 with a C or better and ESCI 380 with a C or better or permission of instructor

4 credits (1 lecture hour and 9 laboratory hours), fall and spring semester

EQUINE RACING MANAGEMENT

ESTB 100 - CARE AND TRAINING OF THE RACEHORSE I

Introductory course in horse racing, covering basic stable management, harnessing, tacking, jogging, feeding and conditioning of the race horse. Use and application of miscellaneous equipment. Breaking of the yearling and training of the 2-year old.

5 credits (10 laboratory hours combined with lecture/recitation), fall semester

ESTB 101 - CARE AND TRAINING OF THE RACEHORSE II

Continuation of ESTB 100 Principles of shoeing, training, problem horses, gaiting problems. Train and condition horses in preparation for racing.

Prerequisite: ESTB 100 or permission of instructor

5 credits (15 laboratory hours combined with lecture/recitation), spring semester

ESTB 200 – HARNESS RACING

A continuation of ESTB 100 and ESTB 101. This course provides the actual hands-on experience of racing at county fairs and amateur events. Students condition and race college owned or privately owned horses.

Prerequisites: At least a B average in ESTB 100, ESTB 101 and an USTA driver's F-Q license, permission of the instructor

5 credits (one lecture hour, five two-hour laboratories), summer semester

ESTB 210 – ADVANCED EQUINE RACING

A continuation of ESTB 101. This course focuses upon topics relative to racing horses at pari-mutuel racetracks in the United States. Students will have the opportunity to study rules of racing relative to starting, claiming, and placing of race horses. Students will also have the opportunity to study sales of weanlings, yearlings and 2-year-olds in training.

Prerequisite: ESTB 101 with a C or better or permission of instructor

4 credits (1lecture hour and 9 laboratory hours), fall semester

ESTB 220 – EQUINE RACING CAPSTONE

ESTB 220 is a capstone course designed to provide students in the equine racing management program with an opportunity to utilize and integrate concepts learned in the first three semesters of course work.

Prerequisite: ESTB 210 or permission of the instructor

4 credits (1 lecture hour and 9 laboratory hours), spring semester

ESTB 300 - ADVANCED EQUINE SPECIALIZATION I

Students will be assigned the enterprise of a two-horse stable. Management responsibilities include breaking of yearlings, shoeing, equipment and nutritional needs, owner correspondence and conditioning young standardbred or thoroughbred race horses. Students are evaluated on effectiveness and leadership, management skills, decision making skills, knowledge of specialization, work ethic, creativity and communication skills. Papers and presentations are required in theory portion. The theme for lecture topics will concentrate on horse psychology and training methodologies in the early training of the race horses.

Prerequisite: ESTB 210 and 220, with a minimum grade of B or permission of instructor

4 credits (1 lecture hour and 9 laboratory hours), fall semester

ESTB 350 - ADVANCED EQUINE SPECIALIZATION II

Students will be assigned to manage a four to five-horse race stable. Management duties expanded from ESTB 300 to include inventory, horse evaluations, billing, ordering supplies, budget development, and equipment operation. Students will train problem horses, fast-training trips. Evaluation procedures continued from ESTB 300. Theme for lecture session will be conditioning procedures, evaluating race fitness, exercise physiology and physiological profiling of the race horse.

Prerequisite: ESTB 300 with a B or better and permission of instructor

4 credits (1 lecture hour and 9 laboratory hours), fall semester

ESTB 400 - ADVANCED EQUINE SPECIALIZATION III

Students assigned management of a 10 to 12 horse race stable. Responsibilities will include the complete management, health, training, conditioning and racing of horses. Students will be evaluated on effectiveness of management and training responsibilities. The theme for the lecture portion will concentrate on effective management techniques.

Prerequisite: ESTB 350 with a B or better and permission of instructor

4 credits (1 lecture hour and 9 laboratory hours), spring semester

ENVIRONMENTAL TRAINING

ETC 101 - BASIC OPERATIONS OF WASTEWATER TREATMENT PLANTS

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. The course includes fundamental concepts of wastewater treatment, laboratory procedures in process control, operational strategies for various methods of treatment, personnel management, development of in-plant safety and equipment maintenance programs, and public relations.

4 credits (short course, 60 contact hours) scheduled 4 times yearly, TBA

ETC 102 - BASIC LABORATORY PROCEDURES FOR WASTEWATER TREATMENT FACILITIES

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. Topics covered include basic wastewater chemistry, an overview of the principles of chemistry and laboratory techniques and safety. The course is

comprised primarily of laboratory exercises used to teach and provide practice with important laboratory tests and techniques.

Prerequisite: ETC 101

1 credit (short course, 24 contact hours) scheduled 4 times yearly, TBA

ETC 200 - ACTIVATED SLUDGE WASTEWATER TREATMENT- PRINCIPLES OF OPERATION

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. The course includes an activated sludge process overview, modifications and variations, process control testing and calculations, nitrification, and process troubleshooting. Approximately half of the course is held at nearby treatment facilities.

Prerequisite: ETC 101

1 credit, (short course, 24 contact hours), scheduled 5 times yearly, TBA

ETC 210 - BASIC SUPERVISION AT WASTEWATER TREATMENT FACILITIES

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. Topics covered include training skills, safety and health programs, budgeting, supervisory management, and public relations. The course is comprised primarily of group exercises used to teach and allow practice with vital supervisory skills and techniques.

Prerequisite: ETC 101

3 credits (short course, 30 contact hours) scheduled 2 times yearly, TBA

ETC 300 - ADVANCED OPERATION OF WASTEWATER TREATMENT FACILITIES

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. Topics covered include residuals handling and beneficial reuse, effluent toxicity, comprehensive plant evaluation and troubleshooting, treatment plant design and construction, tertiary treatment and other advanced operations topics.

Prerequisites: ETC 101, ETC 102, ETC 200 and ETC 210

2 credits (short course, 30 contact hours), scheduled 2 times yearly, TBA

FOOD SERVICE ADMINISTRATION

FSAD 100 - GLOBAL AND ETHNIC FOODS

Presents food and cultural topics to Food majors and Travel and Tourism students. Lecture and laboratory sections will allow students to investigate sources of information and achieve hands-on experience with ethnic foods. Students will gain an appreciation of the importance of various foods in the tourism industry. $45.00 lab fee.

3 credits (1 lecture hour/week, 4 lab hours/week), fall semester

FSAD 101 - QUANTITY FOOD PREPARATION AND SERVICE

An introduction to basic procedures and techniques for quantity food preparation as well as institutional food service equipment (use and maintenance). Also includes sanitation and math competency.

3 credits (1 lecture hour, 3 laboratory hours, 15 hours volume food service), fall semester

FSAD 102 - CERTIFICATION OF APPLIED FOOD SERVICE

A comprehensive course in food service sanitation designed to lead to national certification as a food service handler by the Education Foundation of the National Restaurant Association.

1 credit (15 lecture hours per semester), fall semester

FSAD 153 - FUNDAMENTALS OF HOSPITALITY MANAGEMENT

Basic management theories and principles common to all types of hospitality operations. Organization and management, the management process, leadership, objectives, policies and ethics, communications and discipline. Case studies and critical review of current management literature.

3 credits (3 lecture hours), spring semester

FSAD 154 - EQUIPMENT SELECTION AND LAYOUT

Analysis of factors for selection of equipment according to type of food service, comparative evaluation of equipment, purchase specifications. Each student develops a prospectus for a given food service operation and makes a schematic layout.

3 credits, spring semester

FSAD 200 - INTERNSHIP IN CUSTOMER SERVICE

Customer service laboratory experience in conjunction with state or national hospitality operations. A field based experience providing food service administration, culinary arts, restaurant management, and travel/tourism majors with an opportunity to apply their knowledge in a customer service environment. Student experience supervised by faculty.

3 credits, (1 lecture hour, 6 lab hours) spring semester

FSAD 201 - SUMMER COOPERATIVE EMPLOYMENT

Summer work in an approved job in the food service industry, preferably in the area of specialization. Comprehensive written report required at the end of the work period. Work is evaluated by the college and employers.

2 credits, fall semester

FSAD 203 - MANAGEMENT II (PERSONNEL RELATIONS)

Procurement and placement, improvement of performance, supervision, remuneration, security, personnel management and the future. Case studies and conference leadership sessions required.

3 credits (3 lecture hours), fall semester

FSAD 205 - FOOD AND BEVERAGE MERCHANDISING AND MANAGEMENT

Students learn principles of motivating personnel, merchandising products and advertising of various types of food service units, meal management techniques

involving menu planning, recipe development, staffing, training, safety, purchasing and production. Student projects involve producing an actual menu form which integrates knowledge gained in a laboratory setting.

4 credits (1 lecture hour, 6 laboratory hours), fall semester.

FSAD 222 – CERTIFICATION IN FOOD SAFETY MANAGEMENT

A comprehensive course in food safety management, designed to lead to national certification as a food safety manager by a nationally accredited program approved by the Conference for Food Protection, Certified Professional Food Manager from Prometric. Open to off-campus students only.

Pre/co requisite: FSAD 102 or permission of the instructor.

1 credit (15 lecture hours), spring, summer, winter or fall semesters

FSAD 255 - FOOD PURCHASING AND COST CONTROL

Instruction in determining food products specifications, understanding distribution systems, supplier selection, specifications, and product knowledge. Also includes purchasing and inventory principles, as well as cost control.

Prerequisites: FSAD 101

4 credits (2 lecture hours, 2 hours recitation), fall semester

FSAD 256 - INDUSTRIAL RELATIONS

Management of people at work, the dimensions of labor management and responsibilities. Labor-management relations. Role playing in collective bargaining. Internal and external union functioning.

3 credits (3 lecture hours), spring semester

FSAD 257 - SENIOR SEMINAR

Prepares students for entry into professional management. Portfolio development videotaped interviewing, discussion of technology and service strategies with experts from the industry, analysis and discussion of current trends are topics covered.

1 credit (1 lecture hour), spring semester

FSAD 258 - RESTAURANT MANAGEMENT AND OPERATIONS

A comprehensive course in restaurant management, designed to show the importance of an actual, operational food-service unit including organization, planning, leading, directing, (supervising) and measuring products and people, with applied emphasis on food purchasing, cost control, food preparation and customer service, merchandising, menu planning, advertising, and managerial decision making.

Prerequisites: FSAD 101 or CUL 101, FSAD 102 or instructor’s permission. 6 credits (1 lecture hour and 12 laboratory hours), spring semester

FSAD 259 - INTRODUCTION TO CATERING

A basic course in catering whose purpose is to supply what is needed for the planning and executing of functions on given dates and at specific locations where food is of prime importance. The entire management of an event, including menu preparation, scheduling workers (fellow students), merchandising, purchasing of materials (food & non-food items), and cost control. A true "hands-on" and involved course—customer driven.

3 credits (1 lecture hour, 2 laboratory hours)

FSAD 292 – PROFESSIONAL FOOD SERVICE MANAGEMENT CERTIFICATION

A comprehensive course in Professional Food Service Management Certification. This course reviews all aspects of managing a foodservice operation including customer service, food safety, restaurant math, purchasing, inventory control, beverage control, human resources, food production and service management, menu design and analysis, food service accounting and financial management. Designed to lead to national certification as a Professional food service manager by a nationally accredited program approved by the Conference for Food Protection, Certified Professional Food Manager from Prometric. Open to off-campus students only.

Pre/co-requisite: FSAD 102 or permission of instructor

1 credit (15 lecture hours), fall, spring, summer, winter semesters

FSAD 293 – HAZARD ANALYSIS CRITICAL CONTROL POINTS (HACCP) MANAGEMENT

A comprehensive course focusing on HACCP, the management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product. This class is a national certification course leading to Certified HACCP manager as defined by The National Sanitation Foundation, Conference for Food Protection and Prometric.

Pre/co requisite: FSAD 102, or FSAD 222, or permission of instructor Open to off-campus students only.

2 credits, (30 lecture hours), fall, spring, summer, winter semesters

GENERAL EDUCATION

GNED 100 - FIRST YEAR EXPERIENCE

A survey of factors leading to academic success including the transition from home to college life, attitude structures, learning techniques, and skill development.

2 credits

GNED 101 - SPEED READING

Concentration on improving rate while maintaining or improving comprehension, through tachistoscopic and controlled reading. Fifteen sessions over a five-week period. Offered three times each semester.

1 credit (15 contact hours), graded S/F

GNED 102 - PRACTICAL STUDY SKILLS

Instruction and practice in study skills. The emphasis is on thinking about time management, reading texts, mnemonics, note taking, test taking, use of the library, and writing research papers.

1 credit, (15 contact hours, 5-week course), graded S/F

GNED 103 - READING COMPREHENSION

Introduces the student to the importance of reading and ways to understand the reading process. Emphasis is on the use of literal, interpretive and critical skills. 1 credit (15 contact hours, 5-week course), graded S/F

GNED 104 - BASIC RESEARCH METHODS

Designed to cultivate information savvy students and citizens, this course will help students develop lifelong skills to become confident and independent consumers and creators of information. Students will learn how to formulate their information needs, and how to locate, evaluate, and effectively use information. Other topics will include identifying and avoiding plagiarism, document styles, searching for and retrieving information in both library and open web environments, and becoming conscientious participants in information creation and dissemination in a variety of information sharing venues.

1 credit (5 weeks) fall/spring semester1 credit (15 contact hours, 150 minutes for 5 weeks, lecture, recitation, laboratory), fall semester

GNED 105 - SKILLS FOR THE ADULT RETURNING STUDENT

Designed to meet the special needs of adult returning students. Deals with those factors which contribute to a successful academic experience. Topics will include the timing and sources of information, on programs and classes, building support systems (personally, academically, non-academically, and through scheduling), expectations of faculty and students and being acknowledged as adult students.

1 credit, (15 contact hours, 5-week course), graded S/F

GNED 110 - COLLEGE AND CAREER PLANNING SKILLS

A group learning experience to assist students in maximizing their success. Through a variety of learning modes this course will address reasons for going to college, staying in college, academic and personal coping skills, curriculum and career choice, factors affecting success in college and occupational settings, techniques for self-exploration, sources of personal/educational/career information, and decision-making skills as they relate to personal planning.

1 credit (15 contact hours, 5-week course), graded S/F

GNED 111 - COLLEGE SKILLS FOR MATURE ADULTS

Instruction and practice in the reading, mathematical and study skills needed by college students. Emphasis on improving speed and comprehension in reading, mastering basic mathematical skills, and improving skills in reading textbooks and taking lecture notes. For adults who have been out of school for some time. 3 credits (3 lecture hours)

GNED 112 - COMMUNICATION SKILLS FOR LEADERSHIP DEVELOPMENT (R.A. Class)

Basic interpersonal communication experience with practical application to leadership concepts and functions. Leadership concepts, communication skills, problem solving techniques, management of time, assertiveness and confrontation techniques, conflict resolution techniques, program planning techniques and referral resources. Didactic and experiential instruction techniques, with heavy emphasis on experiential activities.

Limited to Resident Assistants.

1 credit (S/F option), 10-week class

GNED 115 - MEDICAL TERMINOLOGY

Correlation with anatomical systems. Suffixes, prefixes, roots, stems. Use of medical dictionaries, filing and preserving records.

3 credits

GNED 120 – COLLEGE SUCCESS FOR CONTINUING STUDENTS

This course open only by permission of instructor or the school dean to first- year students returning for their second semester. Working in teams and in close coordination with the instructor, students will complete an inventory of their academic strengths and weaknesses, and based on that feedback, develop a program of study for their

remaining time at Morrisville State College and plans for possible transfer. The ability to reflect realistically on the student's academic career, to find and evaluate relevant educational information and to nurture intellectual curiosity will be stressed.

Pre-requisite Permission of instructor or dean only. 3 credits. (3 lecture hours) fall or spring

GNED 203 - PEER TUTOR TRAINING I

This course is designed to train students to become peer tutors. It introduces students to the theory and practice of tutoring. Such topics as the definition of tutoring, tutor responsibilities, basic tutoring guidelines, techniques for beginning and ending a session, learning theory, handling difficult students, role modeling, goal setting and planning, communication skills, active listening and paraphrasing, referral skills, study skills, critical thinking skills, ethics, and problem solving skills will be covered. Satisfactory completion of this course meets the tutor training requirements for the College Reading and Learning Association (CRLA) Level I Peer Tutor Certification.

Pre-requisite: Completion of 12 college-level credits, grade of 'B' or better in course(s) to be tutored, and permission of instructor.

1 credit (15 week hybrid course), fall and spring semesters

GNED 204-PEER TUTOR TRAINING II

A continuation of GNED203, this course provides additional training to students who want to continue to develop their peer tutoring skills. The course will begin with a review of GNED 201 training topics and then proceed to the exploration of questioning skills, brain dominance learning, cultural awareness and inter-cultural communications/diversity, identifying and using resources, tutoring in specific skill/subject areas, and assessing or changing study behaviors. Satisfactory completion of this course meets the tutor training requirements for the College Reading and Learning Association (CRLA) Level II Peer Tutor Certification.

Pre-requisite: minimum of C in GNED 203 and permission of instructor 1 credit (15 week hybrid course), fall and spring semesters

GEOGRAPHY

GEOG 101 – AN INTRODUCTION TO WORLD REGIONAL GEOGRAPHY

This course introduces basic geographical concepts and an overview of the geography of the world. Students examine the world's major cultural regions, with emphasis on geographical aspects of contemporary economic, environmental, social and political relationships with the physical environment. Broader themes include connections among local and global ways of life in various world regions and the persistence of traditional cultures in the face of increasing socioeconomic and political interdependency.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

HISTORY

HIST 101 – UNITED STATES HISTORY TO 1800

This course is a survey of American history from its beginnings through the colonial, revolutionary and into the early national period, with emphasis on the development of our political, constitutional, economic, social and cultural institutions.

3 credits (3 lecture hours) fall and spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History.

Students may not receive credit for both SOCS 101 and HIST 101

HIST 102 – UNITED STATES HISTORY FROM 1800 TO 1900

This course is a survey of American history from the Jeffersonian Era to the Era of Good Feeling, the Reform Movement, the Old South and Slavery, the Civil war and Reconstruction and ending with the rise of the Industrializing Age, with emphasis on the development of our political, constitutional, economic, social and cultural institutions.

3 credits (3 lecture hours) fall and spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History.

Students may not receive credit for both SOCS 101 and HIST 102 Students may not receive credit for both SOCS 102 and HIST 102

HIST 103 – UNITED STATES HISTORY FROM 1900 TO THE PRESENT

This course is a survey of American History from the Progressive Era through Great Depression, the two World Wars, the Cold War, the social political and cultural changes of the 60' and 70's and into Reagan and the post Reagan Era, with emphasis on the development of our political, constitutional, economic, social and cultural in-situations.

3 credits (3 lecture hours) fall and spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History.

Students may not receive credit for both SOCS 102 and HIST 103

HIST 151 – WORLD HISTORY TO 1600

This course is an introductory survey of Ancient World History to 1600 C.E. It explores how human societies developed an increasingly complex set of socio- economic and political systems in response to physical and cultural challenges. It begins with the development of

agriculture as a key event and then focuses on the nature of early world civilizations. The course then studies the civilizations of representative cultures from all areas of the world including the Americas, Africa, East and South Asia, the Middle East, and Europe, demonstrating the way each society ad-dressed key problems through its economic, political, and religious institutions.

3 credits (3 lecture hours) fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

Students may not receive credit for both SOCS 103 and HIST 151

HIST 152 – WORLD HISTORY FROM 1500

This course is an introductory survey of Modern World History from 1500 C.E. It explores the development and collapse of the great early modern empires. It then focuses upon political and economic modernization in Western Europe and the impact of that modernization on representative non-European societies between 1800 and 1945 including those in the Americas, Africa, East and South Asia, the Middle East, and Europe. Finally, the course highlights some of the issues faced by post-WWII non-European societies seeking to modernize in the shadow of Cold War conflict.

3 credits (3 lecture hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

Students may not receive credit for both SOCS 104 and HIST 152

HIST 161 – EUROPEAN HISTORY TO 1648

This course is an introductory survey of European History to 1648. It explores the key institutions of Western culture beginning with its origins in the Mediterranean region. The course focuses on the development of Western civilization into a set of competing states and the political, economic, and intellectual/religious institutions that bound these states together into a common civilization.

3 credits (3 lecture hours) Fall Semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

Students may not receive credit for both SOCS 103 and HIST 161

HIST 162 – EUROPEAN HISTORY FROM 1500

This course is an introductory survey of European History from 1500. It explores the development of a unique modern culture in Western Europe between 1500 and 1850 and the impact of this culture upon the world in the late 19th and early 20th Centuries. The course also discusses the Russian alternative to modern Western culture and how the two societies came into conflict during the Cold War in the late 20th Century. The course ends by describing the Cold War conflict and its legacy in the 21st Century.

3 credits (3 lecture hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

Students may not receive credit for both SOCS 104 and HIST 162

HIST 171 - ENVIRONMENTAL HISTORY

A world history of human action and interaction in the natural world. Explains changing populations, techno-logical and economic developments in geographical and ecological terms. Attention given to the history of religious and philosophical ideas concerning the place of humans in nature. Also considered is the history of modern environmental ideas concerning the human impact on the environment.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

HIST 172 – LATIN AMERICAN AND CARIBBEAN HISTORY

This course surveys the broad sweep of Latin American and Caribbean history from Amerindian cultures before Columbus to the 21st century. The volatility of the multi-cultural societies of these lands, spilling over sometimes into fractious violence and brilliant creativity, will be a recurrent theme. Emphasis may vary between key

personalities, social change, culture, conflict or gender. Students will be exposed to the main themes of Latin American and Caribbean history.

3 credits (3 lecture hours) fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

HIST 181- HISTORY OF TECHNOLOGY TO 1800

This course is a general survey of the history of technology from pre-historic times up to the Industrial Revolution. The course focuses on technology as a means to solve human problems, real or perceived, and the unexpected and unintended side-effects of technology in such areas as: agriculture, energy, communications, navigation,

construction and transportation.

3 credits (3 lecture hours), Fall

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

HIST 182- HISTORY OF TECHNOLOGY FROM 1750

This course is a general survey of the history of technology from the Industrial Revolution to the present. The course focuses on technology as a means to solve human problems, real or perceived, and the unexpected and unintended side- effects of technology in such areas as: energy, communications, economics, health care, and transportation.

3 credits (3 lecture hours), Spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

HIST 220 - AFRICAN AMERICAN HISTORY

This course will focus on tracing African American history from its African origin through the experience of slavery to the present condition in the United States. Some of the objectives will be: to explore the rich African traditions and culture that were in place before slavery; to provide the analytical tools necessary to fully appreciate the Black struggle in its various dimensions; to critically assess the contributions of African Americans to American society from an economic, political and social viewpoint.

Prerequisite: HIST 101, 102, or 103

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History.

HIST 221 – HISTORY OF THE VIETNAM WAR

Analysis and survey of the history, personalities and events that lead to United States involvement in Vietnam from 1945 to the present. The course is an overview of early Vietnamese history and its impact on the twentieth century French and American wars in Indochina. It will seek to answer the questions: why was the US in Vietnam? What was accomplished? What are the lessons of Vietnam?

Prerequisite: Any 100-level HIST course, or permission of Instructor

3 credits (3 lecture hours) fall or Spring Semester This course satisfies the Liberal Arts and Sciences requirement.

HIST 225 - WOMEN IN THE UNITED STATES

This course will explore and analyze the role of women in the U.S. from 1607 to the present. It will critically assess women's experiences and contributions to our nation—politically, socially, economically, and culturally using the tools of social science and historical analysis.

Prerequisite: HIST 101, 102, 103 or SOCI 101

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History.

HIST 320- HISTORY OF NEW YORK STATE

This course includes the social, political and economic history of New York State from Colonial times through the twentieth century. Topics may vary from semester to semester but will include The Iroquois and Algonquians, the Dutch and English in Colonial New York, Slavery, the Revolutionary War, the Erie Canal, the Underground Railroad, Women's Rights,

The Shakers, The Mormons, The Abolitionist Movement, The Oneida Community, The Civil War, the Gilded Age, the World Wars and New York after World War II. Special attention is given to regional and Central New York History.

Prerequisite: One of the following courses: HIST 101, HIST 102 or HIST 103 or permission of instructor

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History.

Students may not receive credit for both SOCS 250 and HIST 320

HIST 351- THE WORLD SINCE 1914

This is an advanced topics courses focused on the history of the non-Western world from 1914 to the present. The course will examine global economic, political, and cultural trends of the period with an emphasis on their impact on the non-Western world. Topics include: imperialism, decolonization, economic development and

globalization, and cultural movements like Pan-Africanism, women rights, and religious fundamentalism.

Prerequisite: COMP 101, grade 'C" or better

3 credits (3 lecture hours

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilizations.

HIST 371 – THE WORLD WARS

This is a general topics course covering the origins, events, and legacy of the First and Second World Wars. The course examines the nature of the wars including

political and military strategy in the major theaters of each war. It discusses significant shifts in the balance of power between the great military powers of the world before, during, and after each conflict.

Prerequisite: COMP 101 with a 'C' or better

3 credits (3 lecture hours) fall/spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

HIST 372 – THE COLD WAR

This is a general topics course covering the origins, events, and legacy of the Cold War. The course discusses the Cold War as an ideological, military, and economic struggle between the United States and the Soviet Union. It also looks at the struggle from the point of view of the so-called Third World countries including countries those in Latin America and the newly independent societies of Africa and Asia.

Prerequisite: COMP 101 with a 'C' or better 3 credits (3 lecture hours) fall/spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

HIST 380 – HISTORY OF SCIENCE AND MEDICINE

This is an advanced topics course focusing on the history of science and medicine. The course surveys human understandings of the nature of the universe and of human beings, beginning with the Neolithic peoples and continuing through ancient cultures such as the Chinese and Greeks and on into the early development of modem science in Europe. It ends with a discussion of the broad developments in science and medicine occurring in the past 200 years of human history. This course can be taken for credit only once as either HIST 380 or STS 380.

Prerequisite: COMP 101 "C" or better.

3 credits (3 lecture hours) fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

HORTICULTURE

HORT 100 - INTRODUCTION TO HORTICULTURE

A dual-credit course with designated high schools to acquaint selected high school students with horticulture basics such as: plant processes, function, reproduction, and growth. Lab activities include plant propagation and greenhouse growing of various ornamental plants. Lectures will review career opportunities in a wide range of horticultural professions.

3 credits (2 lecture hours, 1 recitation hour), fall semester

HORT 101 - PLANT MATERIALS

The identification and landscape characteristics of woody plants commonly found in landscapes of Northeastern United States. Part of each weeks labs include an outdoor plant walk to view various specimens in the landscape.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

HORT 102 - FLORAL DESIGN I

Introduction to the principles, elements, and basic construction techniques of commercial floral design. Hands-on labs include: corsages, bud vases, assorted arrangements, dried flowers, wreaths, and holiday designs.

2 credits (1 lecture hour, 2 laboratory hours), fall semester

HORT 103 - LANDSCAPE PLANNING AND DESIGN I

This course is an introduction to the design process, principles and vocabulary used in landscape architecture. The course content addresses landscape planning and design specifically as it applies to residential site design. Students gain creative problem-solving skills and explore effective methods of graphic, written and oral communication in a series of design projects. The semester culminates in a final design project in which students develop a landscape design solution for an actual residential site.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

HORT 105 - LANDSCAPE PLANNING AND DESIGN II

This is a sequential course to Landscape Planning and Design I with emphasis on advanced landscape design skills and techniques. The course is organized around several studio design projects that vary in context, complexity, and scale. Students continue to apply the phases of the planning and design process and to strengthen their design knowledge, graphics, and communication skills. Fieldwork and field trips are required.

Prerequisite: HORT 103 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

HORT 106 - FLORAL DESIGN

A general overview of the sympathy flower industry. Topics will include: consultation, sales, traditions, and servicing funeral orders. Casket sprays, standing sprays, baskets, vases, and more will be featured in lab.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

HORT 108 - HERBACEOUS PLANT MATERIALS

Identification, culture, and landscape use of annuals, perennials, and tropical foliage plants. Emphasis on plants that are commercially common to the Northeast.

2 credits (1 lecture hour, 2 lab hours), spring semester

HORT 109 - LANDSCAPE MANAGEMENT

This course addresses the principles and practices of landscape installation, maintenance and management. The lectures focus on a range of topics such as the value of landscape management, the landscape industry, site analysis and preparation, soils, plant selection, water management, pest and weed management. Lab activities are organized around hands-on campus and community projects. Successful completion of this course could qualify a student to sit for the NYS Certified Nursery and Landscape Professional exam sponsored by the CNY Nursery and Landscape Association.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

HORT 110 - HORTICULTURE PRACTICES I

Horticulture Practices is an on-going series of courses designed to engage students in a wide range of horticulture practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. HORT 110 is a freshman-level course that introduces students to basic science, production procedures, and entrepreneurial skills of horticulture.

2 credits (1 lecture hour, 2 laboratory hours), fall semester.

HORT 112 - INTRODUCTION TO HORTICULTURAL SCIENCE

This course is organized to cover a broad range of topics about the principles and practices of horticultural science. These topics focus on the fundamentals of horticulture in terms of plant science, the culture of outdoor and indoor plants, and the industries within the field of horticulture. In addition to the two lectures per week, students will be involved in several hands-on horticultural practices during a weekly two-hour lab at the greenhouse.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

HORT 150 - FRUIT AND VEGETABLE PRODUCTION

This course will cover the biology of fruits and vegetables. Emphasis will be placed on introducing students to soils, nutrition, botany as it relates to fruits and vegetables, site selection, planting, fruit and vegetable quality factors, pests (entomological, mycological, bacteriological, etc...), Integrated Pest Management (IPM) strategies, horticultural production practices, marketing strategies, and career opportunities. Students will gain a greater understanding of fruit and vegetable production industry, an increased knowledge of the variety of vegetables, and knowledge of the specific cultural needs of the common vegetable species. Reasons and principles for establishing crop production systems will be explored using observation, evaluation of current production models, and hands-on application of scientific concepts.

3 credits (2 lecture hours, 2 lab hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

HORT 200 - GREENHOUSE MANAGEMENT

Lecture topics include greenhouse and nursery design, construction, structure, machinery, production methods, and operation. Laboratory exercises will include soil, media, nutrition, plant growth modification, and the identification and control of pests. Students are expected to grow a variety of commercial floriculture crops, including poinsettia. Participation in outdoor activities associated with field and container production of trees and shrubs is required.

3 credits (2 lecture hours, 2 lab hours), fall semester

HORT 201 - PLANT PROPAGATION

This course involves the evaluation, analysis, and application of the scientific theoretical and technical practices of sexual and asexual plant propagation. The concepts to be explored utilizing observation and experimentation include division and separation, layering, grafting, budding, cuttings, micropropagation, and seed propagation.

Pre-requisite: BIOL 102 or permission of instructor

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

HORT 202 - GREENHOUSE PRODUCTION

A greenhouse crop growing course. Lecture topics include crop scheduling, propagation, cultural procedures, pest/disease identification and control, and plant marketing. All major and minor ornamental crops common to commercial greenhouses will be discussed. Lab crop assignments will emphasize growing Easter lilies, pot mums, and bedding plants.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

HORT 206 - SUSTAINABLE LANDSCAPES

This course addresses the principles and practices of sustainable landscapes and the current policies & guidelines used to achieve them. Areas of focus include: soils; water & energy conservation; biodiversity; permeable pavement; native plant species; alternatives to invasive plants; and construction material selection. 3 credits (3 lecture hours), spring semester

HORT 210 - HORTICULTURE PRACTICES II

Horticulture Practices is an on-going series of courses designed to engage students in a wide range of horticulture practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. HORT 210 is a sophomore-level course which continues to introduce students to the basics while adding advanced production skills and technology. The level of student's crop and entrepreneurial responsibilities will also increase. 2 credits (1 lecture hour, 2 laboratory hours), spring semester.

HORT 240 - LANDCADD

In this course students gain a basic proficiency in computer-aided drafting and design skills. The course covers software programs commonly used by professionals in the design fields such as AutoCAD, Google SketchUp, and Adobe Design Suite. Students are expected to apply this technical knowledge as a design tool in a series of projects that range in type & scale.

Prerequisites: CAD 181 or permission of the instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

HORT 241 – PLANT PROTECTION

HORT 241 is an interdisciplinary introduction to the study of pest management. This course involves the application, evaluation, and analysis of ecological, biological, and economic principles from each of the following disciplines: entomology, nematology, plant pathology, and weed science. Reasons and principles for establishing pest management programs will be explored using observation, evaluation of evidence, and hands-on employment of data.

Prerequisite: BIOL 102 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

HORT 245 - LANDSCAPE ARCHITECTURAL DESIGN

Conducted in a studio format, this capstone course is designed as a sequence of projects in which students apply and reinforce some of the most fundamental skills required in landscape architecture. Students are challenged and expected to expand their capacity for abstract & analytical thinking as it relates to the relationship of mass and space. A main

focus is on translation of 2D compositions into 3D volumes. The projects will vary in scale and context to cover research, abstract and analytical thinking, aesthetic appreciation, drawing, design, and model making. Fieldwork and field trips may be required.

Prerequisites: HORT 103, HORT 105, or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

HORT 250 - HORTICULTURE/LANDSCAPE INTERNSHIP

The 160-hr internship provides the student with experience in an approved job in the horticulture industry. Final requirements include; a summary report oral presentation and employer and faculty evaluations.

Prerequisites: Completion of one semester and permission of instructor 4 credits (160 hours of supervised employment), fall or spring semester

HORT 310 – HORTICULTURE PRACTICES III

Horticulture Practices is an on-going group of courses that is designed to introduce, educate, and reinforce a wide range of horticultural practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. The goal of this course is to develop a broad base of horticultural skills and knowledge. Students will continue to develop mastery of basic skills while assuming managerial responsibilities of horticulture institute, horticulture students, and departmental projects. Advanced technology and skills will be added with each semester and credit hour.

Prerequisites: HORT 110, HORT 210, or permission of instructor

2 credits (2 lecture hours), fall semester

HORT 320 – HORTICULTURE INTERNSHIP ORIENTATION

Horticulture Internship Orientation prepares students for a horticulture industry internship and assists them with the process of employment and career development. The course helps students meet internship requirements such as goal definition, industry sponsor identification, job application and report writing. It formalizes internship planning and preparation to ensure that internships are conducted in a professional manner, follow guidelines, and satisfy the goals and objectives of students, faculty advisors, and industry sponsors.

Prerequisite: Junior status or permission of instructor

1 credit (1 lecture hour), fall or spring semester

HORT 400 – HORTICULTURE PRODUCTION MANAGEMENT

Horticulture Production Management provides a solid grounding for managing a wholesale nursery. Nutritional, IPM, chemical, physical, biological, and economic principles and practices will be emphasized.

Prerequisites: BIOL 102, HORT 200, HORT 201, and HORT 202 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), fall semester

HORT 403 – PLANTING DESIGN

This course addresses the theory and practices of the landscape planting design process. Topics will be covered in lectures using textbook readings, Power Point presentations, and class discussions. The lab component is designed as a sequence of both studio and outdoor projects that will involve the student in applying the knowledge gained from the lectures and readings. The projects vary in type and scale to cover client relationships, site study, aesthetic, functional, and ecological plant uses, plant selection criteria, design process and vocabulary, design principles & elements, design graphic tools & techniques, planting plan drawings and models. A basic understanding of design, drafting and ornamental horticulture is needed to complete the assignments for the class. A semester-long sketchbook assignment and a design portfolio documenting student's projects and creative process are required.

Prerequisites: HORT 101, 103, or permission of instructor

4 credits (2 lecture hours, 4 lab hours/week), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

HORT 420 – HORTICULTURE INTERNSHIP

Horticulture Internship is a 200 hour supervised, professional experience appropriate to a professional position in the horticulture field. Students will be involved in a wide range of on-the-job work experiences in their chosen career field. Final requirements include: portfolio, journal, supervisor evaluation, summary report and oral presentation.

Prerequisite: permission of instructor

5 credits (200 hours of supervised internship employment)

HORT 430 – HORTICULTURE BUSINESS DEVELOPMENT

Horticulture Business Development is the capstone course of the Horticultural Business Management BT curriculum. This course is designed to combine horticultural and business knowledge that has been presented during the previous three years. Special emphasis will be placed on the link between product development, branding, and sales. Current green industry trends will be closely examined with case studies and profiles of successful horticulture entrepreneurs.

Prerequisite: Senior status or permission of instructor

3 credits (3 lecture hours per week), spring semester

HORT 440 – HORTICULTURE BUSINESS INTERNSHIP

This required internship is a supervised, professional experience appropriate for an entry-level position in a horticultural business or related field. Prior to the start

of the internship, the student must develop and submit an internship proposal that includes contact information, job description, goals, objectives, activities, and outcomes for the internship. The student, sponsor and faculty advisor must agree to the written plan in a signed contract. The on-site experience is about 15 weeks or 600 hours in length. In addition to agency supervision, each intern is advised and monitored by a faculty advisor on a regular basis. Final course requirements include: portfolio, journal, interim reports, mid-term assessment, supervisor evaluation, summary report and oral presentation.

Prerequisites: HORT 320 Horticulture Internship Orientation; Min. 2.0 GPA; Permission of the instructor

15 credits, (600 hours of supervised internship employment), fall or spring semester

HUMANITIES

HUMN 201 – THE FILM EXPERIENCE

This is an introductory course on films with emphasis on film both as an art form and as a shaper of social values. Viewing of key full-length dramatic features, experimental and other short films with related discussions, lecture and independent investigation.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

HUMN 220 - INTRODUCTION TO ISLAM

This course examines the way of life known as Islam. Students are introduced to cultural and religious aspects of life for more than one billion Muslims and Islamic principles of faith and practice, the Quran, Muslim cultural traditions and religious laws. Students will also explore the lifestyles of women, polygamy, the representation of Muslims in the media and shared similarities of Islam with Christianity and Judaism.

Prerequisite: C grade or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

HUMN 230 - RURAL STUDIES

This interdisciplinary course will introduce students to the study of rural life in American history. Through an exploration of historical, literary, and cultural sources, students will examine the idea and reality of rural “life on the farm” in America’s past and present. Grades will be based on class discussion, formal and informal writing assignments, exams and collaborative assignments.

Prerequisite: C or better in COMP 101 and C or better in HIST 101, HIST 102, HIST 103 , POLI 101, POLI 111 or SOCI 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

HUMN 231 – NATIVE AMERICAN STUDIES

Native American history, culture, philosophy, worldview, religion, and art through its oral, written and visual literature. Students will be introduced to the oral tradition, and learn about tribal bio-regions and their cultures and traditions through their literature.

Pre-requisite: "C" or better in COMP 101

3 credits* (3 lecture hours), spring semester even years

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

HUMAN PERFORMANCE & HEALTH PROMOTION

HPHP 100 – INTRODUCTION TO WELLNESS AND FITNESS

This course presents a basic understanding of physical fitness as it relates to health and disease. Emphasis is placed on safe, effective, techniques for developing all components of physical fitness. Course assists students in critically evaluating exercise information promoted by the media. Includes discussion of the many and varied career opportunities in exercise science.

4 credits (3 lecture hours and 2 lab hours per week), fall and spring semester

HPHP 101 – FIELDWORK IN HUMAN PERFORMANCE AND HEALTH PROMOTION

This course is designed to provide the student with his/her first practical experience in the corporate, clinic and/or community setting. The primary objective of this practicum is to give the student an opportunity to closely observe the daily operations of a facility in which exercise is used. This experience is intended to assist the student in determining potential areas of interest for the senior internship.

Prerequisite: HPHP 100

1 credit (45 fieldwork hours), fall and spring semester

HPHP 200 – EXERCISE PHYSIOLOGY I

HPHP 200 examines sport and exercise (primarily cardiovascular exercise) are assessed from a strong scientific and physiologic perspective. Topics covered include the body's acquisition and use of energy to fuel daily activities and exercise. Foundational muscular and cardiovascular physiology are evaluated, with an emphasis on how these systems adapt to training and exercise. Laboratory classes apply the principles learned in class to actual physio-logical experiments.

Prerequisite or Co-requisite: MAGN 101

4 credits (3 lecture hours and 3 laboratory hours per week), fall semester

HPHP 201 – EXERCISE PHYSIOLOGY II

HPHP 201 will continue the study the body's acquisition and use of energy to fuel daily activities and exercise, but with a more in depth view than was covered in the pre-requisite HPHP200 course. Students will become familiar with the chemical reactions involved in these energetic processes. The body's nervous system, and how electronic signals are sent throughout the body in order to elicit a required response. This will serve as a foundation for a more in depth discussion of the cardiac conduction system, and how the conduction of electricity through the heart can be mapped on an ECG. Students will also investigate the respiratory system, acid-base & temperature regulation, and how these factors adjust in response to exercise. Time permitting, training for higher performance will also be investigated.

Prerequisite: HPHP 200

4 credits (3 lecture hours and 3 laboratory hours per week), spring semester

HPHP 300 – SPORT AND EXERCISE PSYCHOLOGY

This course introduces the student to the psychological factors that influence individual and group sport and exercise participation. Topics include the influence of personal psychology and the environment on athletic performance, techniques to enhance athletic and exercise

performance and adherence, and the dynamics of group processes as they relate to sports. Discussion to address psycho-social factors related to the healthy psychological growth and development of children including aggression, character development, and sportspersonship.

Prerequisite: PSYC 101, fall and spring semesters

3 credits (3 lecture hours per week)

HPHP 301 – KINESIOLOGY AND APPLIED ANATOMY

HPHP 301 examines the anatomical structures and mechanical aspects of human movement. Basic neuromuscular and biomechanical principles are introduced. Emphasis is placed on understanding the functional anatomy of the musculoskeletal and articular systems; the course will culminate in students utilizing knowledge of these systems to evaluate posture, locomotion, and a complex motion of their choice. Laboratory exercises concentrate on the role of muscle and joint action during basic movements. Students will be required to apply their knowledge of anatomy towards understanding individual joint function as well as the integrated function of several joints during complex activities such as normal human locomotion.

Prerequisites: C- or better in BIOL 150

Pre- or Co-requisite: PHYS 107

4 credits (3 lecture hours and 2 laboratory hour per week), fall semester

HPHP 304 – COMMUNITY SERVICE IN EXERCISE AND SPORT SCIENCE

This course is designed to enable the student to participate in and to lead volunteer work in the community promoting health and fitness. This experience emphasizes donating time to promote community well-being through application of a variety of skills developed in Human Performance and Health Promotion classes. The experience may include work at health or wellness fairs, at county health department functions, or in public schools.

Pre-or Co requisite: HPHP 201

Prerequisites: MAST 100 and permission of the faculty member.

1 credit (45 fieldwork hours), fall and spring semester

HPHP 305 – FITNESS ASSESSMENT AND EXERCISE PROGRAMMING

HPHP 305 develops the rationale for, and the skills required to evaluate and prescribe health-related fitness programs for individuals. Students will learn the theory underpinning cardiovascular, musculoskeletal and body composition assessment, then how this theory can be applied practically in designing appropriate exercise

prescriptions. The practical laboratory also includes a component on exercise leadership in a facility setting, designed to prepare students for the professional setting of the Wellness Center Internship (HPHP 402). The course is also intended to help prepare the student to sit for a number of national certification exams.

Prerequisite: HPHP 201

4 credits (3 lecture hours, 3 laboratory hours), spring semester

HPHP400–APPLICATIONOFSTRENGTHANDCONDITIONING PRINCIPLES

Provides students with the ability to develop and to implement sport-specific training programs, including periodization of the training cycle. Sport-specific conditioning of aerobic and anaerobic systems, including strength training, and discussion of short- and long-term benefits of specialized programs. Emphasis will be on appraisal and determination of individualized training needs and the establishment of personal performance goals. Includes instruction in the proper techniques and execution of training activities, as well as skill development in client education. Practical mastery is included.

Prerequisite: HPHP 201

3 credits (3 lecture hours), fall semester

HPHP 401 – CARDIOPULMONARY ASSESSMENT FOR EXERCISE

Integration of cardiorespiratory physiological concepts into the assessment of an individual's aerobic capacity and the application of these data in designing an effective aerobic exercise program. ACSM Guidelines will be followed.

Prerequisite: HPHP 305

3 credits (3 lecture hours), fall semester

HPHP 402 – WELLNESS CENTER INTERNSHIP

Experience in the operation of the Morrisville State College Wellness facility and in the promotion of wellness concepts on campus. Student assumes a leadership role in the wellness center performing administrative as well as practical exercise-related tasks including exercise testing, exercise programming, facility supervision, and client monitoring. Students participate in wellness promotions on campus including health fairs, dorm meetings, health center seminars, etc. Student works under direction of the center supervisor and a faculty sponsor. Pre- or Co-requisites: HPHP 401, and permission of the faculty member.

3 credits (135 fieldwork hours), fall and spring semesters

HPHP 403 – EXERCISE PHYSIOLOGY FOR SPECIAL POPULATIONS

HPHP 403 evaluates the impact of various disease processes in the cardiovascular and musculoskeletal assessment of an affected client. Diseases discussed reflect common contemporary diseases that students are likely to encounter in a professional situation, but, time permitting, may be adjusted to suit student interests. Typical topics include diabetes, chronic heart disease, COPD, HIV/ AIDS and arthritis. Because this is a 400 level class, recent research related to these topics is also reviewed, analyzed, discussed in class and assessed in in- semester and final exams.

Prerequisite: HPHP 305

3 credits (3 lecture hours), fall semester

HPHP 404 – FITNESS PROGRAM LEADERSHIP AND ADMINISTRATION

Prepares the student to manage and operate a health/fitness program. Provides instruction in the areas of decision making, problem solving, personnel issues, fiscal policies, budgetary procedures, legal foundations, and facility management. Pre- or Co-requisite: HPHP 402

3 credits (3 lecture hours), spring semester

HPHP 405 – HUMAN PERFORMANCE AND HEALTH PROMOTION CAPSTONE INTERNSHIP

Capstone experience for all Human Performance and Health Promotion majors. A practical learning experience in an exercise setting. Sites include corporate fitness centers, wellness clinics, university fitness facilities, and community- based health clubs. Students are involved

with day-to-day operations of the agency. Involves variable 270 - 540 hours of work at chosen agency.

Corequisite: HPHP 400, HPHP 401, HPHP 403 and permission of faculty member

Variable 6 Credits (270 fieldwork hours), spring semester

HUMAN SERVICES

HUMS 100 – CAREERS IN THE HELPING PROFESSIONS

This course will generate one credit hour by producing 16 hours of contact time over a 15-week semester. This course is designed to assist students wishing to pursue careers in helping professions. Focus will be on researching the breadth of positions available as well as salary range and educational requirements. Attention will also be given to specific concerns associated with professional helpers such as boundaries, interpersonal skills, and appropriate conduct in both the professional and personal settings. Special attention will be given to supporting the student in their first internship, HUM 141, during this course.

Co-requisite: HUMS 101; HUMS 141

1 credit (1 lecture hour/week), fall and spring semesters

HUMS 101 - INTRODUCTION TO HUMAN SERVICES

This course provides an introduction to the human service field and helping professions, including the theoretical systems for understanding human behavior, modalities of intervention, counseling skills, social policy, professional ethics and standards, and an historical perspective on the human service field.

3 credits (3 lecture hours), fall or spring semester

HUMS 141* - INTERNSHIPS IN HUMAN SERVICES I

A field-based internship experience providing social science majors an opportunity to combine their internship experience in a human service setting. Students will be required to combine their internship experience with written work to process their experience.

Corequisite: HUMS 100; HUMS 101 and permission of instructor

1 credit for each unit, fall or spring semester

[Offered at Norwich Campus]

HUMS 142* - INTERNSHIPS IN HUMAN SERVICES II

A field-based internship experience providing social science majors an opportunity to deepen their internship experience in a human service setting. Students will be required to combine their internship experience with reflection and written work to process their experience.

Corequisite: HUMS 143

Prerequisite: HUMS 100; HUMS 101, HUMS 141 and permission of instructor

1 credit for each unit, fall or spring semester

[Offered at Norwich Campus]

HUMS 143* - INTERNSHIPS IN HUMAN SERVICES III

A field-based internship experience providing social science majors an opportunity to combine their internship experience in a human service setting. Students will be required to combine their internship experience with written work to process their experience.

Co-requisite: HUMS 142

Prerequisite: HUMS 100; HUMS 101, HUMS 141 and permission of instructor

1 credit for each unit, fall or spring semester

[Offered at Norwich Campus]

HUMS 200 – HELPINGPROCESSESANDCRISISINTERVENTION

This course will provide students with the skills and techniques necessary for effective helping. Students will be introduced to the role of the helper as well as the process of helping. Students will gain knowledge and understanding of multicultural practices and helping skills as well as the theories associated with helping and crisis intervention.

Prerequisites: HUMS 101

3 credits (3 lecture hours/week), fall semester

HUMS 201 – COUNSELING AND CASE MANAGEMENT

This course will provide an applied foundation to interviewing and counseling techniques. Students will examine strategies pertaining to intentional interviewing and effective interventions. Focus will be given to human strength and resilience. Attention will also be given to the foundations of case management and the importance of this role as a human service provider. Cultural consideration will be integrated into both aspects of this course.

Prerequisites: HUMS 101

3 credits (3 lecture hours/week), spring semester

HUMS 202 – MANAGEMENT AND ADMINISTRATION OF HUMAN SERVICES

This course will focus on the practices and skills vital to the management and administration of human service delivery. The course will provide an overview of topics associated with human service management such as: the functions of human service management, program development and evaluation, community collaboration, organizational theory, and supervisory skills. Students will gain an understanding of technology utilized in the storing and managing of data and finances pertaining to human service administration.

Prerequisites: HUMS 101

3 credits (3 lecture hours/week), spring semester

HUMS 250 – HUMAN SERVICE PRACTICUM

This is the final required course for the Human Services AAS degree program. This course is designed to provide human services students with an opportunity to integrate and assimilate previous learning experiences with human service delivery. Practical field experience combined with lecture and self-reflection enable students to critically assess their personal,

professional, and social values as well as practice interpersonal skills in a learning environment. Course assignments and class discussion will enable students to examine influences of organizational structure, funding sources hiring and training of personnel, as well as other agency policies and procedures on the delivery of services. Students will spend 125 hours at a negotiated human services site, 16 hours in a structured classroom setting, and will complete a Capstone presentation to faculty and practicum supervisors. Successful completion of this course will require a grade of B or better since this course is intended to evaluate the readiness of graduates to participate in human service employment.

Prerequisite: Senior status

3 credits (3 lecture hours/week), spring semester

INDIVIDUAL STUDIES

ISP 101 – COLLEGE SUCCESS FOR INDIVIDUAL STUDIES STUDENTS

For Individual Studies Majors Only. This course will guide the students through the process of setting educational and career goals, in understanding how their Individual Studies major is tied to those goals, and in identifying strategies that will help promote the students' success in achieving their goals. Students who have taken GNED 110, GNED 119, or EDU 101 may not take this course.

Prerequisite: Student is enrolled in the Individual Studies Program or permission of instructor. Not a campus wide elective.

1 credit (1 lecture hour), fall or spring semester

INSURANCE

INS 201 - INSURANCE PRINCIPLES I

This course is the first of two courses that qualify prospective brokers and agents to take the New York State Insurance Brokers and Agents Examination. Topics include insurance basics, personal lines policies and coverage, and New York Insurance Law. (Taught at the Norwich Campus only)

3 credits (3 lecture hours)

INS 202 - INSURANCE PRINCIPLES II

This is the second of two courses that qualify prospective brokers and agents to take the New York State Insurance Brokers and Agents Examination. The course covers a broad spectrum of insurance concepts, coverage and law. This course completes the ninety-hour course of study required by the State of New York Insurance Department with discussions of commercial property, liability, auto, compensation and other commercial forms of insurance. (Taught at Norwich Campus only)

3 credits (3 lecture hours)

JOURNALISM

JOUR 101 - INTRODUCTION TO MASS COMMUNICATION

Survey of the mass media to present vocational opportunities, to familiarize students with leading newspapers, magazines, broadcasting, and other communication media, to explore the media's place in American history, and to examine some of the major issues confronting the press and mass media today. Introduction to communication theory.

3 credits (3 lecture hours), fall semester

JOUR 111 – NEWS WRITING & EDITING

Fundamentals of news writing, the techniques of gathering news, and the elements of writing style that make a good reporter. Elements of the news story including the lead, style and structure of news stories, copy editing, news sources, and types of news stories.

Pre or Co-requisite: COMP 101 or permission of instructor. 3 credit hours (2 lecture, 2 lab hours), fall semester.

JOUR 112 - NEWS WRITING II

In-depth study of reporting and writing news, details of government, politics, courts, education and science writing.

Prerequisite: Grade of "C" or better in JOUR 111

3 credits (2 lecture hours, 2 laboratory hours), spring semester

JOUR 114 - NEWS EDITING

Principles of editing for print, broadcast and Internet copy focusing on style, grammar, syntax. Introduction to CART (Computer-Assisted Reporting Techniques) and ethical considerations applied through the editing process.

Prerequisite: Grade of “C” or better in JOUR 112

3 credits (2 lecture hours, 2 laboratory hours), fall semester

JOUR 121 - PRINCIPLES OF PRESS PHOTOGRAPHY

An introduction to the use of photography in delivering the news. The course includes an introduction to basic camera functions, the rules of photographic composition, the use of digital manipulation software and storytelling through images.

3 credits (2 lecture hours, 2 laboratory hours) spring semester

JOUR 122 - ADVANCED PHOTO JOURNALISM

Intensive study of photography and photographic equipment with emphasis on photojournalism and techniques of the freelance photographer. $40 lab fee, $40 rental fee, $50 refundable deposit.

Prerequisite: JOUR 121

3 credits (2 lecture hours, 2 laboratory hours), spring semester, alternate years

JOUR 126 – BROADCAST WRITING AND EDITING

Broadcast Writing & Editing is designed to provide Journalism majors an introduction to the writing formats and editing styles used to deliver news content clearly and conversationally in the form of radio and Internet broadcasts (podcasts), television packages or stories, and commercial promotions used by a variety of businesses and

organizations worldwide, to gain public attention for events and happenings as well as products and services. Students will research, write and format scripts for broadcast stories on deadl9ine, including content for news, sports, in-depths, packages, mini-documentaries, as well as commercial, entertainment and promotional news. A highlighted component to this course is Resourceful Exercises, in which students will be sent breaking news assignments during a 24/7 period, have to research the topic and submit the proper broadcast formatted script on deadline.

Pre/Co-requisite: COMP 101

3 credits (3 lecture hours) Spring semester

JOUR 185 - PRODUCTION LABORATORY I

Work experience in one of the following publications or publications-related activities: college newspaper, radio station, or photography. Deadline pressures, layout and format techniques, staff composition and problems, and FCC and print ethics.

1 credit (2 laboratory hours), fall semester

JOUR 186 - PRODUCTION LABORATORY II

Continuation of JOUR 185.

1 credit (2 laboratory hours), spring semester

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII

This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation.

Prerequisite: Permission of instructor required

JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

JOUR 201 - SPORTS WRITING

This course provides an introduction to the specialized skills required for reporting and writing about sports for newspapers, magazines and the Web. Game coverage, advances, wraps, features and non-contest reporting are also covered.

Prerequisite: Minimum grade of B in JOUR 111 or permission of instructor. 3 credits, (2 lecture hours, 2 laboratory hours), spring semester

JOUR 211 - FEATURE WRITING

Investigative and interpretative reporting through extensive use of the news conference. Students will develop interviewing, research, and feature-writing skills.

Prerequisite: JOUR 112

3 credits (2 lecture hours, 2 laboratory hours), fall semester

JOUR 214 - SPECIALIZED WRITING

Writing and preparing for publication of columns, interpretative articles and feature pieces for newspapers or magazines.

Prerequisite: JOUR 112

3 credits (2 lecture hours, 2 laboratory hours), spring semester

JOUR 220 – MASS MEDIA & SOCIETY

An investigation of the effects of mass media on society and social systems. This course examines the processes of mass media and their influences on their audiences, with emphasis on the majority and minority voices and viewpoints it creates and promotes. Specific topics will include race, class and gender in mass media, gate-keeping and agenda-setting in media content, news media, entertainment media, feedback and control, audience analysis, and developing skills in critical media literacy.

Prerequisite: SOCI 101 with a C+ or better, or permission of instructor

3 credits (3 lecture hours)

JOUR 261 - THE GRAPHICS OF MASS COMMUNICATION

Advanced newspaper layout and design. Introduction to magazine layout and design. Visual aspects of advertising, such as the use of color to sell a product, plus a unit on promotional material, i.e., brochures, campaigns, including instruction on paper selection and mailing.

Prerequisite: JOUR 114

2 credits (1 lecture hour, 2 laboratory hours), fall semester

JOUR 270 - DESKTOP PUBLISHING

Provide the basic skills of Desktop Publishing to those already familiar with word processing. It is designed to facilitate control of the publishing process- editing, typesetting, design, graphic production, and page makeup from one's own personal desktop. Includes Web page design.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

JOUR272-PUBLIC RELATIONS AND PUBLICITY MANAGEMENT

This course will cover essentials for public relations practitioners, including a brief theory-based discussion of the origins of P.R. at the turn of the century and its evolution into a leading industry in today's world. Students will learn first- hand how to identify target audiences and will go through exercises in drafting, producing, and distributing a wide range of P.R. messages to those publics using mass media and emerging communications technologies. Special topics will include crisis public relations, speech writing, and conducting press conferences and other media briefings. This class is open to non-majors with permission from the instructor.

3 credits (3 lecture hours)

JOUR 280 - BROADCAST MANAGEMENT, NEWS AND PROMOTION

This class offers a “work to show” class where students learn the business of broadcasting including: management and marketing techniques, sales and promotion strategies, and non-linear video editing production. Professionals in the local and regional broadcasting markets guest lecture, as well as host students through field trip visits.

Prerequisite: Permission of instructor 3 credits, fall semester

JOUR 285 - PRODUCTION LABORATORY III

Allows seniors to earn credit for supervisory publication work. CHIMES and photography workers learn editors’ functions while WCVM staff learn management and FCC training.

1 credit (2 laboratory hours), fall semester

JOUR 286 - PRODUCTION LABORATORY IV

Continuation of JOUR 285.

1 credit (2 laboratory hours), spring semester

JOUR 290 - ADVERTISING STRATEGIES

An overview of advertising theory and practice which covers advertising’s place in society, its relation to marketing and communications, its forms of media, and its creative elements-art and copy. Students create an entire production advertising campaign for a client.

Prerequisite: Permission of instructor 3 credits (3 lecture hours)

JOUR 313 – BROADCAST SCRIPT WRITING

Broadcast Script writing will provide students with weekly news and entertainment producing seminars designed to tailor their abilities to research, write and format, and critique in-depth journalistic writings appropriate for use in any communications profession, but

specific to projects related to radio, television (including Internet video streaming), and film script writing. Lecture meetings, as well as independent research and individual consultation sessions, are an integral part of the story origination and execution process for programming related to both the news and entertainment industries.

Prerequisites: “C” or better in COMP 101 and 102, or permission of instructor

3 credits (3 lecture hours) fall or spring semester

JOUR 315 – ONLINE WRITING & PRODUCTION

Adapting written, audio, and video files for the Internet, incorporating style and format changes to accommodate online audiences. Writing assignments for news and marketing content. Examination of the elements of print and broadcast writing styles that contribute to online content. A thorough review of the differences and similarities that mark the era of media convergence in journalism.

Prerequisites: JOUR 214 with a C+ or better

3 credits (2 lecture hours, 2 laboratory hours)

JOUR 317 – WRITING NONFICTION FOR MAGAZINES.

Introduction to the specialized skills required for finding, researching and writing non-fiction stories for magazines. Students will learn how to target potential publication sites, write pitch letters, and negotiate publishing contracts. Prerequisite: “C” or better in COMP 101, submission of writing portfolio and permission of instructor.

3 credits (2 lecture hours, 2 lab hours), spring semester only

JOUR 326 - VIDEO JOURNALISM I PRODUCTION/EDITING

Videojournalism I (Production/Editing) is designed so students emulate the world of videojournalists or “news content producers” in the field. These producers determine what broadcast news is, how to best present it to a specific audience, and how to best technically gather information on deadline within a business model. Students will learn the technical parameters of digital video cameras, audio and video editing, and basic field production. Broadcast writing formats and editing protocol are integral components of this course.

Prerequisite: “C” or better in JOUR 126 Broadcast Writing & Editing.

3 credits (3 lecture hours), fall or spring semester

JOUR 327 - VIDEOJOURNALISM II CONTENT PRODUCING ACROSS MEDIA PLATFORMS

This course provides students a variety of broadcast platforms to perform video shooting, technical editing for audio and video, file conversion, and infographics production. Students will also independently research story themes, visually create, and technically convert audio and video content for use across diverse media platforms including, but not limited to, television, Internet websites, podcasts, and cell phone video. Chromakey use, multi-source video production as well as computer graphics and video editing software will play an integral role in the content conceptualization and production processes of visual storytelling. Prerequisites: "C" or better in JOUR 326 Videojournalism I (Producing/Editing)

3 credits (3 lecture hours) spring

JOUR 328 – VIDEOJOURNALISM III ETHICAL/LEGAL ISSUES FOR CONTENT PRODUCING

This course provides students with numerous case studies focusing on First Amendment issues, industry codes of conduct, the Federal Communications Commission, media access, copyright law, confidential sources, labor law, freedom of information, defamation of character, Internet legalities, and current industry topics in the news. Videojournalism III offers students detailed information to keep themselves and their content legal, while best trying to educate the audience they pledge to serve.

Prerequisite: Permission of instructor. 3 credits (3 lectures per week) fall

JOUR 345 – WEB CONTENT DESIGN

Instruction in basic Web design, with the emphasis on the development of skills related to online journalism. Students will be able to edit Web pages for clarity and appearance that enhances readability and access. Students will learn principles of Web design, getting started with Dreamweaver software, and developing a Web site. The course features step-by-step instructions and in-depth explanations of the features of Macromedia Dreamweaver and Flash. Instruction includes working with text and graphics, links, animations and tables. In addition, students will understand and create cascading style sheets and page formatting. Prerequisites: JOUR 270 and JOUR 315 with a C or better, or permission of instructor

3 credits (2 lecture hours and 2 lab hours per week), fall or spring semester.

JOUR 385 – PRODUCTION LAB IN JCOM I

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing.

Prerequisite: JOUR 286 – CHIMES Production Lab or permission of the instructor 1 credit (2 laboratory hours)

JOUR 386 - PRODUCTION LAB IN JCOM II

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing.

Prerequisite: JOUR 385 or permission of the instructor

1 credit (2 laboratory hours)

JOUR 401 – LEGAL AND ETHICAL ISSUES OF MASS COMMUNICATION

Students will research several case studies that represent various legal and ethical issues past and present, including freedom of speech, publishing by authority, alien and sedition laws, libel and slander, bias and prejudice and conflicts of interest in reporting, right to privacy, professional codes of conduct, shield laws, FCC regulation of broadcast entities, and the emerging debate over censorship if the Internet. Current related issues in the news will also be explored as available. Prerequisite: Jour 214 or permission of instructor

3 credits (3 lecture hours), fall semester

JOUR 409 – PRE-INTERNSHIP SEMINAR

Prepares students in the B.S. in Journalism & Communication for Online Media degree program for the 6-credit internship in the following semester. Integrates rules and regulations from the work place with academic and professional standards for performance, conduct, and

communication within an organization. Students will also use this course to prepare solicitations for, and secure, their internship sites for the following semester.

Prerequisite: JOUR 315 -- Online Writing & Production – With a grade of C+ or better

1 credit (One seminar hour per week)

JOUR 410 – INTERNSHIP IN JOURNALISM & COMMUNICATION FOR ONLINE MEDIA

In this course, students will work in a professional business setting—either in person or on campus through online and phone correspondence—to establish and maintain a professional Web site for that business. Eligible businesses may or may not be related to journalism. Students will utilize writing skills learned in previous courses to generate content appropriate to the client and to prepare that content for uploading on a daily or weekly basis as appropriate. Students will work collaboratively with client employees and will be expected to conduct themselves in a manner consistent with high professional standards.

Prerequisites: JOUR 409 – Pre-Internship Seminar

12 credits (A minimum of 400 hours in an internship setting plus 40 hours with the instructor, including all assignments)

JOUR 411 – CAPSTONE COURSE IN JOURNALISM & COMMUNICATION FOR ONLINE MEDIA

This course draws together all the elements of the B.S. degree in Journalism & Communication for Online Media, including technical applications, writing skills, liberal arts and elective courses and internship experience. Students will be required to meet in lecture, seminar and laboratory settings, and to discuss common and individual

experiences from their internship and other applied academic activities. Emphasis will be on the examination of specific skills sets as well as students' problem-solving skills, goal setting, self-assessment, and oral and written communication skills. Students will perform a community-service project in which they will provide Web content for a local nonprofit agency. They will also prepare a report of their activities in the form of a capstone presentation to be delivered to a campus audience at the end of the semester.

Prerequisite: JOUR 410 – Internship in Journalism & Communication for Online Media

3 credits (1 lecture hour, 1 seminar hour, 2 laboratory hours)

JOUR 426 - VIDEOJOURNALISM IV REMOTE BROADCAST PRODUCTION

This work-to-show class enables students to produce live remote broadcasts for radio, television, and the Internet – news, sports, special event meetings, plays, and more. Students will learn the real world challenges and rewards of "live content producing" - planning, site surveying, budgeting, executing, and evaluating the production process. Many of the productions will be researched and produced independently by a team of Videojournalism producers.

Prerequisite: JOUR 327 Videojournalism II (Content Producing Across Media Platforms); permission of instructor

3 credits (3 lecture hours) spring

JOUR 428 - VIDEOJOURNALISM INTERNSHIP

This 12-credit, in-field experience offers students preparation for full-time employment. Students work collaboratively in a professional work environment with an on-site mentor, who will assign duties and responsibilities similar to those of on-staff videojournalists or content producers.

Prerequisite: 'B' or better in JOUR 427 Video Portfolio

12 credits (2 credit hours) spring

JOUR 485 - PRODUCTION LAB IN JCOM III

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing.

Prerequisite: JOUR 386 or permission of the instructor

1 credit (2 laboratory hours)

JOUR 486- PRODUCTION LAB IN JCOM IV

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing.

Prerequisite: JOUR 485 or permission of instructor

1 credit (2 laboratory hours)

LITERATURE

LITR 203 - AMERICAN LITERATURE TO 1900

This course surveys the voices of North America up to and beyond the Civil War. It covers Indians, explorers, slaves and pioneers. Students are introduced to philosophical and political pondering, the birth of the short story, and the forging of the North American character.

Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 204 - AMERICAN LITERATURE 1900 TO PRESENT

Step into a time machine and witness the unfolding of Modern America, from the 1870's to the 1970's and beyond. This course surveys the writers who influenced and echoed the culture that shapes our times. Meet immigrants, flappers, beatniks and more, in poems, stories, etc.

Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 205 - ENGLISH LITERATURE TO 1800

This survey course brings to life monsters, dragons, knights, poets, angels and actors from English literature and culture of the eighth through eighteenth centuries. Watch Beowulf fight Grendel, take a journey to Canterbury with Chaucer's pilgrims, see a Shakespearean play at

the Globe Theatre, gasp as Milton's angels fall from heaven, visit exotic lands with Gulliver, and more.

Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 206 - ENGLISH LITERATURE 1800 TO PRESENT

Murderers, monsters, lovers and lunatics stalk the pages of British literature since the eighteenth century. This survey starts with the revolutionary ideas of Wordsworth, Coleridge, and other Romantics. The Victorian period that follows reveals surprising contrasts such as Tennyson's practical analysis of issues and Morris's artistic rejection of meaning. Finally, the survey shows how modern authors such as Yeats and Pinter build upon or reject the heritage of the past.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 207 - WESTERN WORLD LITERATURE

This is a Western literature course which examines literature in translation from South, Central and North America, as well as the Caribbean and from Africa and Europe. Students will research, read, discuss, and write about early and modern texts from countries within the western bioregion, such as Italy, France, Russia, Chile, Argentina, Cuba, Canada, Ghana, Nigeria, South Africa, and others. Students will be introduced to a broad survey of literature that will provide a window on the culture, history, and geography of the regions in their texts.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 208 - EASTERN WORLD LITERATURE

This is a world literature survey course that examines literature in translation from the Middle East, Asia, Australia and the Eastern Pacific Basin. Students will read, discuss, and write about early, middle period, and modern text selections from regions including Israel, Palestine, Saudi Arabia, India, Tibet, China, Japan, Korea, Vietnam, Singapore, Australia, New Zealand, and Samoa. Students will be introduced to a broad survey of literature that will provide a window on the culture, history, and geography of the regions in the texts.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities and Other World Civilization.

LITR 211 - BLACK AMERICAN WRITERS

Chronological survey of the contribution of the Black American writer from the days of slavery to the present. Slave narratives, novels, plays, short stories, and poems.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 221 - LITERATURE OF GENDER

Reading, discussion, and written analysis of literature emphasizing the significance of changing gender roles portrayed in various genres, in different cultures and in different eras.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 231 - MODERN LITERATURE

Reading, discussion, and written analysis of 20th century novels, short stories, poetry, plays, and nonfiction with a multicultural emphasis.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 232 - MAJOR AMERICAN NOVELS

Reading and discussion of novels which have had an impact in American literature, of their authors, and of the changes in American literature as evidenced through these novels. Concepts of the novel explored through criticism and explication.

Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 233 - LITERATURE AND THE ENVIRONMENT

A chronological survey of North American writers on the environment from the Colonial period to the present. Special attention is paid to H.D. Thoreau, Aldo Leopold, Rachel Carson, Edward Abbey, Barry Lopez, and others.

Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 234 - ASPECTS OF CONTEMPORARY LITERATURE

Reading, discussion, and writing about fiction, drama, poetry, and nonfiction produced since World War II. Emphasis on developments in literary genres and criticism, as well as on social and cultural developments as reflected in the texts. Prerequisite: C or better in COMP 101

3 credits (3 lecture hours), offered on a rotating basis

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

LITR 342 - SCIENCE FICTION

This course will cover the scope and definition of a huge genre relating to many aspects of current life and interest. Topics will cover all levels of the area from horror to time and space literature. Emphasis will be on the rich and classis history which includes movement from books to television and movies. The literary elements and rationale for such writing will also be discussed along with an opportunity to begin understanding of the many choices and future of this writing.

Prerequisite: C or better in COMP 101; COMP 102 recommended 3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

MANDARIN CHINESE

CHIN 101 – BEGINNING MANDARIN CHINESE I

This course is an introductory first course to the Mandarin Chinese language. It presupposes no prior knowledge of Mandarin Chinese. Using communicative approach, students will explore basic phonetic system of Chinese (Pin-yin), basic character writing, sentence structure and Chinese culture through activities. Students will learn to listen, speak, write and read at a beginning level. Note: This course is not designed for heritage learners, or students who have taken 3 or more years of Mandarin Chinese in high school. A student with more than a beginner level of proficiency in Mandarin Chinese should meet with the instructor prior to registration to determine the correct level of Chinese course to take.

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

CHIN 102 – BEGINNING MANDARIN CHINESE II

This course is a continuation of CHIN 101, with continuous concentration on communicative approach of the Mandarin Chinese language. By exploring daily conversational topics, this course includes study of the Chinese phonetic system (Pinyin), character writing, sentence structure, and expanded knowledge of Chinese culture. Further acquisition of language skills in listening, speaking, reading, and writing is emphasized. Prerequisite: CHIN 101 at Morrisville with a C grade or better, 2-3 years of high school Chinese, or placement in CHIN 102.

3 credits (3 lecture hours).

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

MANUFACTURING TECHNOLOGY

MFG 110 - DIMENSIONAL METROLOGY

Utilization of the principles of the science of measurement to first give the necessary laboratory experience to show linear calibration to 10 millionths of an inch with various measurement instruments. Secondly to demonstrate the necessity of metrology in regards to national and international manufacturing and trade.

2 credits (1 lecture hour, 3 laboratory hours), spring semester

MFG 206 - CNC MACHINING

Students will be instructed about the capabilities and limitations of computer numerical control (CNC) 4-axis machining center and 2-axis turning center. Students will write programs using g-code for a FANUC controller and produce parts in the laboratory from their programs.

Prerequisite: MECH 101

3 credits (2 lecture hours, 3 laboratory hours), fall semester

MFG 207 - QUALITY CONTROL

A fundamental, yet comprehensive coverage of the basic principles and applications of quality control. Topics covered include: statistical process control (SPC), data collection and analysis, control charts for variables and attributes, acceptance sampling, reliability, total quality management (TQM) and ISO systems.

Prerequisite: MATH 102

2 credits (1 lecture hour, 3 laboratory hours), spring semester

MFG 208 - COMPUTER-AIDED MANFACTURING (CAM) - MASTERCAM

Introduction to Computer-Aided Manufacturing (CAM) utilizing Mastercam Software and Computer Numerical Controlled (CNC) machinery. Students will generate 2D and 3D drawing files and use the software to program various 2 and 3 axis CNC machining toolpaths. These programs will then be used to machine projects on our 4-axis machining center

Prerequisites: CAD 186 and MFG 206

2 credits (1 lecture hour, 3 laboratory hours), spring semester

MFG 221 - MANUFACTURING PROCESSES I

Examination of materials and processes in the manufacturing environment - theoretically and in the laboratory.

Prerequisites: MECH 101 and MECH 120

3 credit hours (2 lecture hours, 3 lab hours), fall semester

MFG 240 - DESIGN/MANUFACTURE CAPSTONE

This course is a project-based culmination of design and manufacturing studies applied to a formal product design challenge. Students will work in teams to conceptualize, plan, define, prototype, optimize, and manufacture their solution to a real-world design problem. Emphasis is placed on creativity, communication and documentation skills, time management and individual responsibility for project success. A final project portfolio will include both written and graphical documentation of the product design process.

Prerequisites: DRFT 252, MFG 221

3 credits (1 lecture hour, 4 laboratory hours), spring semester

MASSAGE THERAPY

MAST 100 CPR FOR HEATHCARE PROVIDERS

This course introduces students to the skills and techniques necessary to provide the initial emergency care to sustain life support to victims of accidents and illness. Students will be eligible to become certified in CPR for the Healthcare Provider by satisfying the requirements established by the American Heart Association. This course is open to Massage Therapy students and Human Performance and Health Promotion students or by permission of the instructor.

1 credit (lecture), 5 weeks, fall and spring semester

MAST 101 - EASTERN ANATOMY AND PHYSIOLOGY

Focus is on the nature and distribution of energy throughout the body. This course introduces the philosophical principles of Eastern medicine as well as an in-depth study of the channel system and the distribution of energy and areas of influence. The course introduces the concepts of the organs and viscera and their functions related to energy development and utilization. The principles of energy and Taoist Cosmology will be discussed from ancient to modern viewpoints.

Pre or Co-requisites: BIOL 150 and 150L; BIOL 135 and MAST 102

3 credits (3 lecture hours), fall semester

MAST 102 - WESTERN MASSAGE I

Presents western massage techniques including the history of massage, the fundamental principles, physiological effects, and precautions for use. The appropriate use of oils, equipment and draping techniques will be introduced. This course provides the knowledge base of western massage therapy theory and techniques.

Pre or Co-requisites: BIOL 150 and 150L; BIOL 135 and MAST 101

4 credits (3 lecture hours, 3 laboratory hours), fall semester

MAST 103 - WESTERN MASSAGE II

This course focuses on the further development of western massage techniques and the precautions for all practitioners. The student will learn more advanced hand manipulations, direction of pressure and pressure points as well as review western massage principles.

Prerequisites: MAST 102, BIOL 150 and 150L (each with C or better required) Pre or Co-requisites: BIOL 151 and 151L; BIOL 136 and MAST 104

2 credits (1 lecture hour, 3 laboratory hours) spring semester

MAST 104 - EASTERN MASSAGE

This course focuses on the development of understanding regarding the location of the Primary Meridians and the Extra Channels used in Eastern massage. Various eastern massage techniques will be presented as practical applications of theoretical knowledge. Use of acupoints will be thoroughly examined. Students will learn a variety of Eastern massage manipulations and exercises. Prerequisites: MAST 101, BIOL 150 and 150L (each with C or better required)

Pre or Co-requisites: BIOL 151 and 151L; BIOL 136, MAST 103

2 credits (1 lecture hour, 3 laboratory hours), spring semester

MAST 201 - WESTERN MEDICAL MASSAGE

Presents western massage techniques and precautions for its use. The student is introduced to acute and chronic health conditions appropriate to treat with Western massage. Situations requiring a referral to medical health care providers will be identified. Fifty hours are devoted to pathology.

Prerequisites: MAST 103, BIOL 151 and 151L (each with C or better required) Pre or Co-requisites: MAST 202: BIOL 137; MAST 203;

4 credits (2 lecture hours, 6 laboratory hours) fall semester

MAST 202 - EASTERN MEDICAL MASSAGE

This course presents applications of Eastern massage techniques. Eastern massage theory and practice will be applied to chronic and acute health conditions. Students will learn to utilize the Primary Meridians and the Eight Extra Channels to facilitate therapeutic client response. Students will develop a cohesive strategy for client evaluation using Five Element Theory, Eight Principles and four evaluations as well as procedures to develop effective treatment strategies. Students will learn to identify situations that require referral. Fifty hours will focus on pathology.

Prerequisites: MAST 104, BIOL 151 and 151L (each with C or better required) Pre or Co-requisites: MAST 201 and 203; BIOL 137;

4 credits (2 lecture hours, 6 laboratory hours) fall semester

MAST 203 - PROFESSIONAL ISSUES

Topic areas include regulation of the profession and code of ethics and issues of boundaries in relation to body work, interpersonal communications and therapeutic relationships. Introduces students to the Rules of the Board of Regents on Unprofessional Conduct, Section 6509 of Title VIII, and professional ethics and standards Prerequisites: MAST 104, BIOL 151 and 151L (each with C or better required)

Pre or Co-requisites: MAST 201, MAST 202, BIOL 137

1 credit (2 lecture hours), first half of spring semester

MAST 204 - MASSAGE CLINICAL EXPERIENCE

This course provides the student with the opportunity to apply the knowledge and techniques acquired in all previous massage therapy courses and to become more proficient with client assessment and treatments. Students will become familiar with reading a prescription, developing a plan of treatment and charting methods. This course is offered in a simulated office situation and students must apply massage therapy techniques to another individual for 150 hours under the on-site supervision of a licensed massage therapist. Students will be evaluated applying therapy techniques to a variety of clients using pre- established evaluation criteria.

Prerequisites: MAST 201, MAST 202 and BIOL 137 (each with C or better required) Pre or Co-requisites: MAST 100, MAST 205, MAST 206, COMP 110 or COMM 111

5 credits (150 laboratory hours), spring semester

MAST 205 - SENIOR SEMINAR

This course is designed to assist the student's transition into professional practice. The course examines independent contractor/self-employment and paid employee opportunities. Professional standards of practice are reviewed with a focus on legal issues and trends. Aspects of establishing and maintaining an individual practice will be examined including small business planning, business finances, bookkeeping, and marketing/promotions.

Prerequisites: MAST 201, MAST 202 and MAST 203 (each with C or better required) Pre or Co-requisites: MAST 204, MAST 100, MAST 206, COMP 110 or COMM 111

3 credits (3 lecture hours), spring semester

MAST 206 – PROFESSIONAL PRACTICE ISSUES

This course assists the development of professional practice through the discussion of case studies and/or actual client health needs presented in the massage therapy clinic setting. The seminar format allows for discussion of client situations, pathologies and practice issues. This course accompanies MAST 204 which is the clinical component for the Massage Therapy degree. Pre or Co-requisite: MAST 204 and MAST 205

2 credits (2 lecture hours), spring semester

MATHEMATICS

CHOOSING YOUR FIRST MATHEMATICS COURSE

It is important that you begin your mathematics sequence at the appropriate level for which you are qualified. You need to know your initial mathematics placement and exit requirement for your program. If you do not know your initial placement, contact the chair of the Department of Mathematical Sciences. Following are the different options if you have been placed at, below, or above your program's mathematics exit requirement.

If you have been placed at your program's exit requirement, then take that mathematics course as specified in the college catalog.

If you have been placed below your program's exit requirement, then take that mathematics course and then progress through the math sequence to the mathematics course listed as the exit requirement.

If you have been placed above your program's exit requirement, then work with your academic advisor to find an appropriate course for your major and your ability.

SUNY GENERAL EDUCATION

Students who successfully complete any course with the MATH subject code will fulfill the SUNY General Education requirement for Mathematics.

Mathematics Pathways

Quantitative Reasoning Statistical Reasoning Algebra

Calculus SKLS 091

SKLS 091

SKLS 091

MATH 147

MAGN 107

MAGN 101 or MAGN 107

MAGN 101

MATH 151 OR MATH 161

MATH 127

MATH 123

MATH 102

MATH 152 OR MATH 162

MATH 103

MATH 261

MATH 147

MATH 262

The above information does not include mathematics electives. A student must pass a course with a C or better to meet the pre-requisite for the next course in the sequence. Any student who passes a math course with a C or better may not take a course lower in the sequence to receive mathematics credit. If a student elects to take a mathematics course as Pass/Not Pass, a grade of pass does not imply that a student is able to progress in the sequence. In order to progress in the sequence, the numeric grade will be used to determine if the student has met the prerequisite.

MATHEMATICS COURSE ELECTIVES

MATH 141 Statistics

Prerequisite: MATH 102 (C or better) or placement into MATH 103 or higher MATH 145 Discrete Mathematics

Prerequisite: MATH 102 (C or better) or placement into MATH 103 or higher MATH 149 Elementary Linear Algebra

Prerequisite: MATH 103 (C or better) or placement into MATH 147 or higher

Transfer/Placement Information

Transfer credit: College mathematics courses taken at other institutions are evaluated and will be awarded transfer credit when appropriate.

How students are initially placed in a mathematics course

All incoming students are required to take a mandatory placement exam.* In addition to the result on the placement exam, other factors that may be considered include: high school mathematics grades, examinations (regents, state, SAT, or ACT), the number of attempts necessary to successfully complete high school mathematics courses, and the time elapsed since a student's last mathematics course.

*In some cases, college mathematics courses taken at other institutions and successfully transferred for credit may be considered in lieu of the placement exam.

How to find a student's mathematics placement/other questions

If a student's mathematics placement is needed, or if students or advisors have any other questions about mathematics placement, please contact the chair of the Department of Mathematical Sciences.

Changes to Placement

If a student feels their math placement is not correct, they may schedule a meeting with the mathematics department chair during the first week of classes to have their placement reevaluated.

SKLS 091 - PRE-ALGEBRA

(see Skills Courses)

MAGN 101 - ELEMENTARY ALGEBRA

Topics include: Review of basic arithmetic skills. Properties of the real number system, terminology, and vocabulary; Solving linear equations and inequalities in one variable; Literal equations and applications of algebra; Integer exponents; Operations on Polynomials; Factoring; Operations on Rational expressions; Graphing linear equations. (TI-30 required) Prerequisite: SKLS 091 (C or better required) or equivalent

3 credits* (3 lecture hours), fall or spring semester

* These credits do NOT count toward the math/science requirements of the A.S., A.A.S., or

A.A. degree.

MAGN 106 – REAL-WORLD MATHEMATICS

This course focuses on math for everyday life. Topics include fluency with numbers, proportional reasoning, data interpretation, algebraic reasoning, modeling, and communicating quantitative information. Arithmetic skills (fractions, decimals, proportions, and percentages) are integrated throughout the course. Mathematical concepts are investigated through group problems and class discussions based on real-life contexts of citizenship, personal finances, and medical literacy. This course prepares students to take a college-level non- STEM path in mathematics, such as MATH 127 or MATH 123. Students may not take MAGN 106 if credit has been received from SKLS 091 or MAGN

107. Prerequisite: None (Placement into MAGN 106.) Texas-Instruments (TI- 30XII) calculator required. This course fulfills 3 credits of the Liberal Arts and Sciences requirement.

Prerequisite: Placement into MAGN 106.

6 credits (3 imputed, 3 general), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement

MAGN 107 – MATHEMATICAL LITERACY

This course focuses on mathematics for everyday life. It integrates fluency with numbers, proportional reasoning, data interpretation, algebraic reasoning, modeling, and communicating quantitative information. Mathematical concepts are investigated through group problems and class discussions based on real-life contexts of citizenship, personal finances, medical literacy, healthcare fields, and the environment. (TI-30SII calculator required). Students may not take MAGN 107 if credit has been received from MAGN 106.

Prerequisite: SKLS 091 (C or better) or equivalent.

3 credits (3 lecture hours) fall or spring semester.

This course satisfies the Liberal Arts and Sciences requirement.

MATH 102 - INTERMEDIATEALGEBRA WITHTRIGONOMETRY

Topics include: Exponents, roots, and radicals; Functions and their graphs; Solving and graphing quadratic equations and applications; Solving, radical, equations; Equations in quadratic form; General angle trigonometry; Solving systems of linear equations in two or three variables and applications. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MAGN 101 (C or better required) or MAGN 107 (B or better required) or equivalent

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 103 - COLLEGE ALGEBRA WITH TRIGONOMETRY

Topics include: Complex fractions; Evaluation and combinations of functions, inverse functions, exponential, and logarithmic functions, including applications; General angle trigonometry in radian measure; Graphs of basic trigonometric functions; Transformations of sine and cosine functions; Trigonometric identities and equations; Law of sines and law of cosines, including applications. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.)

Prerequisite: MATH 102 (C or better required) or equivalent 3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 123 – ELEMENTARY STATISTICS

Study design and Sampling methods; Graphical representation of data; Descriptive statistics; Normal distribution; Hypothesis testing; Confidence intervals; Nonparametric techniques; t-tests; Correlation and regression. Chi-Square Applications in the healthcare and life science professions will be emphasized. Excel will be used for calculations and analysis. Students may not take MATH 123 if credit has been received for MATH 141, or equivalent, without permission from instructor.

Prerequisites: MAGN 101 (C or better) or MAGN 107 (C or better) or equivalent, or placement into MATH 102 or higher

3 credits (hybrid or lecture format)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 127 – MATHEMATICAL REASONING

This course will explore various applications of mathematics in the social, finance, health, and environmental fields with a focus of developing informational, technological, logical, and visual reasoning skills. Topics from numeracy, probability and statistics, finance, mathematical modeling with linear, statistical, and exponential functions, and other areas of mathematics will be covered. (TI-30XII calculator required).

Prerequisite: MAGN 101 (C or better required), MAGN 106 (C or better required), or MAGN 107 (C or better required) or placement into MATH 127.

3 credits, (3 lecture hours) fall or spring semester.

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics.

MATH 141 - STATISTICS

Topics include: Graphical representations, Measures of central tendency and dispersion; Probability; Normal distribution; Central limit theorem; Hypothesis testing; Confidence intervals; Regression-correlation. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Students may not take MATH 141 if credit has been received from MATH 123.

Prerequisite: MATH 102 (C or better required) or equivalent, or placement into MATH 103 or higher

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 145 - DISCRETE MATHEMATICS

Primarily for students in Computer Science and Computer Information Systems curricula or others with permission. Topics include: Logic; Set theory; Introduction to combinatorics; Relations and functions; Introduction to graph theory. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.)

Prerequisite: MATH 102 (C or better required) or equivalent, or placement into MATH 103 or higher

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 147 - SELECTED TOPICS IN PRECALCULUS

Topics include: Functions and their inverse; Polynomial functions; Operations on complex numbers; Rational functions and their graphs; Trigonometric identities; Inverse trigonometric functions; Trigonometric equations. Emphasis on calculator solutions. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.)

Prerequisite: MATH 103 (C or better required) or equivalent

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 149 - ELEMENTARY LINEAR ALGEBRA

Basic elements of linear algebra, an area of mathematics with applications in a wide variety of fields. Topics include: Systems of linear equations including matrix solution using Gauss-Jordan elimination; Matrix operations; Inverse; Computations via calculator; Determinants; The vector space, linear combinations and independence, span, basis; Dot and cross product; Eigenvalues and eigenvectors. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.)

Prerequisite: MATH 103 (C or better required) or equivalent, or placement into math 147 or higher

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 151 - General CALCULUS A

Topics include: Introduction to limits and continuity; Derivatives of algebraic functions: definition and notation, differentiation rules, implicit differentiation; Applications of the derivative: slope, velocity and acceleration, rate of change, related rates, curve sketching, and

optimization; Integration: notation and terminology, definite and in-definite integrals; The Fundamental Theorem of Calculus; Applications Integration by substitution. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.)

Prerequisite: MATH 147 (C or better required) or equivalent

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 152 - GENERAL CALCULUS B

Topics include: Differentiation and integration of logarithmic, exponential and inverse trigonometric functions; Applications including growth and decay, finding areas, volumes, centroids, fluid pressure, work, and arc length; Techniques of integration; Indeterminate forms with L'Hopital's Rule; Improper integrals. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.)

Prerequisite: MATH 151 (C or better required) or equivalent

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 153 - BUSINESS CALCULUS

This course is an introduction to differential and integral calculus with particular emphasis on applications in business and related areas. Topics include Functions (polynomial, rational, exponential and logarithmic); Continuity; Limits; Derivatives and differentiation techniques; Marginal analysis; Curve sketching techniques;

Optimization; Interest, Integrals and integration techniques; Fundamental Theorem of Calculus; Area between curves; Future value of a continuous income stream. (TI-83 plus or TI-84 plus required, TI- Nspire or similar calculator is not allowed.)

Prerequisite: MATH 147 (C or better required) or equivalent, or placement into math 151 or higher (If credit has been received for MATH 151, or equivalent, then permission must be obtained by instructor to register for MATH 153.)

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 161 - CALCULUS I

Topics include Review of algebra and analytic geometry; Concepts of limit and derivative of a function; Differentiation and integration of functions including trigonometric, exponential, logarithmic functions and inverse trigonometric functions; Applications to engineering. (TI-83 plus or TI-84 plus required.) Prerequisite: Math 147 (C or better required) or initial math placement of MATH 161.

4 credits (4 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 162 - CALCULUS II

Topics include: Applications of integration and integration techniques; Infinite series; Parametric equations and polar coordinates; Applications to engineering. (TI-83 plus or TI-84 plus required.)

Prerequisite: MATH 161 (C or better required)

4 credits (4 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 261 - CALCULUS III

Topics include: Vectors in the plane and in three dimensional space; Vector functions; Functions of several variables; Partial derivatives and multiple integration; Vector calculus; Applications to engineering. (TI-83 plus or TI-84 plus required.)

Prerequisite: MATH 162 (C or better required)

4 credits (4 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MATH 262 - DIFFERENTIAL EQUATIONS

Topics include ordinary differential equations and their solutions; Classical solutions of linear differential equations; Solutions by use of series and by

Laplace transforms; Matrix procedures with solutions to linear systems of differential equations using eigenvalues; Introduction to partial differential equations; Applications in the field of chemistry, physics and engineering. (TI- 83 plus or TI-84 plus required.)

Prerequisite: MATH 261 (C or better required) 4 credits (4 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

MECHANICAL ENGINEERING TECHNOLOGY

MECH 101 - MACHINE TOOLS

Basic principles, capabilities and limitations of machine tools, theory of single and multiple point cutting tools and metal removal. Machine operations and setup, measuring devices, safety and use of hand tools.

Co-requisite: MAGN 101 and MFG 110 or permission of instructor

3 credits (2 lecture hours, 3 laboratory hours), spring semester

MECH 103 - MACHINE SHOP PRACTICES

Types of tools used in machine shops, with hands-on experience. Machining of several simple small parts, with methods of machining being more important than accuracy, surface finish, etc.

1 credit (1 lecture hour, 3 laboratory hours), 8 weeks, fall semester

MECH 120 - ENGINEERING MATERIALS

A study of material properties, limitations, processing, testing, and specification. Course includes plastics, metals, ceramics, composites, cements and other important engineering materials.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

MECH 211 - ANALYTICAL MECHANICS (STATICS)

Development of the various analytical methods to determine force acting on a particle of rigid body at rest, in a plane or in space. Determination of forces in transmission lines, cables, trusses, machine components and structures. Forces introduced as a result of friction and location of first and second moments. Spreadsheet of software

applications.

Prerequisite: PHYS 107 (C or better required) Co-requisite: MATH 103

3 credits (2 lecture hours, 1 recitation hour), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

MECH 212 - MECHANICAL DESIGN

Study of translation and rotation plane motion of machine elements. Graphical kinematic analysis including absolute and relative velocities, with CAD and spreadsheet applications. Mechanical component analysis and selection to include cams, gears, chain drives, and belt drives.

Prerequisites: CAD 186, MECH 211

4 credits (3 lecture hours, 2 laboratory hours), spring semester

MECH 213 - STRENGTH OF MATERIALS

Physical properties of engineering materials including relationships between stress and strain, beam design, riveted joints, torsion of shafts, column buckling and the impact loading of mechanical elements. Laboratories in tensile, shear and bending tests as well as the use of

electrical strain gages.

Prerequisite: MECH 211 (C or better required)

4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

MECH 233 - FLUID POWER AND CONTROL

A study of incompressible power systems. Including topics in power transmission, controls, circuit design and efficiency, applications, as well as electrohydraulic

control of discrete components and programmable systems.

Prerequisites: MATH 103, CAD 184 and PHYS 107

4 credits (3 lecture hours, 3 laboratory hours), spring semester

MUSIC

MUSI 101 - INTRODUCTION TO MUSIC AND ART

An overview of the stylistic and cultural elements of the great epochs of western civilization as expressed through its art and music.

3 credits* (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

MUSI 102 - HISTORY OF JAZZ

A study of styles, backgrounds, playing and techniques in the different eras of jazz history from the 1890s to the present.

3 credits* (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts and the SUNY General Education Requirement for Humanities.

MUSI 105 EXPERIENCING MUSIC

An introduction to the appreciation of music as an art form, this course assumes no prior experience with the subject. Students will learn basic vocabulary and notation of music, along with concepts of pitch, melody, rhythm, musical forms, genres and instrumentation. They will develop basic knowledge, supported by listening, discussion and participation. History and culture will be related to the various musical attributes studied. Live music will be incorporated as much as possible into the musical experience.

3 credits* (3 lecture hours), fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

MUSI 150 - ENSEMBLE

Credit for successful participation in pep band, jazz lab, jazz singers or concert band. Tryout may be required. Courses below are for subsequent semesters.

1 credit, fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts. Note: At least three credits from the following courses will satisfy the SUNY General Education requirement for “The Arts.”

MUSI 155 - ENSEMBLE

1 credit, fall or spring semester

MUSI 160 - ENSEMBLE

1 credit, fall or spring semester

MUSI 165 - ENSEMBLE

1 credit, fall or spring semester

NATURAL RESOURCES CONSERVATION

NATR 100 - INTRODUCTION TO FORESTRY AND NATURAL RESOURCES

Field identification of important forest trees and shrubs, their growth characteristics and uses are introduced. Basic instruction is provided in forest management problems, forest measurement, utilization, forest ecology, silviculture, forest wetlands, natural resources recreation, wildlife conservation, urban forestry and natural resource organizations. Several field forestry exercises are used to provide students with practical experience.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

NATR 101 - GENERAL ECOLOGY

Interrelationships among living organisms and their environment. Examines the nature of diversity, niche dimensions, species' roles and habitats, organism adaptations, life histories, population dynamics, symbiotic relationships, biome and landscape ecology, and the impact of human activities, and extractive economies.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 103 - NATURAL RESOURCE EQUIPMENT OPERATION

Operation, safety and preventative maintenance of natural resource equipment including chain saws, log skidder, log loader, dump truck, bulldozer, forklift, skid steer loader, backhoe, and flatbed trailer is practiced. Included in this course is the instruction and hands-on operation of chainsaws, which with additional training in adult first aid/CPR and environmental concerns will qualify students for New York State Logger certification.

2 credits (1 lecture hour, 2 laboratory hours), fall or spring semester

NATR 110 - NATURAL RESOURCES MEASUREMENTS

Measurements of forest and wildlife resources, statistical analysis of data and presentation of results. Includes mapping, timber inventories, wildlife population surveys, and report writing.

Pre-requisite/ Co-requisite: Completion of or testing out of MAGN 101 or by permission from the instructor.

3 credits (2 lecture hours, 3 laboratory hours), spring semester

NATR 115 - FOREST ECOLOGY

Physical and biological factors that affect the forest community are discussed. Emphasis is placed on forest ecosystem dynamics and establishing a scientific basis for the cultural treatment of forest stands. Forest community interactions are discussed in detail. Specific types of old growth, wetland and eastern mesophytic forest communities are analyzed.

Prerequisite: NATR 100 or permission of instructor

3 credits (2 lecture hours, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 120 - INTRODUCTION TO RECREATION AREA MANAGEMENT

Basic principles of outdoor recreation and use of leisure time as applied to the development and management of park and recreation areas. Observations and analyses of local recreation areas, trail development and improvement activities.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

NATR 130 - NORTH AMERICAN WATERFOWL

Identification, life histories, production areas, nuisance issues, and management of North American ducks, geese, swans and shorebirds. Course includes extensive field observation and maintaining field journals. This course is a certified NYS DEC Waterfowl ID Course and students may opt to take the exam to receive the certificate required to get an access permit for select National Wildlife Refuges and state lands open to waterfowl hunting.

Pre-requisite/ Co-requisite: NATR 101 or by permission from the instructor.

1 credit (1 lecture hour) spring semester.

NATR 140 – GEOLOGY

Nature and origin of minerals and rocks, and the development of land formations with special emphasis on plate tectonics and associated phenomena. Agents of erosion with resulting land formations.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 142 - PLANE SURVEYING

The principles of plane surveying are explored. Investigation is made of elementary field techniques and office procedures with emphasis on agricultural and conservation applications. Familiarization with various modern surveying instruments, analysis of error and survey computation is emphasized. Field work includes taping, profile and differential leveling, traversing and topographic mapping.

Prerequisite: MAGN 101 or equivalent

3 credits (2 lecture hours, 3 laboratory hours), fall semester

NATR 144 - SEMINAR IN ENVIRONMENTAL RESOURCES

Designed to inform the freshman Environmental Science student with the various options of study within the department and the career opportunities for each. Other presentations will deal with such topics as enhancing your classroom success, the pre-registration process, ethics, placement, letters of applications, resumes, interviewing techniques and meeting professionals from various environmental fields. Required for all freshman in the Environmental Sciences majors.

1 credit (1 hour recitation), fall semester

NATR 150 - AQUACULTURE

An introduction to the husbandry of aquatic organisms. Course places emphasis on rearing unit theory and management, stock inventory, growth projections, and water quality management. Laboratory exercises feature visits to state and commercial hatcheries, and hands-on activities at the Morrisville State College Aquaculture Center.

3 credits (2 lecture hours, 4 laboratory hours), fall semester

NATR 152 - FISH REPRODUCTION

This course explores fish reproductive strategies and their management implications; topics include: modes and requirements of reproduction, embryology, induced spawning techniques, genetics, hybridization and genetic engineering. Laboratories include manual spawning of salmon and trout, and egg inventory.

Prerequisites: NATR 150, NATR 252

2 credits (1 lecture hour, 2 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 153 – MARINE BIOLOGY

Introductory course to marine ecology, marine ecosystems, and survey of marine animal phyla. Course will cover the basic processes of marine ecosystems such as tides, currents, and general oceanography. Course will provide a survey of marine ecosystems (coral reefs, estuaries, mangroves, seagrass beds, kelp forests, intertidal and pelagic zones) and their processes. Course will cover marine animal phyla and biodiversity from Cnidarian to Pinnipeds (jellyfish to seals).

3 credits (3 lecture hours) fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 156 - AQUACULTURE PRACTICUM I

Hands-on experience in aquaculture facility management with emphasis on daily routine and records keeping. Care of cultured fish and plants, facility maintenance, including fish stock inventory, water quality management, and shipping and transporting fish.

Corequisite: NATR 150 or permission of instructor

1 credit fall or spring semester

NATR 158 - FISH NUTRITION

Introduction to the nutritional requirements of fish. Emphasis is placed on natural and artificial feeding of fishes, digestive physiology and anatomy, nutritional requirements and deficiencies, and feed formulation. Laboratories include hands-on study of fish digestive anatomy, and the calculation of feed rations.

Prerequisite: MAGN 101, NATR 150

Co-requisite: NATR 252

2 credits (1 lecture hour, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 160 - PRINCIPLES OF ARBORICULTURE

Introduction to the art, science and technology of woody plant health care. Emphasis on the care of landscape trees and shrubs in residential, campus and municipal settings. Major topics include tree mechanics, pruning and training trees; cabling; risk tree management; site evaluation and tree planting and establishment.

Co-requisite: NATR 161

2 credits (2 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 161 - PRACTICES OF ARBORICULTURE

Practical education and experience in the establishment and care of trees and shrubs in the landscape. Emphasis on individual and small groups of plants in residential, campus and municipal settings. Students work in teams under close supervision. Major activities include pruning, climbing with rope and saddle, and risk tree evaluation.

Co-requisite: NATR 160

1 credit (3 laboratory hours), spring semester

NATR 210 - DENDROLOGY

Field study, identification, taxonomy and natural history of more than 100 important forest trees and shrubs of North America.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 211 - FOREST PROTECTION

Overall view of the agents damaging to the forest and their management: meteorology, insects, disease causing organisms, beneficial organisms, IPM, fire behavior and control, and invasive species. Hybrid course: on-line lectures with in-person laboratory.

Pre-requisite: NATR 101 General Ecology or permission from the instructor.

3 credits (2 lecture hours, 3 laboratory hours), spring semester

NATR 213 - BASICS OF GEOSPATIAL TECHNOLOGY

This course involves a basic introduction to geospatial technology with focus on the practical applications of geographic information (GIS) and global positioning systems (GPS) in mapping natural and renewable resources. The basic principles of GIS and GPS are discussed with emphasis on computer- assisted mapping. Focus will be on running ArcGIS and its application in a number of assigned class projects. Students are also expected to understand how to conduct surveys using both standard and real-time differential GPS as well as generate thematic maps. GPS measurements and digital orthoimages are utilized in creating geographically-referenced, spatial data which forms the basis for geospatial analysis, the primary focus of the newly proposed NATR 216.

Prerequisite: NATR 142 or AGEN 151, or permission of instructor

1 credit (1 lecture hour, 2 laboratory hours), 8-week course, spring semester

NATR 215 - PRACTICES OF SILVICULTURE

Application is made of Silvicultural techniques for tending the forest stand in order to meet the objectives of the forest owner utilizing the principles of forest ecology. Emphasis is on understanding the forest ecosystem and the impact of cultural practices such as thinning, harvest cutting, timber stand improvement and stand regeneration.

Prerequisite: NATR 110 and NATR 115

Co-requisite: NATR 213

3 credits (2 lecture hours, 3 laboratory hours), spring semester

NATR 216 - BASICS OF GEOSPATIAL ANALYSIS

This course involves a basic introduction to geospatial analysis with emphasis on the practical applications of geographic information and global positioning systems. The basic principles of geospatial analysis and remote sensing are discussed with focus on some general applications that pertain to natural and/or renewable resource system(s). Evaluations of various situations are accomplished through a number of general class projects and one final case study project to be assigned by the instructor based on each student's area of interest. Emphasis will be on running ArcGIS and its application to the assigned class projects. Students are also expected to understand how to navigate using both standard and real-time differential GPS. GPS measurements and digital orthoimages are especially useful in creating geographically-referenced, spatial data which are required for performing geospatial analysis.

Co-requisite: NATR 213

1 credit (1 lecture hour, 2 laboratory hours), 8-week course, spring semester

NATR 221 - INVASIVE SPECIES MANAGEMENT

Biology, impact and management of invasive species found in or threatening New York State. Terrestrial and aquatic plants, animals (including insects), and diseases are discussed. Classroom focus is on pathways, factors leading to invasion, impact, management and control

strategies, and restoration options. Laboratories will involve hands-on surveying and management efforts.

Pre-requisite: NATR 101 or similar, or by permission from the instructor. 3 credits (2 lecture hours, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 232 - WILDLIFE ECOLOGY AND MANAGEMENT

A study of the art and science of wildlife management, including topics pertinent to understanding wildlife populations, their habitats, their ecology and management. Laboratories emphasize identification and life histories of principle North American mammals and game birds, specimen preparation, collection techniques, cover mapping, and habitat manipulation.

Prerequisites: NATR 101 or permission of the instructor

Co-requisite: NATR 213

3 credits (2 lecture hours, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 246 - INTERNSHIP IN NATURAL RESOURCES

This course involves students working in an approved job in the natural resources industry, usually during the summer session. A journal, supervisor evaluation and comprehensive written report are required and upon completion of the internship.

Prerequisite: Completion of one semester in Natural Resources and permission of instructor 4 credits (12 weeks, 480 hours minimum), fall semester

NATR 250 - AQUATIC ECOLOGY

A study of the physical, chemical and biological interactions of freshwater environments throughout Central New York. Includes ecology, origins, communities and populations of lakes, streams, wetlands, and estuaries, and aquatic invasive species. Laboratories include

identification of aquatic plants, invertebrates, reptiles and amphibians, habitat assessment, wetland delineation, and the use of bioindicators. Field studies are conducted on local streams, lakes and wetlands.

Prerequisite: NATR 101

3 credits (2 lecture hours, 3 laboratory hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 252 - FISH ECOLOGY AND MANAGEMENT

A study of the morphology, biology, ecology, behavior, and taxonomy of fishes. Strong emphasis is placed on the identification of New York's common freshwater and estuarine fish species. Other topics include systematics, reproductive ecology, population dynamics, fisheries management, and the application of seines, trap nets, gill nets, and electroshocking fishing gear.

Prerequisite/co-requisite: NATR 101 or permission of the instructor

3 credits (2 lecture hours, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 254 - FISH HEALTH MANAGEMENT

Capstone course in the Aquaculture series, dealing with the development and maintenance of hygienic culture facilities. The course progresses from disease and diagnostic theory, through pathogenic and parasitic agents, to chemical and cultural means of disease prevention and eradication. Laboratory exercises include necroptic and microbiologic techniques, pathogen and parasite identification, and chemotherapeutic treatments.

Prerequisites: NATR 150 and NATR 252, or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

NATR 256 - AQUACULTURE PRACTICUM II

A continuation of the Aquaculture Practicum series, addressing advanced methods in aquaculture, including fish handling, incubation and early-rearing of fish stocks, feed ration calculations, grow out projections, and harvesting and shipping of fish.

Prerequisite: NATR 156, MAGN 101

Co-requisite: NATR 158

1 credit, fall or spring semester

NATR 257 - AQUACULTURE PRACTICUM III

In this continuation of the Aquaculture Practicum series, the student assumes the role of a fish hatchery crew supervisor. In supervising the daily routine of work crews, the student develops mentoring and leadership skills. Additional competency is developed in grow-out, harvesting, fish sales, and delivery.

Prerequisite: NATR 256

1 credit, fall or spring semester

NATR 258 - AQUACULTURE PRACTICUM IV

Final course in the Aquaculture Practicum series. Students will continue to develop and apply mentoring and leadership skills in the management of the Morrisville State College Aquaculture Center. AP IV students will plan and implement work schedules of AP I-III students, conduct performance evaluations, determine feed orders and supply budgets, and develop long-range strategic plans for the AQ Center.

Prerequisite: NATR 257

1 credit, fall or spring

NATR 261 – ADVANCED PRACTICES OF ARBORICULTURE

This course will include advanced arboriculture knowledge and skills associated with hazard tree identification, tree pruning, climbing with a rope and saddle, and use of tree pruning equipment. Students will additionally gain leadership skills by mentoring NATR 161 students by acting as crew leaders for projects, assisting them with skill development, and demonstrating arboriculture skills. Prerequisite: B or higher in NATR 160 and NATR 161 or with instructor's permission.

1 credit (2 laboratory hours), spring semester

NATR 280 - HERPETOLOGY

Herpetology is a course designed to investigate the thermal physiology, taxonomy, distribution and natural history of reptiles and amphibians. Emphasis is placed on local forms. Techniques of field identification, collection and preservation are covered in the laboratory component.

Prerequisite: Grade of 'C' or better in BIOL 120, or General Ecology NATR 101.

3 credits (2 lecture hours, 4 laboratory hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

NATR 288 - RESEARCH IN AQUATIC SCIENCE I

This course provides the ground work for developing and initiating a research project in the aquatic sciences. Students will progress through the steps of conceiving and conducting background research, formulating research objectives, developing a research methodology, and initiating data collection. The efforts of this course will culminate in NATR 289 Research in Aquatic Science II.

Prerequisites: Aquaculture and Aquatic Science major AND permission of instructor

1 credit (approximately 4 hours/week independent research, 60 hours total), fall or spring semester

NATR 289 - RESEARCH IN AQUATIC SCIENCE II

This course provides the continuation of the research project initiated in research in aquatic science I. Students will progress through the steps of data collection and analysis, data description and summarization, synthesis of conclusion and presentation of results. The

course will culminate in an oral, conference-type research presentation.

Prerequisite: Research in Aquatic Science I and permission of the instructor

1 credit (approximately 4 hours/week independent research, 60 hours total), fall or spring semester

NURSING

NURS 100 - HOLISTIC HEALTH

This course explores the many facets of holistic health as it pertains to ourselves. Topics to be covered include body and mind connection, stress management, exercise, nutrition, meditation, visualization and global effects on health. Open to all majors.

No prerequisite required.

3 credits (3 hours per week of lecture for 15 weeks)

NURS 101- SKILLS FOR SUCCESS IN NURSING

This course will address effective study skills focusing on time management. Other topics include test taking strategies and study habits for nursing students, including the use of library resources and the application of technology. The demonstration of proper use of math concepts as applied to drug calculations specifically use in the health care profession will also be required.

This course is open to students enrolled in nursing.

1 credit hour (2 lecture hours per week for 8 weeks), fall/spring semester

NURS 120 – FUNDAMENTALS OF NURSING

This course provides the theoretical foundation for nursing education and practice including the nursing process with emphasis on the assessment phase. Theories of therapeutic communication techniques and basic human needs across the lifespan are correlated to general knowledge of the biologic sciences and humanities. Standards for professional nursing practice are defined. The concept of critical thinking as it applies to health care is

introduced. Particular attention is given to the care of geriatric individuals. Students learn nursing procedures and skills in a campus laboratory setting utilizing medical technology to complete accurate nursing assessment.

Pre or Co-Requisite: BIOL 150, PSYC 101, COMP 101

7 credits (4 lecture hours, 3 laboratory hours)

NURS 150 - NURSING CARE OF THE INDIVIDUAL WITH COMMON HEALTH PROBLEMS

This course provides the theoretical foundation for nursing knowledge that supports care of individuals with common health and psychiatric problems across the life span. Students will develop cognitive, affective and psychomotor skills in the campus laboratory setting and implement these skills in acute health care settings. Critical thinking skills which are applied to all phases of the nursing process are developed. Students learn to incorporate the general knowledge of growth and development, cultural and psychosocial needs into the care of individuals. Students utilize professional standards of practice while participating as a member of the health care team by practicing personal professional accountability. Communication skills utilized to effectively report and document nursing care. Technology is utilized to research and access nursing and medical information to deliver health care to individuals and families.

Prerequisites: NURS 120 (with a C+ grade or better), Pre-or Co- Requisites BIOL 151 and PSYC 241

9 credits (4 lecture hours, 9 clinical hour per week, 1 college laboratory hour for 6 weeks), fall or spring semester

NURS 152 - PHARMACOLOGY I

This first course in the series presents concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with common health alterations. Principles of action, uses, and side effects are discussed to facilitate the student's learning in the clinical environment. Information is presented by integrating pharmacology into the nursing process. Specific drug information is discussed in relation to assessment, nursing diagnosis, client monitoring, and interventions of safe and effective drug therapy. The concepts presented will focus on the common health problems and psychiatric health problems encountered across the lifespan. Specific nursing responsibilities related to drug administration, including real world dosage calculations across the life span, are emphasized.

Some specific topics discussed in this course will include the pharmacological treatment used for psychiatric disorders, cancer, infection, common respiratory, gastrointestinal and genitourinary disturbances, and diabetes.

Pre-requisite- NURS 120 with a C+, Co-requisite- NURS 150

1 credit (1 lecture hour: Online), fall and spring semesters

NURS 160 - ENHANCED CLINICAL I

An elective intensive clinical focused course offered at an affiliated, acute care health facility to increase the clinical confidence level of the beginning second year nursing student by providing continuity of care and expanding on the number and variety of patient care opportunities. Grading is pass/fail.

Prerequisite: NURS 150 with a C+ or permission of faculty.

2 credits (30 hours/week of clinical laboratory for 2 consecutive weeks).

NURS 200 - CLINICAL SIMULATION

This hybrid clinical simulation course is designed to incorporate the student's previous knowledge of disease processes, nursing theory and nursing skills for diverse simulated patient care experiences. Emphasis is placed on developing the knowledge, skills and attitudes the student would need to deliver safe, holistic, evidence-based and competent care to the patient. Critical thinking skills are applied to all phases of the nursing process to develop cognitive, affective, and psychomotor skills. The student will collect, analyze and interpret patient data in an environment where mistakes can occur without adverse consequences to the patient. At the conclusion of each simulation scenario participants are provided with the opportunity to review their experiences during a debriefing/ self-reflection session to obtain feedback from their peers and faculty.

Prerequisite: NURS 150 with a grade of C+ or better

2 credits

NURS 210 - NURSING CARE OF THE INDIVIDUAL WITH COMMON COMPLEX HEALTH PROBLEMS

This course provides the theoretical foundation for nursing knowledge that supports the care of individuals across the life span with common complex health problems and of families in a variety of practice settings including acute care, obstetric and community health agencies. Students apply critical thinking skills to design, implement and evaluate nursing care with a particular focus on patient education to individuals and families. Therapeutic communication skills are enhanced through a variety of interactive learning strategies. Technology is applied to the research process as well as the delivery of care.

Prerequisite: NURS 150 and NURS 152 (with a C+ or better), Pre or Co-Requisites: NUTR 108 and BIOL 285

9 credits (4 lecture hours, 10 clinical laboratory hours per week), fall or spring semester

NURS 212 - PHARMACOLOGY II

This second course in the series presents concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with complex common health alterations. Principles of action, uses, side effects, and client education are discussed to facilitate the student's learning in the clinical environment. In-formation is presented by integrating pharmacology into the nursing process. Specific drug information is discussed in relation to assessment, nursing diagnosis, client monitoring, and interventions of safe and effective drug therapy. Client education takes on an increased focus to facilitate the student's ability to convey application of concepts to the public. The concepts presented will focus on the complex common health problems across the lifespan and obstetric care. Specific nursing responsibilities related to drug administration, including real world dosage calculations across the life span, continue to be emphasized. Some specific topics discussed in this course include the pharmacological treatment used for eyes, ears, obesity, electrolyte and acid/base imbalances, various cardiac issues, male and female reproductive disorders, labor, delivery, postpartum, and newborn care.

Pre-requisite NURS 150 and NURS 152 (with a C+ or better), Co-requisite NURS 210

1 credit (1 lecture hour: Online), fall and spring semesters

NURS 220 - ENHANCED CLINICAL II

An elective intensive clinical focused course offered at an affiliated, acute care health facility to increase the clinical competence of the second year nursing student by providing priority based care to a group of patients with complex common health problems. Grading is pass/fail.

Prerequisite: NURS 210 with a C+ or permission of faculty.

NURS 250 - NURSING CARE OF THE INDIVIDUAL WITH MULTIPLE COMMON COMPLEX HEALTH PROBLEMS

This course provides the theoretical foundation for nursing knowledge that supports the holistic care of individuals with multiple complex common health problems across the life span. Students are afforded the opportunity to manage the care of groups of individuals with multiple complex needs in the acute care practice setting. Critical thinking skills are applied to the design, implementation and evaluation of holistic care. Students participate in learning experiences that enhance team building and conflict resolution skills. Students participate in activities that support lifelong learning through the development and evaluation of self-learning needs assessment and learning contracts, and peer review. Own transportation required for the last 8 weeks.

Prerequisites: NURS 210 and NURS 212 (with a C+ or better), Pre-or Co- Requisites NURS 251 and NURS 252

8 credits (4 lecture hours, 8 clinical laboratory hours per week, fall or spring semester

NURS 251 - TRANSITION INTO PRACTICE

This course assists the students in role transition from student nurse to graduate nurse by offering learning op-opportunities through a seminar format on a broad range of topics that support professional nursing practice. Topics include resume writing, interviewing, critical thinking, leadership, management, prioritization, delegation and ethics and self-care.

Co-requisite: NURS 250 & NURS 252

1 credit: Hybrid, spring or and fall semester

NURS 252 - PHARMACOLOGY III

This final course continues to present concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with multiple complex common health alterations. Principles of action, uses, side effects, and client education are discussed to facilitate the student's learning in the clinical environment. Information is presented by integrating pharmacology into the nursing process. Specific drug information is dis-cussed in relation to assessment, nursing diagnosis, client monitoring, interventions, and client education. Evaluation of medication use and administration is incorporated to expand the knowledge of care of the client. The concepts presented will focus on multiple complex

common health problems encountered across the lifespan. Specific nursing responsibilities related to drug administration, including real world dosage calculations across the life span continue to be emphasized. Some specific topics discussed in this course will include the pharmacological treatment used for critical care needs, autoimmune disorders, renal disorders and dialysis, HIV/AIDS, infectious, and degenerative neurological disorders, seizures, headaches, pancreatic and liver disorders, burns, endocrine disorders, respiratory, cardiac and hematological disorders.

Pre-requisite NURS 210 and NURS 212 (with a C+ or better), Co-requisite: NURS 250 & NURS 251

1 credit (1 lecture hour: Online), fall and spring semesters

NURS 305 – NURSING INFORMATICS

The purpose of this course is to enable RN students to access information from a variety of sources to support decision making in practice. Baccalaureate nurses manage data, information, knowledge, and technology to communicate effectively and provide safe and effective patient care. The use and understanding of data sources to manage, produce and disseminate evidence-based nursing knowledge is examines. Ethical issues related to data security, regulatory requirements, confidentiality and clients' right to privacy will be explored.

3 credits (3 lecture hours), fall semester

NURS 310 – CONCEPTUAL FOUNDATIONS FOR PROFESSIONAL PRACTICE

This course engages the learner in exploring the progression of the professional nursing role, focusing on teamwork and collaboration, communication, leadership, quality improvement, and safety. These competencies are essential for nursing, providing a solid foundation for a successful career.

Pre/co-requisite: NURS 305

3 credits (3 lecture hours) fall or spring semester

NURS 330 – HEALTH ASSESSMENT ACROSS THE LIFE SPAN

This course assists the learner in broadening and refining health assessment and physical assessment skills in both individual and group learning experiences. Students will: differentiate normal and abnormal assessment findings; conduct and document a complete physical examination; use group learning experiences to broaden knowledge of the cultural

determinants of health; use therapeutic communication techniques, evidence-based practice, and the principles of patient centered care to complete a culturally sensitive and developmentally appropriate client history. Documented practice sessions in the campus laboratory are required. This is a hybrid course with 30 campus lab hours.

Pre/co requisite: NURS 305; NURS 310 with a C+ or better

3 credits (2 lecture hours; 1 laboratory hour at 2:1 ratio (30 laboratory hours),) fall semester

NURS 361 – HEALTH PROMOTION ACROSS THE LIFE SPAN

In this course the learner will engage in learning activities with peers, faculty and the broader learning community, to develop new knowledge of the concepts of health literacy, health promotion and disease prevention across the lifespan and for all levels of care. Topics include a range of determinates of health including psychosocial, physical, spiritual, cultural, and political factors and use a healthiness model based on human strengths to design and implement patient- centered health promotion and disease prevention interventions. The concepts that guide the teaching and learning process for nursing practice will be explored in depth. Nursing informatics is used throughout the course and to develop population specific profiles and learning tools. Integration of knowledge will be demonstrated through a service learning project. This course is a combination of face to face classroom time and asynchronous online learning.

Pre/Co-requisite: NURS 305, NURS 310 with a C+ or better 3 credits (3 lecture hours) spring semester

NURS 381 – LEADERSHIP AND MANAGEMENT FOR PROFESSIONAL PRACTICE

The focus of this course is to provide the learner with foundational concepts, elements, and practices of the con-temporary nursing leader. Current issues in healthcare leadership are studied within a context of the program's five core concepts. Reflection and critical thinking strategies are used to explore and/or resolve leadership and/or management issues related to patient care and healthcare teamwork. Collaboration with interdisciplinary colleagues in healthcare organizations is stressed. The service learning project for this course involves leadership for planned change in your community of choice.

Prerequisite: NURS 305, NURS 310 with a C+ or better 3 credits (3 lecture hours) spring semester

NURS 430 – NURSING RESEARCH AND EVIDENCE-BASED PRACTICE

The focus of this course is to provide the learner with the resources and learning activities to develop the skills needed to identify and critically appraise scientific evidence to evaluate the quality and applicability to clinical practice. The course content includes an overview of research concepts, ethical issues, literature searches and reviews, quantitative and qualitative research methods and designs, data collection, analysis and interpretation techniques. The learner will gain an understanding of the research process and the role of research in evidence-based practice for the use of quality improvement, and practical application.

Prerequisite: all NURS 305 and NURS 310 with a C+ or better Pre/Co-requisite: BIOL 302; MATH 123 or equivalent

3 credits (3 lecture hours), fall semester

NURS 431– Healthcare Policy, ISSUES AND TRENDS

In this course the learner will explore current issues in healthcare, trends, public and social policies, and politics on the local, national and global level. While investigating the influence of economics, and regulatory bodies on the healthcare system. Individual and group learning will assist the learner to prepare themselves to engage in the economic, political, and policy dimension of healthcare. The student will learn to identify opportunities for political action in the workplace, communities and nursing organizations.

Prerequisite: NURS 305, NURS 310 with a C+ or better 3 credits (3 lecture hours) spring semester

NURS 450 – PUBLIC, COMMUNITY AND FAMILY HEALTH NURSING

This course examines nursing and public health theory to identify factors that promote or act as barriers to health across the lifespan. Nursing's role in planning, directing and coordinating evidence-based health promotion and illness prevention activities that incorporate safety, epidemiology, cultural competence, quality and cost-effective measures will be explored. Integration of knowledge is demonstrated through service-learning project that will provide opportunities to develop and implement interdisciplinary holistic health promotion strategies with a population-centered focus. This course is offered primarily online with campus sessions at the beginning, middle and end of the semester. 45 hours of clinical experience are required.

Prerequisites: All 300 level nursing courses, with a C+ or better Pre/Co-requisite: BIOL 302

5 credits (2 public health/community lecture hours; 2 family lecture hours, 1 clinical hour at 3:1 ratio (45 clinical hours), fall semester

NURS 481 – CLINICAL PRACTICUM IN PROFESSIONAL NURSING

This is the capstone course for the Morrisville State College BS Nursing Program. The learner will integrate the knowledge of nursing leadership and management, nursing informatics, and evidence-based practice to design and implement a patient-centered care quality improvement project. Professionally, the learner will collaborate and work in teams with peer colleagues, faculty, nurse preceptors, and expert clinicians. For the Capstone Quality Improvement Project a target population and healthcare setting will be selected by the learner with approval from faculty. The seminar portion of this course is online.

Pre/Co-requisite: All previous nursing courses

4 credits (1 lecture hour; 3 clinical hours at a 3:1 ratio (135 hours clinical), spring semester

NUTRITION

NUTR 108 - BASIC NUTRITION

Fundamentals of human nutrition including biological pathways of nutrients from digestion to metabolism. Computer analysis of personal nutrient intake. Emphasis on nutrition and consumer trends as well as personal wellness and fitness.

3 credits (3 lecture hours), fall and spring semester

NUTR 110 - NUTRITION I

Nutrient and food energy needs of the human biological system. Body processes in the digestion, absorption and utilization of nutrients. Dietary guides for planning nutritionally balanced menus.

Prerequisite: Admission to the dietetic technician, sports nutrition and fitness management, or nursing program or permission of the instructor.

3 credits (3 lecture hours), fall and spring semester

NUTR 115 - HEALTH FIELD

Introduction to health care field, team approach to total health care. Menu development and role of the nutrition professional in trend promotion and management. Exploration of career options. Project work in computerized Nutrition and Wellness Analysis Programs. Laptop computer required.

Pre- or Co-requisite: NUTR 110

2 credits (1 lecture hour, 1 laboratory hour), fall semester

NUTR 120 – INTRODUCTORY FOOD SCIENCE

This course will introduce the basic principles of food science as it applies to today's food supply and human nutrition needs. Through laboratory experience, the student will gain a broad appreciation for our diverse food supply through exploring the chemical composition, physical properties, and nutritional value of whole and processed foods. Topics include the purpose and techniques of food preparation and preservation, packaging, sensory evaluation of and the quality of food, food safety, food laws, and others in the food and nutrition fields.

Prerequisite: C or better in NUTR 110, ServSafe Certification (May be completed through FSAD 102)

3 credits (2 lecture hours and 2 laboratory hours), spring semester

NUTR 160 - DIET THERAPY

Diet therapy for disease and special conditions. Application of Academy diet principles. Menu planning and menu corrections for various disease states. Physiological reasons for the use of modified diets and nutritional needs of the body during illness.

Co-requisite: NUTR 170 Prerequisite: C or better in NUTR 108 or NUTR 110 3 credits (3 lecture hours, 1 hour recitation), spring semester

NUTR 170 - SUPERVISED FIELD EXPERIENCE I

Nutrition assessment and food production experience with various free-living and institutionally-based populations under the supervision of a Registered Dietitian. The course emphasizes an introduction to assessment and application of theory. Weekly conference hour. Transportation to and from field experience sites. Approved uniform required.

Prerequisites: C grade or better in NUTR 108 or 110, NUTR 115, FSAD 101, FSAD 102

Co-requisite: NUTR 160

3 credits (6 practical hours, 1 lecture hour), spring semester

NUTR 210 - LIFE CYCLE NUTRITION

Nutrition applied to individuals throughout the life span, including pregnancy and lactation, infancy and childhood, adolescence, adulthood and the aged. Emphasis on prevention and wellness models of care.

Prerequisite: C or better in NUTR 108 or 110 and NUTR 160 3 credits (3 lecture hours), fall semester

NUTR 219 – ORIENTATION TO SUMMER FIELD EXPERIENCE

This course is designed to orient the student for successful completion of the 150 supervised practice hours required for NUTR 220 - Summer Supervised Field Experience. The orientation process will assist the student in developing a realistic timeline, to prepare them for meeting the responsibilities of an intern and exposing them to the various forms and reports related to the summer field experience. This course must be successfully completed during the spring semester prior to the summer field experience.

Pre- or Co-requisite: NUTR 160 and NUTR 170 1 credits (1 lecture hour), spring semester

NUTR 220 - SUMMER SUPERVISED FIELD EXPERIENCE

Summer-supervised experience in an appropriate nutritional services department or program. Emphasis is on practical application of theory.

Prerequisite: C or better in NUTR 160, NUTR 170 and NUTR 219 2 credits, fall semester

NUTR 225 - EDUCATIONAL METHODS FOR THE FOOD AND HEALTH CARE FIELDS

Presentation of basic concepts in the educational process through communication skills. Includes: interviewing, writing, presentation and evaluation techniques needed in the Food Service Industry and Health Care fields.

Prerequisite: Senior standing in food or health care curriculum or permission of the instructor.

3 credits (2 lecture hours, one 2 hour recitation), fall semester

NUTR 230 - SUPERVISED FIELD EXPERIENCE II

Nutrition assessment and production experience in a health care facility. Application of theory in planning, implementing, and assessing nutritional care. Weekly conference hour. Transportation to and from clinical. Approved uniform required.

Prerequisites: C or better in NUTR 160, NUTR 170 and NUTR 220 3 credits (6 practical hours, 1 lecture hour), fall semester

NUTR 250 - SPORTS NUTRITION

Application of basic nutrition principles in the development of a total wellness and fitness program and the impact of nutrition on physical activity. Assessment of levels of physiological fitness and nutritional well-being. Prescriptive requirements for nutritional intervention in a total fitness program. Nutrient needs for fitness through the life cycle. Evaluation of current research data regarding nutrition intervention and practices for total health and physical well- being.

Prerequisite: C or better in NUTR 108 or 110

3 credits (3 lecture hours), spring semester

NUTR 260 - MEAL MANAGEMENT: SPA CUISINE

Meal preparation and service with emphasis on meeting spa cuisine parameters are covered in this course, as well as utilizing principles of recipe modification in food preparation and computerized dietary analysis. Presentations focus on current trends in marketing of healthful menus and recipe modification and development.

Prerequisites: FSAD 102 & 255, NUTR 110, NUTR 115 and C or better in NUTR 225

3 credits (1 lecture hours, 4 laboratory hours), spring semester, laboratory fee required. Approved uniform required.

NUTR 270 - SUPERVISED FIELD EXPERIENCE III

Community and food and nutrition experiences in various institutional and agency settings. Application of nutritional principles and assessment skills for various stages of the life cycle. Planning, implementing and assessing nutrition education for target groups. Students are responsible for arranging their own transportation to the field experience sites.

Prerequisites: C or better in NUTR 210, NUTR 225, and NUTR 230

3 credits (6 practical hours, 1 lecture hour), spring semester

OFFICE ADMINISTRATION

OFFT 100 - INTRODUCTION TO WORD PROCESSING SOFTWARE

This hands-on course introduces the concept of using word processing software to create letters, memos, reports and other documents in a timely manner. Documents will be created with graphs, charts, and tables to make it easier to convey information. The course will also cover using borders, shading, bullets, spell check, and creating envelopes and labels. Window explorer is used to help students organize their files.

1 credit (3 lecture hours), spring and fall semesters, five weeks

OFFT 106 - PERSONAL COMPUTER KEYBOARDING I

The module includes learning the keyboard by touch, learning the use of computer features, and developing proper stroking techniques. Basic letter and report formatting are included. This course is directed to non-office technology majors.

1 credit (2 lecture hours), fall or spring semester, eight weeks

OFFT 108 - INTRODUCTION TO PERSONAL MANAGEMENT SOFTWARE

This hands-on course introduces the concepts of using personal management software as a management tool to organize and manage personal and business information. This tool consists of creating e-mail messages, signatures, distribution lists, contacts, calendar, tasks, notes, and journal.

1 credit (3 lecture hours), spring and fall semesters, five weeks

OFFT 109 - INTRODUCTION TO PRESENTATION SOFTWARE

This hands-on course introduces the concepts of using presentation software to communicate effectively with an audience. The course will cover the basics of creating a presentation, using the design templates, adding text, tables, graphs, transition and animation to slides, formatting and printing of the presentation to be used as handouts.

1 credit (3 lecture hours), spring and fall semesters, five weeks

OFFT 110 - INTRODUCTION TO SPREADSHEET SOFTWARE

This hands-on course introduces the concept of using spreadsheets, lists and charts. The course will cover basic data entry into worksheets, formatting the worksheets, using formulas, and creating charts. Spreadsheets provide the tools needed to manage, present and analyze numeric data for personal or business use.

1 credit (3 lecture hours), spring and fall semesters, five weeks

OFFT 111 - KEYBOARDING 1-A

Development of basic keyboarding techniques on computers, including learning the keyboard by touch, learning the use of the computer features/commands and developing proper techniques. Basic letter formatting is included.

1 credit (2 lecture hours), fall and spring semesters, seven weeks.

OFFT 112 - KEYBOARDING 1-B

This course covers the development of computer keyboarding skills as well as speed and accuracy. Basic business/personal letters from text copy and script with envelopes, memos and tables are also covered. Students will also develop proofreading skills and use Macintosh software. Prerequisite: OFFT 111 with minimum grade of C or permission from instructor for OFFT majors; minimum grade of D for all other majors

1 credit (2 lecture hours), fall and spring semesters, seven weeks

OFFT 113 - KEYBOARDING 2-A

Development of computer keyboarding skills in the production of diverse business letters and memo forms, complex tabulations, reports and manuscripts are covered in this course. Further development of speed and accuracy on production and straight-copy typing is also covered. Word software is used.

Prerequisite: OFFT 112 with minimum grade of C or permission from instructor for OFFT majors; minimum grade of D for all other majors

1 credit (2 lecture hours), spring semester, seven weeks

OFFT 114 - KEYBOARDING 2-B

The development of computer keyboarding skills in the production of business forms and templates such as purchase orders, form letters, business, standard and academic reports are covered in this course. Word software is used in this course, which also covers further development of speed and accuracy on production and straight-copy typing.

Prerequisite: OFFT 113 with minimum grade of C or permission from instructor for OFFT majors; minimum grade of D for all other majors

1 credit (2 lecture hours), spring semester, seven weeks

OFFT 116 MEDICAL KEYBOARDING

On-line course covering development of basic keyboarding techniques, including learning the keyboard by touch, learning to operate the computer and its menus, icons, and functions, and developing proper stroking techniques. Students learn the proper formatting of various medical documents including Chart Notes, X-Ray Reports, Consent Forms, History/Physical Forms, Single- Page and Two-Page Letters, and Two-Page Assessments and Referrals.

2 credits (2 lecture hours), fall and spring semesters

OFFT 117- OFFICE ADMINISTRATION ORIENTATION

This course is for all incoming Office Administration majors (including Medical Office Administration) only. Topics include researching occupational skills required for today's office administrative assistant, attending Career Fairs, attending one SGO meeting, preparing for Portfolio Day , discussing key items to prepare for upcoming internships, and understanding philosophies that are helpful to keeping your job once companies downsize and/or merge. Students also receive thorough instruction within Webmail, Outlook, customer

service techniques, telephone etiquette, resume writing, Blackboard participation. Lectures will review career opportunities in a wide range of office administration professions with the help of many invited guest speakers and shadowing opportunities. OFFT AAS Degree Majors only (including Medical Office Admin AAS Degree)

1 credit hour, 3 lecture hours per class meeting – class will meet on the Morrisville campus one weekday every third week of the Fall Semester. Required of all Office Admin (Medical Office Admin) majors in their first or second fall semester enrolled in the program. THIS IS NOT AN ONLINE CLASS - Student must have ability to come to Morrisville State College's main campus.

OFFT 118 – INTRODUCTION TO DATABASE SOFTWARE

The course provides an applied introduction to database concepts using Microsoft Access software within the Windows environment. Topics include: relational database management system (DBMS) concepts, the creation and maintenance of MS Access databases, the creation of tables, forms, reports and queries, with data integration with MS Excel worksheets as time permits.

1 credit, spring and fall semesters, five weeks.

OFFT 120 – DOCUMENT DESIGN FOR EFFECTIVE COMMUNICATIONS

This full semester course combines 10 weeks of Microsoft Word with 5 weeks of Microsoft PowerPoint - emphasizing formatting, punctuation, spelling and proofreading within both applications. In Microsoft Word, topics such as development of complex tabulations, report formatting, column writing, designing letterhead, and developing a variety of marketing documents used in today's business are covered. Many Microsoft shortcuts/commands are emphasized to increase the productivity of the student. In Microsoft Power Point, the course will cover the creating of a presentation, using the design templates, adding text, tables, graphs, transition and animation to slides, formatting and printing of the presentation to be used as handouts.

Students who take this course cannot also receive credit for taking OFFT 100 -Introduction to Word Processing Software and/or OFFT109 -Introduction to Presentation Software as this course covers the material from both of those courses.

Prerequisite: OFFT 112 or permission from instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester.

Required of all Office Admin (Medical Office Admin); can be used as an elective to other majors.

OFFT 130 - DATA ENTRY

Operating features of a microcomputer with practical business applications. Speed development of 10,000 key-strokes per hour.

1 credit, fall semester

OFFT 135 - MACHINE TRANSCRIPTION

Integration of keyboarding skills with the operation of a transcription machine. Reinforcement of basic English skills, including spelling, punctuation, grammar, paragraphing, sentence construction, and proofreading skills. Mailable transcripts required for successful completion of the course.

Prerequisite: Successful completion of OFFT 112 or OFFT 116 or permission of instructor

2 credits, fall semester

OFFT 200 MEDICAL CODING

This is a beginning medical coding course designed to provide students with the essential information and working knowledge of health care coding systems used in billing insurance companies for medical services to ensure optimum reimbursement. The course offers practical and easy-to-follow instructions on how to code procedures and diagnoses using the CPT, ICD-10 and HCPCS systems. Other aspects of healthcare reimbursement will be covered such as HIPAA guidelines, abstracting information from patient records for correct placement on claim forms, inpatient and outpatient health care settings, and third party reimbursement issues.

Prerequisite: OFFT 250

3 credits (3 lecture hours), spring semester

OFFT 201 – OUTPATIENT BILLING

The course will focus on outpatient billing and accounting software. The student will learn to enter data into a computerized patient billing system, manage data, enter patient and case information, process transactions, process claims, create statements and produce reports.

Prerequisite: OFFT 250

2 credits (2 lecture hours) meets for 10 weeks, fall semester

OFFT 202 – INPATIENT BILLING

This course is designed to introduce the student to the basics of hospital billing and correct completion of the required claim form(s). Computer application is done using MediSoft's Just Claims software.

Prerequisite: OFFT 250

2 credit hours – 10 weeks (2 lecture hours, 2 laboratory hours), spring semester

OFFT 203 – INTERMEDIATE WORD PROCESSING SOFTWARE

This hands-on course introduces concepts using intermediate features of word processing software to create form letters using mail merge, mailing labels, newsletters, reference documents, table of contents, an index, and an online form template. Course will also cover document collaboration, integration, and charting tools.

1 credit, spring and fall semesters; five weeks. Prerequisite: OFFT 100 (or permission from instructor)

OFFT 205 – INTERMEDIATE SPREADSHEET SOFTWARE

This intermediate spreadsheet software course further analyzes basic spreadsheets to assist in a variety of problem solving scenarios using calculated field and other formula auditing functions. It assists with forecasting based on data presented within workbooks using a variety of Trendline charts, queries and other PowerTool reporting options.

Prerequisite: OFFT 110 or permission from instructor

1 credit, spring and fall semesters, five weeks

OFFT 210 - ADMINISTRATIVE SUPPORT STAFF PROCEDURES

Exploration of office operations and procedures, new developments in office information technology and equipment, communication transmittal systems, records management, and administrative office skills and responsibilities. Students will gain experience with voice digital recordings, facsimile, copy machines and telephones to better enhance their skill set.

Prerequisite: OFFT 112

3 credits (3 lecture hours), fall semester

OFFT 216 - PROFESSIONAL OFFICE PRACTICE SIMULATION

Working in a computerized professional model office. Handling telephone calls, incoming mail, transcription, correspondence, spreadsheet and database applications, records management, coordinating travel and conference plans and preparing reports. The topics include a brush up on English and keyboarding skills and career information.

Prerequisites: OFFT 114 or OFFT 116, OFFT 120, OFFT 220

3 credits (4 laboratory hours), spring semester

OFFT 218 – MEDICAL OFFICE PROCEDURES

This course is designed to introduce students to the variety of tasks and skills required for an administrative medical assistant. Students will be able to understand medical ethics, bioethics, etiquette, legal responsibilities of the physicians, use computer software to schedule appointments, create and maintain patients medical records, bill and collect payment, and understand method the method of scheduling appointments. The procedures of banking and payroll are introduced as part of being an administrative medical assistant.

Prerequisite: OFFT 116

3 credits (3 lecture hours), fall semester

OFFT 220 – DOCUMENT DESIGN FOR BUSINESS ANALYSIS

This course involves learning Microsoft Excel and Access skills. It includes topics such as merge, sort, charts, filtering, pivot tables, queries, designing your own table, etc. Students gain experience and understanding of versatility within the databases.

3 credits (4 laboratory hours), fall semester

OFFT 235 - MEDICAL TRANSCRIPTION

This is a beginning medical transcription course designed to provide students with a working knowledge of the transcription of medical documents, including x-ray reports, chart notes, history and physical reports, consultations, office procedures notes, progress notes and letters. The goal of this course is to develop transcribing speed and accuracy, gain skills in editing and proofing documents, and increase knowledge of medical terminology.

Prerequisites: OFFT 116, OFFT 135, and OFFT 250 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

OFFT 250 - MEDICAL TERMINOLOGY

This is a full semester course designed to instruct students in the various medical terminology used in medical environments today. Students learn how to pronounce and spell medical terms correctly, understand “root” words, as well as prefixes and suffixes of various terms and also recognize and define terms pertaining to the sciences of the human body and fields of medicine.

3 credits (3 lecture hours), fall semester

OFFT 251 - OFFICE MANAGEMENT

A study of the operations, controls, problems, systems, and human relations in the changing electronic office age are included in this course. Topics include introduction of office management, human relations management, building an understanding of the management of office services, building an understanding of office systems, building an office management vocabulary, seeking employment as a supervisor/manager. Operation of office equipment, including word processors required.

Prerequisites: OFFT 112, and OFFT 120 and OFFT 220, or permission of instructor. 3 credits (3 lecture hours), spring semester

OFFT 291 - OFFICE TECHNOLOGY INTERNSHIP I

All second-year students are strongly encouraged or required to participate in this internship opportunity. Students must complete 45 hours within an office environment. Many of the offices that participate in this internship are on campus; however, students may also work off campus. The focus of this internship opportunity is not only to give students a greater understanding of working within a professional organization, but also to open doors for the students if an opening occurs in their internship office after graduation. Monitoring occurs during the 45-hour, one-credit internship experience whereby the Office Technology faculty meets both student and his/her Internship Supervisor at the office where the student is interning.

Prerequisite: Prerequisite: Office Administration/Medical Office Administration sophomore student status and BSAD 140

1 credit (45 hours per semester), fall and spring semester

OFFT 292 - OFFICE TECHNOLOGY INTERNSHIP II

Similar to OFFT 291 since it is an additional one-credit hour course (another 45 hours required) and is taken after a student has successfully completed OFFT 291. OFFT 292 allows a student an additional credit, and subsequently, additional working experience.

Prerequisite: OFFT 291

1 credit (45 hours per semester), fall and spring semester

OFFT 301- ADVANCED MEDICAL CODING

This course is designed to utilize the student's previous learning experience to the variety of tasks and skills required for an administrative medical assistant dealing with coding. Students will be able to work on cases that are coded with service codes (CPT and HCPCS) and diagnosis codes (ICD-9-CM) in the outpatient settings of the clinic and outpatient departments of the hospital for both the physician and facility services.

Prerequisite: OFFT 200- Medical Coding 3 credits (3 lecture hours)

OFFT 335 - ADVANCED MEDICAL TRANSCRIPTION

This is an advanced medical transcription course whereby students gain competence in transcribing the advanced materials provided in the textbook, which more closely resemble on-the-job tasks than in the initial stages of learning medical transcription. This course has

strong emphasis on editing and critical thinking activities.

Prerequisite: OFFT 235 Medical Transcription

3 credit hours (2 lecture hours, 2 laboratory hours), fall semester

PHILOSOPHY

PHIL 201 - INTRODUCTION TO PHILOSOPHY

This course is an introductory study of both historical and contemporary approaches to the basic philosophical issues of knowledge, values, reality, matter, mind, soul, God.

3 credits (3 lecture hours), fall or spring semester (second-year students only)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

PHIL 211 - MODERN ETHICS

Examines problems of human conduct and reflective choices such as right and wrong, duty and conscience. Study and discussion center on human values, questions of morality versus legality, situation ethics and whether ends can justify means.

3 credits (3 lecture hours) fall or spring semester (second-year students only)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

PHIL 311 - PROFESSIONAL ETHICS

The objective of this course is to provide students with a realistic working model for ethical decision making in their professional field. Students will identify their existing set of moral values. From this basis, students will develop, refine, and evaluate their ethical stance based on the study of ethical theorists. The workable nature of their ethical approach will be tested through case studies, in-class discussion and written assignments.

Prerequisites: C or better in COMP 101, junior or senior standing and an introductory course in philosophy, or consent of instructor

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

PHYSICAL SCIENCE

PSCI 101 - PHYSICAL SCIENCE

For students with a limited background in the physical sciences and/or non- science majors. Disciplines include chemistry, physics, geology and astronomy. Demonstrations, field trips, class discussion and student prepared and presented papers.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

PHYSICS

PHYS 107 – INTRODUCTORY PHYSICS I

An introduction into the concepts and methods of scientific inquiry illustrated using elements of classical mechanics complemented with laboratory experiments. Topics include translational and rotational motions of particles and rigid bodies, analyzed using simple algebra-based Newtonian kinematics, dynamics and statics, and conservation of energy and momentum.

Pre- or Co-requisite: MATH 102 or equivalent

4 credits (3 lecture hours, 2 laboratory hours)

PHYS 108 – INTRODUCTORY PHYSICS II

An introduction into the concepts and methods of scientific inquiry illustrated using fundamentals of thermal physics and classical electromagnetism complemented with laboratory experiments. It includes a survey of thermodynamic variables and laws applied to

ideal-gas processes and phase changes in matter. Also, it discusses electromagnetic interactions and fields exemplified using charge statics and dynamics, simple elements of electric circuits, and an excursion into the nature of light.

Prerequisite: PHYS 107 or permission of instructor

4 credits (3 lecture hours, 2 laboratory hours)

PHYS 127 – GENERAL PHYSICS I

The first of two general-level survey courses in Physics, with an emphasis on analysis using algebra and trigonometry. Topics include: physical units and dimensions, vectors, kinematics, Newton's laws, potential and kinetic energy, circular motion, linear and angular momentum, and rigid body motion.

Pre- or Co-requisite: MATH 103 or equivalent

4 credits (3 lecture hours, 2 laboratory hours), fall semester

PHYS 128 - GENERAL PHYSICS II

The second of two general-level survey courses in Physics, with an emphasis on analysis using algebra and trigonometry. Topics include: concepts of heat, work, internal energy, heat transfer, and the first and second laws of thermodynamics. Simple harmonic motion, wave motion, harmonic waves, and superposition. Topics in

electromagnetism. Properties of light include reflection, refraction, interference, diffraction, polarization, the electromagnetic spectrum, and optical instruments.

Prerequisite: PHYS 127 or permission of instructor

4 credits (3 lecture hours, 2 laboratory hours), spring semester

PHYS 154 – UNIVERSITY PHYSICS I –MECHANICS

This course is a calculus-based introductory survey of classical mechanics. It presents translational, rotational and vibrational motion of particles and rigid bodies based on Newtonian kinematics and dynamics, and on the laws of energy and momentum conservation.

Pre- or Co-requisite: MATH 161 or equivalent

4 credits (3 lecture hours, 2 laboratory hours), spring semester

PHYS 155 – UNIVERSITY PHYSICS II – (ELECTRICITY AND MAGNETISM)

This course is a calculus-based introduction into the classical theories of electricity and magnetism with applications to electrical components and circuits. It surveys concepts such as the intertwined nature of electric and magnetic fields, classical laws and models culminating with Maxwell's equations of electromagnetism, and devices including capacitors, resistors and inductors combined into simple dc and ac-circuits.

Prerequisite: PHYS 154

Pre- or Co-requisite: MATH 162 or equivalent

4 credits (3 lecture hours, 2 laboratory hours), fall semester

PHYS 254 – UNIVERSITY PHYSICS III – SOUND AND THERMODYNAMICS

This course is an introduction into the theory and applications of acoustics and classical thermodynamics. The sound part is an illustration of mechanical wave characterization, production, propagation and detection. The topics of thermodynamics include a classical interpretation of the thermal properties of matter at macroscopic and microscopic scales, a survey of thermal processes and the laws of thermodynamics, and their applications to simple heat machines. Prerequisite: PHYS 154, 155

Pre- or Co-requisite: MATH 261 or equivalent

4 credits (3 lecture hours, 2 laboratory hours), spring semester

PHYS 255 – UNIVERSITY PHYSICS IV – OPTICS AND MODERN PHYSICS

This course is an introductory exploration of increasingly explanatory theories of light and matter, from classical optics to modern physics and cosmology. The discussion of optics includes concepts and applications of ray optics (reflection, refraction and image formation) and wave optics (interference, diffraction and polarization). The suite of modern physics includes elements of relativity and quantum mechanics applied to the study of matter in atomic, nuclear, molecular and solid state physics.

Prerequisite: PHYS 154, 155

Pre- or Co-requisite: MATH 262 or equivalent

4 credits (3 lecture hours, 2 laboratory hours), spring semester

PLASTICS TECHNOLOGY

PLAS 121 - INTRODUCTION TO PLASTICS

An Introductory course covering: basic chemistry, plastics materials, product applications, processing methods, assembly and finishing techniques.

4 credits (3 lecture hours, 2 laboratory hours),

This course satisfies the Liberal Arts and Sciences requirement.

PLAS 131 - PLASTIC PRODUCT & MOLD DESIGN

Basic principles of molded part and tooling design. An emphasis on injection molded parts and the steel molds in which they are made. The course culminates into a student designed mold to be built and used in the machine tools and plastics laboratories.

3 credit hours (2 lecture hours, 3 laboratory hours), spring semester

PLAS 221 - PLASTICS MANUFACTURING PROCESSES

This course applies the machining principles acquired in Manufacturing Processes I (MFG 221) toward the repair, machining and assembly of plastics tooling which was designed in Plastic Product and Mold Design (PLAS 131). Prerequisite: PLAS 131

1 credit hour (3 laboratory hours), spring semester

PLAS 231 - PLASTICS PROCESSING I

Theory, operation and setup of major plastics production processes. These include injection molding, blow molding, extrusion, thermoforming, rotational molding, compression molding, and foaming processes. The processing of reinforced plastics is also covered.

Prerequisite: PLAS 121

4 credit hours (3 lecture hours, 3 laboratory hours), fall semester

PLAS 241 - PLASTIC MOLD CONSTRUCTION

A laboratory course which combines use of the machining and plastics laboratory operations. Students will build a mold, including its necessary related tooling, to produce a finished plastic part previously designed in the PLAS 131 course. The part is then produced in the plastics laboratory.

2 credit hours (6 laboratory hours), spring semester

PLAS 251 - PLASTICS PROCESSING II

The final course in the plastics curriculum. It covers the secondary processes of decorating and coating, finishing, and assembling of plastics products to conclude the final sequence of production. The basic concepts of statistical process control (SPC) and total quality management (TQM) are also introduced and the environmental aspects of plastics are examined.

Prerequisite: PLAS 231

2 credit hours (1 lecture hour, 3 laboratory hours), spring semester

POLITICAL SCIENCE

POLI 101 - AMERICAN NATIONAL GOVERNMENT

Topics include nature, functions and philosophy of the government of the United States, importance of the individual in the American constitutional system and the dynamic aspects of that structure.

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

POLI 111 - STATE AND LOCAL GOVERNMENTS

Topics include state and local government structures-grass roots politics, parties, and policies on state, county, city, township, village, and special district levels. Interrelationships, structures, functions, financing, problems and how they are approached today. Participation directly and indirectly in these governments by the average citizen.

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

POLI 113 - AMERICAN JUDICIARY SYSTEM

This course introduces students to the operations of criminal, civil, and appellate courts and their key participants and includes an evaluation of the American Judiciary System.

3 credits (3 lecture hours) fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement.

POLI 151 – INTRODUCTION TO COMPARATIVE GOVERNMENT

This is an introductory course in comparative government that examines both the theoretical and real-life issues confronting governments today. It discusses such basic concepts as: the social contract, democracy, authoritarianism, capitalism, and socialism. Concepts and structures are presented in the context of actual contemporary (non-U. S.) world governments.

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization.

PSYCHOLOGY

PSYC 101 – INTRODUCTION TO PSYCHOLOGY

This course includes an introduction to the scientific study of behavior, mental processes, and the influences upon them. It also covers major theories and findings in psychology, including learning, cognition, abnormal psychology, and others.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 103 - INTRODUCTION TO APPLIED PSYCHOLOGY

An introduction to the Applied Psychology major, the course discusses career options in psychology, and provides information on choosing and preparing for a career path with a psychology degree.

Prerequisite: Major in Applied Psychology; pre- or co-requisite PSYC 101

1 credit

PSYC 161 – SOCIAL SCIENCE AND PSEUDOSCIENCE

This one-credit course provides an in-depth look at how social scientists collect and assess evidence for and against their theories. We will compare these methods to similar techniques from popular culture, particularly paranormal investigations.

1 credit (3 lecture hours), spring semester, total of 5 weeks

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 221 - BIOLOGICAL PSYCHOLOGY

This course is an introduction to the biological side of psychology. Students will gain knowledge of physiological processes and their relationship to human thought and behavior.

Prerequisite: Grade of “C” or better in Introduction to Psychology (PSYC101) and grade of “C” or better in Human Biology (BIOL 105) or the equivalents.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 241 – CHILD DEVELOPMENT

A survey of the biological, cognitive, emotional, and social aspects of human growth and development from birth to adolescence. Special emphasis on contemporary theories.

Prerequisite: PSYC 101 or equivalent, or permission of instructor

3 credits (3 lecture hours), fall or spring semester.

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 242 - ADOLESCENT DEVELOPMENT

This course will focus on the general principles and theories of development during the adolescent period. Topics included are biological and cognitive processes, psychosocial development, identity and other special issues and concerns in adolescence.

Prerequisite: PSYC 101 or equivalent, or permission of instructor

3 credits

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 243 - ADULT DEVELOPMENT

This course covers the years between 18 and 50 are the center of life, a time of growth, opportunity, and crisis. It examines what philosophers, social scientists, psychologists and other human beings have theorized about the process of living and aging. Moral as well as personality insight and strategies for survival will be explored so that future coping with life's changes will not be as isolating or overwhelming.

Prerequisite: PSYC 101 or equivalent or permission of instructor

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 251 - ABNORMAL PSYCHOLOGY

This course examines psychological disorders from a variety of perspectives. In addition to the usual survey of psychological disorders across diagnostic categories, it also considers the possible causes of psychological problems and a wide variety of therapeutic techniques used to treat them. The history and scientific underpinning of

psychological diagnosis and treatment is also covered.

Prerequisite: PSYC 101 or equivalent, or permission of instructor

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 255 - PSYCHOLOGY OF PERSONAL ADJUSTMENT

This course examines personal growth and adjustment throughout the life span, encompassing theory research and practical applications. Topics include: theories of adjustment, characteristics of the healthy personality, inter-personal relationships, adjustments to school, work, and retirement, understanding and managing stress, human sexuality, and strategies for coping and adjustment.

Prerequisite: PSYC 101 or equivalent or permission of instructor

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 284 - PSYCHOLOGY OF GENDER

This course examines factors that contribute to the development of gender, explores internal and external pressures that mold and modify male/female behavior and personality. Cultural and ethnic differences between men and women are also studied.

Prerequisite: PSYC 101 or equivalent or permission of instructor

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 291 – HUMAN DIVERSITY IN SOCIAL CONTEXT

The course examines diversity, including race, gender, sexual orientation and selected topics. A specific focus will be given to group and institutional identity formation. Theories of bio-psycho-social development, reference group affiliation, social stratification, oppression and institutional discrimination.

Prerequisite: PSYC 101 or SOCI 101

3 credits (3 lecture hours), fall or spring semester

PSYC 304 - INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

This course is designed to help students develop an understanding of human behavior in work settings, the variables which affect workers and their productive efficiency and strategies to improve productive human relations in such settings. Prerequisite: PSYC 101 or equivalent, junior-level status (or permission of instructor)

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 325 - MOTIVATION AND BEHAVIOR

This course examines the various theories that attempt to explain the complex reasons why humans pick one behavior or goal over another. It will cover many theories of motivation, including (but not limited to) physiological regulation, pleasure-seeking, external incentive, and such modern theories as competency and effectance motivation.

Prerequisite: Grade of 'C' or better in Introduction to Psychology (PSYC 101), major in Applied Psychology or permission of instructor.

Credits (3 lecture hours), fall or spring semester

PSYC 361 - RESEARCH METHODS AND APPLICATION IN APPLIED PSYCH I

The purpose of this course is to provide students with an introduction to the research methods and statistical interpretation used in the scientific discipline of psychology. This course will introduce basic concepts in research methods and assumptions used to design studies and

will also present basic concepts from statistical analysis on how to design studies. Basic concepts from statistical analysis on how to describe data, evaluation and presentation of research methods and findings will also be covered.

Prerequisite: Grade of “C” of better in Introduction to Psychology (PSYC 101), grade of “C” or better in Inter-mediate Algebra with Trigonometry (MATH 102), and grade of “C” or better in Principles of Computers and Applications (CITA 101) or the equivalents, or permission of instructor.

4 credits (3 hours + lab), fall semester

PSYC 362 - RESEARCH METHODS AND APPLICATION IN APPLIED PSYCH II

The purpose of this course is to provide a continuation of the material and topics from Research Methods and Statistical Application 1. This course will provide instruction into specific types of studies commonly conducted in the psychological sciences and the statistical methods used to analyze and interpret the data gathered in those studies.

Prerequisite: Grade of “C” or better in Research Methods and Application I (PSYC361) or the equivalent

4 credits (3 hours +lab), spring semester

PSYC 381 - PERSONALITY

This course will introduce students to various theories used to study stable traits and dispositions and how they are related to human behavior. This course will also explore many theories of personality including (but not limited to) Psychoanalysis, Neo-Freudian, Humanistic, Biological, and Evolutionary.

3 credits Offered fall or spring semester

Prerequisite: Grade of “C” or better in Introduction to Psychology (PSYC 101), major in Applied Psychology or permission of instructor

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 384 - GROUP BEHAVIOR

This course examines human behavior in small groups. The emphasis will be on participation in face-to-face small groups focusing on the group's behavior and each individual's behavior, including interaction style and skills.

Prerequisite: PSYC 101 or equivalent, and junior-level status (or permission of instructor) 3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC 386 - SOCIAL PSYCHOLOGY

This course examines the relationship between the individual and the group, the influence of culture and of institutions on humans, factors in the development of social attitudes, and the psychology of mass movements and of social decisions.

Prerequisite: PSYC 101 or equivalent, or permission of instructor

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

PSYC405 APPLIEDPSYCHOLOGYINTERNSHIPORIENTATION

Prepares students in the B.S. in Applied Psychology degree program for the 120-credit internship in the following semester. This course will introduce students to workplace expectations and norms and provide assistance in students' applications to internship.

Prerequisite: Major in Applied Psychology, successful completion of at least 90 credits or permission of instructor

1 credit (1 lecture hour), fall semester

PSYC 406 - APPLIED PSYCHOLOGY INTERNSHIP

This course involves supervised fieldwork in a selected business or human service organization.

Students carry out a planned program of educational experiences under direct supervision of a senior staff member on site. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report, and an oral presentation.

Prerequisite: Grade of “C” or better in PSYC 405, (Applied Psychology Internship Orientation), major in Applied Psychology, all other degree course work successfully completed.

12 credits, spring or summer semester

PSYC 410 - SENIOR SEMINAR IN APPLIED PSYCHOLOGY

This course provides a framework for students to connect the theoretical concepts they mastered in their previous coursework to the practical concerns found outside of the laboratory, in business and in human services. As a topical course, exact content will vary from year to year.

Prerequisite: Completion of at least 12 credits in PSYC courses at the 300-level or above or the equivalent or permission of instructor.

3 Credits (3 lecture hours), fall semester

PSYC 461 - TESTS AND MEASURES

Thiscourseisahands-onintroductiontotestingandpsychologicalmeasurement, including, basic psychometrics such as IQ and personality, academic testing such as the SAT and achievement tests, and employment related testing such as aptitude testing. Students will learn the fundamentals of what makes a good test, and the strengths and weaknesses of many common commercial tests.

Prerequisite: Grade of “C” or better in Introduction to Psychology (PSYC 101), grade of “C” or better in Research Methods in Applied Psychology I (PSYC 361) and grade of “C” or better in Applied Psychology II (PSYC 362) or the equivalents), major in Applied Psychology or permission of instructor

3 credits (3 lecture hours), fall or spring semester

RENEWABLE ENERGY

RENG 101 – BASIC ELECTICITY FOR RENEWABLE ENERGY

Introductory course covering DC and AC electrical circuits as applied to renewable energy fields, including solar photovoltaics, small wind, micro hydroelectricity, biofuel generators, and standalone power systems (batteries and generators). Fundamental theoretical concepts will be intimately linked to hands-on laboratory exercises that form the basis for subsequent renewable energy courses. Power conditioning components will also be emphasized, including charge controllers, inverters, and diversion loads.

Co-requisite: MATH 102

4 credits (3 lecture hours and 2 lab hours), fall semester

RENG 102 – RENEWABLE ENERGY RESOURCES

A scientific examination of the energy field with emphasis on alternate energy sources; their technology and application will be covered in this course, in addition to present needs and future demands; conventional sources, biomass conversions; wind power; geothermal; solar and nuclear energy. Conservation methods are stressed. Knowledge of intermediate algebra is highly recommended for this course.

3 credits (3 lecture hours), fall semester, (spring semester online only)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

RENG 103 – RENEWABLE ENERGY SEMINAR

The course provides the student with an introduction to renewable energy resources and systems, recent socioeconomic renewable energy issues, and career opportunities in the field of renewable energy and sustainability.

1 credit (1 lecture hour per week), fall or spring semester.

RENG 150 – ANALYSIS TECHNIQUES FOR RENEWABLE ENERGY

This course provides students with fundamental analysis skills pertinent to the field of renewable energy systems. Course focus is on energy and power conversions, algebraic fractions, logarithmic and exponential power functions, Euclidean graph interpretation, and fundamental statistics, with a strong emphasis on renewable energy system examples.

Pre – or Co-requisite: MATH 102, RENG 102

1 credit (1 lecture and 1 hr. recitation weekly), spring semester

RENG 221 – INTRODUCTION TO SMALL WIND SYSTEMS

This course provides students with an introduction to wind energy and the impacts of turbulence, frequency distributions, and tower height on the wind resource. Students are engaged with installation, maintenance, and troubleshooting small wind system (those <100 kW in size). This course covers the Job Task Analysis for the North American Board of Certified Energy Practitioners (NABCEP) Small Wind Installer examination.

Prerequisites: RENG 101 or ELEC 190 or DTEC 125 or AGEN 125, and PHYS 107 minimum grade of C.

3 Credits (2 hours lecture, 2 hours laboratory).

RENG 225 – TOWER CLIMBING AND RESCUE

This course is designed to give hands-on experience for those entering the residential wind turbine industry. Initial focus is on tower climbing standards, terminology of the tower climbing industry, and competent climber expectations and duties. Emphasis will be placed on working safely at heights, teamwork in stressful conditions, and fall protection equipment inspection. Students will be held to the National Association of Tower Erectors Authorized Climber and Competent Climber standards. Prospective students should be aware that this course is physically demanding and requires the willingness to be at heights. Must be able to lift 50 pounds and climb a ladder.

Prerequisite: Renewable Energy major(s), or permission of instructor

2 credits (1 hour of lecture and 2 hours of laboratory), spring semester

RENG 231 – INTRODUCTION TO SOLAR PHOTOVOLTAICS

This course provides students with an introduction to solar energy and the impacts of seasonality, aspect, and latitude on solar resources. Students are engaged with system components and design of solar photovoltaic electricity generation in both grid-tied and off-grid systems. This course covers the Job Task Analysis for the North American Board of Certified Energy Practitioners (NABCEP) Solar PV Entry Level examination.

Prerequisites: RENG 101 or ELEC 190 or DTEC 125 or AGEN 125, and MATH 102 minimum grade of C.

3 Credits (2 hours lecture, 2 hours laboratory).

RENG 306 – ALTERNATIVE FUEL VEHICLES

This course explores current and future technology in the automotive industry in the areas of alternative power sources. Alternative vehicles such as hybrid electric, full electric (EVs), biofuels and fuel cell technology will be studied. Students will learn automotive technology necessary to understand the hurdles required to achieve a fully sustainable vehicle. Prior knowledge of automotive technology and internal combustion theory is helpful but not necessary.

2 credits (1 lecture hour and 3 laboratory hours), spring semester

RENG 310 – BIOMASS ENERGY RESOURCES

This course provides students with a technical understanding of biomass energy resources, materials, and production systems. Two broad categories of biomass energy resources are considered: dedicated energy crops and waste streams or coproducts. The primary focus of the course is on the production of dedicated bioenergy sources, including agriculture, forestry and aquaculture feedstocks, and recovery of biomass from waste streams, including agriculture, forestry, municipal and industrial systems. The course also provides an introduction to chemical, biological, and thermal conversion pathways of biomass into useful energy sources and materials.

Prerequisites: BIOL 120 or CHEM 110 or (RREN 302 or RREN 332) and MATH 102, or permission by the instructor.

3 credits (2 lecture hours, 3 lab hours), fall semester

RENG 315 – BIOMASS ENERGY RESOURCES II

This course builds on RENG 310 Biomass Energy Resources, with more emphasis on dedicated energy crops and woody biomass production systems. This course provides the student with a scientific and technical understanding of biomass energy crops and production systems with

a focus on: dedicated energy crops establishment, site preparation, and planting methods; and harvesting, pre-processing and handling of agricultural and woody biomass crops as feedstocks for biomass-to-energy conversion systems.

Prerequisite: RENG 310

3 credits (2 hours of lecture and 3 hours of laboratory), spring semester

RENG 321 – INTRODUCTION TO MICRO HYDROELECTRICITY SYSTEMS

This course provides students with an introduction to hydroelectricity and the impacts of head, flow, and fluid dynamics on the useable water resource. Students are engaged with installation, maintenance, and troubleshooting micro hydroelectricity systems (those <10 kW in size). Course focus will be on sizing penstock, mapping the hydro resource, and identifying environmental concerns with small hydro systems.

Prerequisites: ELEC 291, AGEN 151 and PHYS 127 minimum grade of C. 3 Credits (2 hours lecture, 2 hours laboratory).

RENG 410 – BIOMASS ENERGY CONVERSIONS I. BIO- CHEMICAL

This course provides the student with a scientific and technical understanding of biomass energy conversions with a focus on biological-chemical conversions (e.g., fermentation, distillation, anaerobic digestion, etc.) of plant and waste compounds into useful energy sources such as biodiesel, ethanol, and methane. The focus of the course includes both small-scale and production-level energy systems designed to convert energy crops and waste streams into useable energy sources and products for chemicals, liquid and gaseous fuels, heat and electricity. Prerequisite: RENG 310, and BIOL 120 or BIOL 285

3 credits (2 hours of lecture and 3 hours of laboratory), fall semester

RENG 415 – BIOMASS ENERGY CONVERSIONS II. THERMO- CHEMICAL

This course provides the student with a technical understanding of biomass energy conversions with a focus on thermal-chemical conversions (e.g., pyrolysis, gasification, combustion) of plant and waste compounds into useful energy sources such as torrified wood, char, bio-oils, synthesis gas. The focus of the course includes both small-scale and production-level energy systems designed to convert energy crops and waste streams into useable energy sources and products for chemicals, liquid and gaseous fuels, heat and electricity.

Prerequisite: RENG 310, and CHEM 101 or CHEM 121

3 credits (2 hours of lecture and 3 hours of laboratory), spring semester

RENG 420 – SMALL WIND SYSTEMS

The focus of RENG 420 is on siting small wind systems, plotting and analyzing Weibull and Rayleigh wind distribution functions, analyzing wind shear and turbulence data, tip-speed ratios, optimizing turbine-inverter inter-actions for maximum energy production, rotor design, electrical system design, National Electrical Code, and system troubleshooting. Paperwork necessary for grant funding and New York State ordinances are also covered. This course will heavily emphasize the NABCEP requirements for small wind site assessment. Prerequisite: MATH 103, and RENG 221

3 credits (2 hours of lecture and 3 hours of laboratory), spring semester

RENG 430 – SOLAR PHOTOVOLTAIC SYSTEMS

The focus of RENG 430 is on siting solar PV systems, National Electrical Code Article 690, roof analysis, wind loading, weight loading, array withdrawal forces, sliding forces, 1- line electrical diagrams, system grounding, off-grid systems, optimizing system efficiency, and troubleshooting. Paperwork necessary for grant funding and New York State local ordinances are also covered.

Prerequisite: MATH 103, and RENG 231

3 credits (2 hours of lecture and 3 hours of laboratory), fall semester

RENG 460 – SYSTEMS INTEGRATION

This is a capstone class for the Renewable Energy degree program. Quantitative, technical writing, and presentation skills (oral and written) will be applied to design and propose a renewable energy system for a landowner. Students are expected to perform an energy audit, recommend energy efficiency and conservation measures, assess renewable energy resources available, design a full system consistent with landowner objectives, check for town ordinance regulations, prepare applicable paperwork for incentives and utility interconnection agreement, and conduct a financial analysis for the system. A final written and oral presentation will be graded.

Prerequisite: Minimum of two 400-level RENG courses

3 credits (3 lecture hours), spring semester

RENG 490 – RENEWABLE ENERGY INTERNSHIP

Thiscourseisintendedtoprovidethestudentwithaprofessionalworkexperience in renewable energy or energy efficiency. This work experience should range from 120 to 600 hours (40 hours per credit) and apply theoretical and technical knowledge in a professional setting. Prior to taking this course, students are required to develop a resume, create goals and objectives of the internship, and seek internship organizations in conjunction with their internship advisor while in RREN 450. To qualify for the internship, the internship sponsor, student, and academic advisor must sign a written contract. Students will be required to prepare and submit interim progress reports, develop and submit a comprehensive written report, and deliver a professional presentation of their internship experience.

Prerequisite: RREN 450, enrollment in the Renewable Energy B. Tech. program, and permission from the instructor.

3-15 credits, spring or fall semester

RENEWABLE RESOURCES

RREN 302 – RIPARIAN ECOLOGY AND WETLAND MANAGEMENT

The focus of this course is on processing functions and structure of riparian and wetland areas and the multiple human influences on these areas. The options for management of these areas will be stressed. Lectures are used to introduce students to the principles and concepts; and lab exercises are used to visit and evaluate field sites for future management consideration.

Co-requisite: NATR 210

Prerequisites: NATR 101, NATR 115, or college-level course in ecology, RREN matriculation or permission of instructor

3 credits (2 lecture hours, 3 laboratory hours) fall semester

RREN 303 - FUNDAMENTALS OF GEOSPATIAL SYSTEMS

This course is intended to cover the fundamentals of geospatial information systems. These include the geographic information system (GIS) which represents a computerized data management system designed to input, store, analyze and output geographically-referenced spatial data; the global navigation satellite system (GNSS) which combines globally-functional satellite constellations (including the U.S. Global Positioning System or GPS) with global and regional ground-based reference stations (at accurately surveyed locations) to enhance and broaden positioning; and remote sensing which is widely used to gather information about features on the earth's surface without being in physical contact with these features. The course is designed to provide students who possess limited geospatial technology and analysis background with the ability to gather spatially=distributed and geographically-references data, query data, analyze spatial relationships, and produce professional outputs. The specific topics covered include geospatial data models, geodesy, datums, map projections, and coordinate systems; mapping and cartographic output; data collection and entry; GNSS and coordinate surveying; aerial and satellite imagery; geospatial and tabular data analyses; basic geospatial analysis; advanced geospatial (including terrain) analyses; geospatial estimation; geospatial modeling; and data standards and quality. The laboratory work will focus on the practical application of geospatial information systems following the hands-

-on approach where the student is expected to gain practical knowledge on using QGIS, ArcGIS for Desktop, aerial and satellite imagery, and a number of positioning and navigation systems.

Prerequisite: NATR 213 and RREN matriculation, or permission of instructor

4 credits (2 lecture hours, 4 laboratory hours), spring semester

RREN 305 – RENEWABLE RESOURCES LAWS AND REGULATIONS

The focus of this course is on the major federal environmental and related health and safety statues currently in force. This course will also make general suggestions and give ideas on how one can identify potential environmental law problems and how to resolve them as effectively and efficiently as possible.

Prerequisite: Bachelor degree standing or permission of instructor 3 credits (3 lecture hours) spring semester

RREN 312 – AQUATIC SAMPLING DESIGN AND TECHNIQUES

A comprehensive study of sampling theory, design and methodologies currently used in the aquatic sciences. Course specifically addresses research sampling considerations and strategy design; sampling statistics and analysis; sampling and characterization of lake, river and wetland ecosystems; watershed and catchments delineation; and stream channel morphology and characterization. Course includes field dress and safety, field data management, watercraft operation, biometry, and data analysis.

Prerequisites: NATR 250 or permission of instructor

3 credits (2 lecture hour, 3 laboratory hours), fall semester

RREN 332 – ENVIRONMENTAL PLANNING AND NATURAL RESOURCES MANAGEMENT

Current issues, theories, practices and trends associated with multiple-use environmental planning and natural resource management. Emphasis is on critical thinking processes for the identification, definition, and resolution of environmental problems; planning and the implementation of plans; and management strategies for specific management goals.

Prerequisite: RREN matriculation or permission of instructor

3 credits (3 lectures hours), spring semester

RREN 412 - ECOSYSTEM ADAPTIVE MANAGEMENT

This is the capstone course of the Renewable Resources curriculum, building upon theory and analytical skills gained in prerequisite courses and closely integrated with RREN 332 - Environmental Planning and Natural Resources Management. This course will integrate theory and technical management concepts with policy considerations so that terrestrial, aquatic and human system management issues may be approached at a systems-level rather than as individual mitigation or mediation efforts.

Prerequisite: RREN 332

3 credits (2 lecture hours, 3 laboratory hours), fall semester

RREN 420 - GEOSPATIAL TECHNOLOGY APPLICATIONS I

This course involves the presentation of two integrated teaching modules that focus on the application of geospatial technology to forest and wildlife management. The first module includes the application of geospatial technologies to the integrated management and

monitoring of forest land. The second module utilizes the application of geospatial technology to assess habitat resources for wildlife management. The two modules incorporate the global positioning system (GPS), geographic information system (GIS), and remote sensing technologies combined with field-tested, scientifically-based principles providing an integrated approach to natural resources management. The two modules are vertically integrated where field measurements are combined based on common sampling points.

Pre- or Co-requisite: RREN 303; and RREN matriculation or permission of the instructor 1 credit (1 lecture hour, 2 laboratory hours), 10-week course, spring semester

RREN 421 - GEOSPATIAL TECHNOLOGY APPLICATIONS II

This is an elective course in the Renewable Resources Technology BT program where students are expected to master the application of geospatial technology to natural resources management through independent and group projects where many of the college properties will be inventoried using the methodology covered in RREN 420. The course follows integrated approaches to the management and monitoring of forest land as well as the assessment of habitat resources for wildlife management by focusing on a new college property each year. Geospatial technologies including the global positioning system (GPS), geographic information system (GIS), and remote sensing are combined with field-tested, scientifically-based principles providing an integrated approach to natural resources management of the forest.

Prerequisite: RREN matriculation or permission of the instructor

1 credit (2 lecture hours), 7-week course, spring semester

RREN 450 – RENEWABLE RESOURCES INTERNSHIP ORIENTATION

This course is designed to prepare students for an internship and to assist them with the process of employment and career development. It prepares students for internship requirements such as goal definition, placement site identification, job application, performance evaluation and report writing. RREN 450 formalizes internship planning and preparation to insure that internships are procured, conducted in a professional manner, follow course guidelines, and satisfy the goals and objectives of students, faculty advisors and cooperating placement sites.

1 credit (2 lecture hours), 8-week course, spring semester

RREN 470 - INTERNSHIP IN RENEWABLE RESOURCES

This course involves supervised fieldwork at an approved placement site. Students carry out a planned program of educational work experiences under direct supervision of an owner, manager, or supervisor. . Each intern is advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation.

Prerequisite: RREN 450 and permission of the instructor 15 credits

RESIDENTIAL CONSTRUCTION

RESC 106 - GRAPHIC COMMUNICATIONS

An introduction to the graphic standards of construction working drawings wherein students learn to interpret and interpolate construction drawings, using judgment based on accepted building techniques and material usage. Functional design concepts for residential floor plans are introduced and incorporated into various residential design situations. “Chief Architect” design software is introduced in laboratory sessions giving students the ability to design homes and create complete working drawings using the latest technology.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

RESC 130 - LIGHT FRAMING

Light framing and layout work encountered in residential construction are introduced in lecture sessions and practiced in laboratory settings, dealing with the construction and modification of light home and agricultural structures.

3 credits (2 lecture hours, 3 laboratory hours), fall semester

RESC 160 - INTRODUCTION TO BUILDING MATERIALS AND ESTIMATING

A thorough introduction to the basics of platform framing and the major concepts of balloon construction, post and beam construction, and manufactured housing. Emphasis directed to understanding the advantages and limitations of contemporary building materials and methods and their impact on the construction industry. Laboratory experiences culminate with a take-off list of materials required for the proper construction of a residential structure Prerequisite: RESC 106 or permission of instructor

3 credits (2 lecture hours, 3 laboratory hours), spring semester

RESC 190 - CONSTRUCTION INTERNSHIP

Work experience in the residential construction industry is detailed in a written report documenting and stratifying the various occupational tasks encountered. The candidate must receive prior approval from the department staff after submitting a detailed proposal in writing.

Prerequisite: Approval of department staff 1-6 credits

RESC 201 - ESTIMATING AND PLANNING

The estimating consideration involved with the cost of doing business, the control of those costs, and the professional presentation of the final estimate to the prospective customer. Workbook Instruction in the use of construction calculators included in course work. The assessment portion of the class directs the student's attention toward a rational evaluation of the overall quality of a product of building material and it's propriety of use in a given circumstance. Guest lecturers from the industry and field trips to places of business enhance the student's under-standing as to the variety of opportunities within the home- building industry.

Prerequisite: RESC 160

3 credits (2 lecture hours, 2 laboratory hours), fall semester

RESC 211 - MASONRY AND FOUNDATIONS

An overview of the functional requirements of residential foundations, available systems to affect those requirements, and of the properties and uses of concrete

and masonry products in residential construction. Laboratory sessions introduce the student to skills required to plan, place, and finish concrete, plus design, layout, and erect structures using masonry products.

3 credits (2 lecture hours, 4 laboratory hours), fall semester

RESC 221 - PLUMBING

An overview of the plumbing trade including tools, skills, mathematics, nomenclature, science of fluids, cold and hot water distribution systems, and the drain-waste-vent system. The student will participate in the installation and testing of a residential plumbing system with special emphasis on setting of fixtures and trim work.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

RESC 260 - HEATING AND ENERGY SYSTEMS

The study of heat transfer in conventional building materials and construction techniques for reducing energy consumption. Subjects covered will also include residential hot water, hot air, and steam heating systems. Sizing of heating/ cooling systems and selecting of peripheral components will be covered.

3 credits (2 lecture hours, 2 laboratory hours), spring semester

RESC 270 - CONSTRUCTION PLANNING AND MANAGEMENT

A class for graduating Residential Construction majors that draws together features of all previous classes and introduces points directed toward effective planning and management of a construction project. The Senior Construction Project(s), a building activity completely organized, directed, and executed by the students, is the major concentration helping to prepare them for a management position in the home-building industry,

Prerequisite: Senior Residential Construction majors only

4 credits (1 lecture hour, 6 laboratory hours), spring semester

RESORT & RECREATION SERVICE MANAGEMENT

RRMT 320 - LEGAL IMPLICATIONS IN THE RESORT AND RECREATION INDUSTRY

This course will cover legal principles governing hospitality operations. Case studies involving the resort and recreation industry will be emphasized. Topics include responsibilities for loss or injury to guests and guest property, inn maker relationships tax laws, labor laws, building codes and public health regulations.

Prerequisites: BSAD 107 or BSAD 108

3 credits (3 lecture hours), fall semester

RRMT 398 – HOSPITALITY ANALYTICS AND REVENUE MARKETING

This course studies the application of budgeting, finance and revenue management principles at resort enterprises. Students will gain an applied understanding of hospitality analytics and measures of performance for revenue centers at resorts. Quantitative assessment tools and metrics as well as industry benchmarks will be studied. The final portion of the term will focus on case studies and culminates with a final research project which analyzes and synthesizes findings, presenting them in client ready format.

Prerequisites: FSAD 201 or TOUR 251, 30 credit hours completed, or permission of instructor

3 credits (3 lecture hours), fall semester

RRMT 399 - STUDY OF WINE AND SPIRITS

The intent of the course is to introduce the student to wine and spirits from various regions of the globe with an emphasis on location. Terroir and its importance to the evolution of wine and spirits will be integrated throughout the course. Products that are indigenous to the areas of study will be researched, discussed and examined. Sampling of the various products will be done throughout the course. The course also examines the essential items needed to set up a proper bar area. This includes glassware, and tools necessary in the preparation of the service of alcohol.

Prerequisites: CAS 240 or BSAD 112 and junior standing in bachelor's degree program or permission of instructor

3 credits (3 lecture hours)

RRMT 425 - TRAINING DESIGN AND IMPLEMENTATION FOR THE HOSPITALITY INDUSTRY

This course is an applications-based course that will provide students with a solid foundation in the principles and procedures for selecting, designing, implementing and evaluating training programs. Conducting a needs assessment, utilization of instructional design models, applying appropriate technology, and evaluating outcomes will be studied. Students will be able to link results of the training programs studied to the mission of the corporation. Prerequisite: RRMT or permission of instructor

3 credits (3 lecture hours), spring semester

RRMT 430 - THE ASSESSMENT OF CUSTOMER SATISFACTION IN SERVICE MANAGEMENT

This course will identify and utilize the various assessment issues related to evaluation and the development of instruments and methodologies. The focus will be placed on how these assessment methods can be implemented to measure customer satisfaction. Guidelines for the development of instruments and processes will be discussed with an emphasis on reliability and validity issues. Focus groups, their uses, makeup and procedures for effective use will be discussed. Company models will be used to implement and demonstrate the student's understanding of the subject material. The relationship between assessment and continuous quality improvement will be emphasized.

Prerequisite: BSAD 221 or RRMT 398 or permission of instructor 3 credits, (3 lecture hours), spring semester

RRMT 440 - TECHNOLOGY APPLICATIONS FOR RESORT AND RECREATION MANAGEMENT

This course covers the applications of various software programs that enhance efficiency in resorts and recreational facilities. Identification of information management systems and function in various departments as well as necessary interfaces to enhance service recovery and quality will be covered.

Prerequisites: TOUR 106, TOUR 153, RRMT 320

4 credits, (2 lecture hours, 2 hours of recitation), fall semester

RRMT 450 - SECURITY AND SAFETY CHALLENGES AND INTERVENTION STRATEGIES FOR RESORT ENTERPRISES

This course identifies issues of security, surveillance and safety which must be addressed by resort enterprises for loss prevention. Major concepts include operational intervention and strategies for an effective security and safety program. Legal, prevention and compliance requirements will be reviewed.

Prerequisite: BSAD 310 or permission of instructor

3 credits (3 lecture hours), fall semester

RRMT 460 - INTERNATIONAL HOTEL AND RESORT MANAGEMENT

The goal of this course is to provide students with a basic understanding of the international hotel and resort industry by examining various aspects of hotel development and management in global terms.

Prerequisites: TOUR 153

3 credits (3 lecture hours), spring semester

RRMT 465 - MANAGING ENTERTAINMENT VENUES

This course is designed to identify the components of successful entertainment venues. Special focus on strategic planning, budgeting, special considerations/ requirements, legal issues, contracts, and public relations as they relate to leveraging the department. Students will integrate hospitality skills and knowledge to formulate an executive philosophy applicable to entertainment management. The class will implement a case study approach to enhance critical thinking and presentation skills.

Prerequisite: RRMT 320 or permission of instructor 3 credits (3 hours per week, lecture), fall semester

RRMT 470 – CAPSTONE EXPERIENCE ORIENTATION

This 2 credit hour course is to be completed during the semester prior to the student's 12 credit hour capstone experience. The focus of this course will be on preparation for the capstone experience including self-assessment of workplace competencies, identification of preferred work sites, developing interviewing skills, formulating a list of ideal capstone sites, creating an electronic portfolio, the application process, designing strategic career mapping document, formulating

objectives of the experience, creating an approved project plan for the capstone experience, and completing a facility orientation schedule. Necessary forms and the capstone experience plan, (identifying projects to be completed); for RRMT 480 will be submitted by the student, and must be approved, prior to beginning their capstone work experience.

Prerequisite: FSAD 257 and RRMT 430, B.B.A Resort and Recreation Service major, or permission of instructor

2 credits (2 lecture hours)

RRMT 475 - MEETINGS, EXPOSITIONS, EVENTS AND CONVENTION MANAGEMENT

The goal of this class is to provide students with a comprehensive understanding of the meetings, expositions, events and conventions industry (MEEC). The class offers students an in-depth view of planning and management in MEEC. The course supports students with hands-on, step-by-step methods for planning and managing gatherings in MEEC.

Prerequisite: TOUR 252 and RRMT 460 or permission of instructor

3 credits (3 lecture hours), spring semester

RRMT 480 - RESORT AND RECREATION SERVICE MANAGEMENT INTERNSHIP

This is supervised field work in a selected resort and recreation business or service organization. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the Resort or Recreation Department head 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. An evaluation will be based on the quality of experiences gained from the internship.

Prerequisites: RRMT 320, 430, 440, 470 or permission of instructor

12 credits, spring semester/fall semester/summer semester

SCIENCE, TECHNOLOGY, AND SOCIETY

STS 101 – THE VALUES OF SCIENCE AND TECHNOLOGY

This course explores ethical, social, political, and religious issues associated with science and technology. For many people, the practice of science is the pursuit of knowledge, while the application of technology involves tools that may have a positive impact on society, depending upon the actions of those using them. Students in this course will analyze contemporary challenges to those views, through the use of case studies and theoretical investigations (including fiction and film). The course will confront both science and technology with questions about knowledge, expertise, progress, and neutrality. By the end of the class, students should have a richer perspective on the values and challenges of science and technology within society.

Prerequisite: “C” or better in COMP 101 Pre- or Co-requisite: Lab science

3 credits (3 lecture hours) spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

STS 301 – HUMANS VS. NATURE

An exploration of the relationship between the natural world and human attempts to understand it (science) and control it (technology). The distinction between what is natural and what is technological often informs human discourse in terms of what is permissible and what is possible. Students will survey and critique the ethical, social, and scientific distinctions between the natural world and the human world. To this end, the course will take a broad view of technology to include human artifacts and technological systems, but will also grapple with objects at the boundaries of technology and nature – domesticated animals, designed babies, and other genetic and biological "enhancements" and "reassignments."

Prerequisites: STS 101, or PHIL 201 or permission of instructor.

3 credits (3 lecture hours) fall semester.

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

STS 316 – INVESTIGATING CYBERCULTURE

This course will examine the contemporary transformation in human interaction via computer technologies. Topics investigated through reading and research include: new concepts of space and time; electronic subjectivity and anonymity; new representations of gender, race and class; emergence of new forms of expression; localization and the trend in networked individualism and the impact of hypertext and multimedia technologies on human thinking and learning.

Prerequisite: SOCI 101 or permission from the instructor.

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

STS 380 – HISTORY OF SCIENCE AND MEDICINE

This is an advanced topics course focusing on the history of science and medicine. The course surveys human understandings of the nature of the universe and of human beings, beginning with the Neolithic peoples and continuing through ancient cultures such as the Chinese and Greeks and on into the early development of modem science in Europe. It ends with a discussion of the broad developments in science and medicine occurring in the past 200 years of human history. This course can be taken for credit only once as either HIST 380 or STS 380.

Prerequisite: COMP 101 "C" or better.

3 credits (3 lecture hours) fall or spring

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

STS 401 – ADVANCED TOPICS IN SCIENCE, TECHNOLOGY, AND SOCIETY

This course focuses on a specific set of issues relating to how science and/or technology engage the larger social world. The issue set is examined in detail from a variety of perspectives (historical, philosophical, sociological, etc.). This course is designed to give upper-division students in the major an opportunity to explore a rapidly changing world in-depth. Topics vary from semester to semester. Topics selected will center around the social dimensions of recent or highly influential developments in science and technology, and might include subjects like gender and technology, modernism and science, or non-western scientific traditions.

Prerequisites: junior or senior standing and permission of instructor

3 credits (3 lecture hours) fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

STS 411 – SENIOR SEMINAR IN SCIENCE, TECHNOLOGY, AND SOCIETY

A refinement of the connection between the technical and critical skills developed throughout the STS major's coursework. In this course, the students will learn how to think critically and conceptually about the practice of STS. Each student in the course will produce a senior thesis.

Prerequisites: senior standing and permission of instructor Spring semester,

3 credits

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

SKILLS COURSES

SKLS 087 – READING ESSENTIALS

This course addresses the basic skills necessary for efficient college reading. The course concentrates on effective study reading and provides instruction and practice in vocabulary development, reading comprehension and reading rate.

3 credits (not to count toward graduation credit), 3 lecture hours, fall or spring semester

SKLS 088 – WRITING ESSENTIALS

This course is designed to develop the basic language skills. It is a developmental skills course, grounding students in the mechanics of Standard English through sentence construction and paragraph organization and development.

Prerequisite: D or better in high school English

3 credits (3 lecture hours), fall or spring semester

These credits do NOT count toward graduation credit.

SKLS 089 – ENGLISH AS A SECOND LANGUAGE

This is a course for students with limited experience with written and spoken English. Concentration on pronunciation, vocabulary development, written and spoken grammar and sentence construction, and basic reading and writing skills. The emphasis will be on everyday conversational English.

3 credits (not to count toward graduation credit), 3 lecture hours, fall or spring semester

SKLS 091 – PRE-ALGEBRA

This course consists of basic mathematics with the ground work for introductory algebra. Topics include covers operations with whole numbers, integers, fractions, decimals, percent and application problems for each area. Students will learn strategies for solving problems without the use of a calculator. The goal of Pre-algebra is to prepare the student to deal with math as it occurs in everyday life and to prepare the student for introductory algebra.

3 credits (not to count toward graduation credit), 3 lecture hours, fall or spring semester

SOCIOLOGY

SOCI 101 – INTRODUCTION TO SOCIOLOGY

Introduction to sociological concepts, with description and analysis of the structure and dynamics of human society. Consideration of contemporary social institutional trends and of the reciprocal relationship among individuals and institutions.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 201 – SOCIAL PROBLEMS

A consideration of problems confronting contemporary civilization. Topics include institutional problems within family, economic, political, religious and educational systems, as well as the effect of these problems on individuals. Potential solutions to social problems will be addressed.

Prerequisite: SOCI 101 or HIST 103, or permission of instructor

3 credits (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 220 – MARRIAGE AND THE FAMILY

Designed for students who want to gain perspectives on the evolution and current state of marriage and family relations in the United States. There will also be a focus on alternatives to the traditional notion of marriage and family. Discussion of issues such as nontraditional relationships, mate selection and dating, gender roles, love and sexuality, family planning, separation and divorce, families in crisis, etc.

Prerequisite: SOCI 101

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 221 – DEATH AND DYING

This course examines the impact of dying and bereavement on individuals, families, groups, social institutions and cultures.

Prerequisite: PSYC 101 or SOCI 101

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 250 – SOCIAL GERONTOLOGY

Social, psychological, and physiological changes experienced in aging and the responses of our society to problems faced by older people. Role changes in work and family relationships, economic and health problems, planning adjustment to retirement and beyond, institutionalization. Training of those responsible for care and management of older people.

Prerequisite: PSYC 101 or SOCI 101

3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 270 - DRUGS, SOCIETY & BEHAVIOR

Examination of the biological, psychological and sociological aspects of drug use and abuse in the United States.

Prerequisite: PSYC 101 or SOCI 101

3 credits

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 360 - SOCIAL MOVEMENTS AND COMMUNITY CHANGE

This interdisciplinary course examines social change through political advocacy and/or use of community re-sources.

Prerequisite: SOCI 101

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SOCI 390 - URBAN SOCIOLOGY

Urban sociology analyzes both the historical roots of urban development as well as the contemporary urban area as a regional social system. Basic sociological research concepts are used to discover demographic and organizational patterns and relate those patterns to urban problems and planning techniques.

Prerequisite: SOCI 101 3 credits (3 lecture hours)

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

SPANISH

SPAN 101 - BEGINNING COLLEGE SPANISH I

This course is for students who have not previously studied Spanish and who are not familiar with the language. Using a communicative approach with a variety of listening, speaking, reading, and writing activities, students will become familiar with basic structure and vocabulary of the Spanish language. Elements of Hispanic culture, customs and geography will be introduced. Note: this course is not designed for students who have taken 3 or more years of Spanish in high school, or for anyone who has passed the high school Regents Spanish exam. This course is not designed to meet the needs of heritage or native speakers of Spanish.

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

SPAN 102 - BEGINNING COLLEGE SPANISH II

This course builds on SPAN 101 to further develop and strengthen listening, speaking, reading and writing skills. Emphasizes the ability to use and understand Spanish in context. Instruction occurs in Spanish with clarification in English. Students express themselves orally, read authentic materials, understand oral input, and write compositions at high novice level. Prerequisite: SPAN 101 at Morrisville with a C grade or better, or 2 to 3 years of high school Spanish – Passing Grade in Course I and II

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

SPAN 125 – SPANISH FOR HERITAGE SPEAKERS

This course addresses the needs of students who can communicate in Spanish but need to develop and/or improve their reading and writing skills. It will enable the student to capitalize upon his/her existing language skills, expand his/her knowledge base and develop his/her ability to read, write, and communicate more effectively in the language. The student will recognize regional and dialectal differences, describing varieties of Spanish spoken in the U.S. and throughout the world. Special attention is given to specific linguistic issues such as diction, orthography and sentence structure. The course is conducted in Spanish and includes cultural discussions. Students cannot receive credit or both; SPAN 101 or 102 and SPAN 125.

Prerequisite: Placement Evaluation or by permission of instructor

3 credits (3 lecture hours) fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

SPAN 201 - INTERMEDIATE COLLEGE SPANISH I

Enhances Spanish listening, speaking, reading and writing skills. Emphasizes increasing the accuracy and depth of communicative abilities and cultural understanding. Students express themselves orally and in writing, read authentic sources, and understand clear, native speech at the intermediate level. Instruction occurs in Spanish.

Prerequisite: passing Spanish 102 with a "C" or better, permission of instructor, or passing grade on Course 3 Regents Spanish

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

SPAN 202 - INTERMEDIATE COLLEGE SPANISH II

Strengthens Spanish listening, speaking, reading and writing skills acquired in intermediate Spanish I. Emphasizes increased accuracy and depth of the students' abilities and knowledge of contemporary Hispanic culture through group and individual work. Students express themselves orally and in writing at the high-intermediate level and understand key concepts when spoken clearly at native speed. Instruction occurs in Spanish.

Prerequisite: Spanish 201 or passing grades on 3-4 years high school Spanish or permission of instructor

3 credits (3 lecture hours), fall or spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language.

TECHNOLOGY MANAGEMENT

TECH 395 – INTERNSHIP ORIENTATION SEMINAR

It is strongly suggested that this course be taken in the semester prior to the student's internship experience. Topics include the role of the internship in the student's professional development, formulating personal and professional goals, the current employment outlook in the technology field, employer expectations of an intern, formulating a job search strategy, the role of networking through the use of personal contacts and referrals, interviewing skills, the work environment in large, medium and small organizations. The documents and methods that will be used to evaluate the student during the internship will be clearly defined.

TECH 480 – INTERNSHIP IN TECHNOLOGY MANAGEMENT

In this course, student will participate in supervised fieldwork. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the business/organization. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation.

THEATER

THEA 124 - INTRODUCTION TO THEATRE

Critical, historical, aesthetic, and practical survey of dramatic forms and styles, the development of the theater, and contemporary theatrical practice. Analysis of plays of each type or period.

3 credits (3 lecture hours), fall semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

THEA 125 - PLAY PRODUCTION

Introduction to the basic techniques of acting, directing, and dramatic production. Practical experience in the fundamentals of character development, stage movement and dramatic pantomime, the designing and construction of sets and planning of lighting. Students produce various scenes and participate in the college dramatic organization.

3 credits* (3 lecture hours), spring semester

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

THEA 150 - THEATRE PRODUCTION LABORATORY

This course is an advanced hands-on course in theatre production. In this course the students will participate in the creation of a theatrical production

from casting to performance in one of these four areas: acting, design, directing, or stage management. In acting the student will develop the ability to create a character through the rehearsal process while increasing confidence and poise. In the design areas the student will research past productions, develop a design concept for the production, and execute the final design. In directing the student will choose a production for performance, research said production, develop a production concept, hold auditions, and hold rehearsal for said production up to the last performance of said production. The Stage Manager will work with the director to co-ordinate all aspects of a given production and also be responsible for the back stage areas during performance. Students will also explore the significance of theatre in our society.

Prerequisite: Permission of Instructor

For 1 credit, 2 credits, or 3 laboratory credits offered both fall and spring.

This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

Student must accumulate three credits (in any combination) to meet SUNY General Education requirement in the Arts. Students may successfully complete a combination of four credits of THEA 150 or THEA 160 toward graduation

THEA 160 – TECHNICAL THEATRE PRODUCTION LABORATORY

This course is for the student who wishes to work back stage or in the front of house for a chosen theatre production. The student will work with the stage manager and director to coordinate the front-of-house and backstage elements of a performance.

Prerequisite: Permission of Instructor

For 1 credit, 2 credits, or 3 laboratory credits offered both fall and spring. Does not meet SUNY General Education requirement in the Arts.

Students may successfully complete a combination of four credits of THEA 150 or THEA 160 toward graduation

TRAVEL & TOURISM/HOSPITALITY MANAGEMENT

TOUR 101 - TOURISM AND GEOGRAPHY

This course approaches geography from a travel industry perspective. Basic geographic regions, country locations, and landmarks of significance to the travel industry are presented.

3 credits (3 lecture hours), fall semester

TOUR 106 - INTRODUCTION TO THE TRAVEL-TOURISM/ HOSPITALITY INDUSTRY

This course is a basic introduction to the travel and tourism industry. The course explores the roles played by the various components of the industry including air transportation, maritime transportation, surface transportation, the hotel industry, the tourism industry wholesale and distribution companies and the food service segment. The course also explores potential career options available in the industry. The course focuses on team building.

3 credits (3 lecture hours), fall semester

TOUR 151 - COMPUTERIZED RESERVATIONS SYSTEM

Presents the concepts, procedures and formulas necessary for a working understanding of American Airline's SABRE Computer Reservation System. Students practice what they learn in a simulated SABRE environment with intensive hands-on computer exercises, case studies and role playing, travel reservations and bookings, travel agency and airline accounting, and legal issues affecting both.

3 credit hours

TOUR 152 - TRAVEL INDUSTRY OPERATIONS AND ADMINISTRATION

Provides students with a basic understanding of travel agency and airline operations and administration as well as the legal environment of the travel industry. Topics include the role of ARC and IATAN, travel agency location and staffing, travel sales techniques and customer

service skills are emphasized. 3 credits (3 lecture hours), spring semester

TOUR 153 - HOTEL OPERATIONS

This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, from the reservations process to checkout and settlement. The course examines the various elements of effective front office management, paying particular attention to the planning and evaluation of operations and to human resource management. Front office procedures and management are placed within the context of the overall operation of a hotel. Certification by the American Hotel/Motel Association.

3 credits (3 lecture hours), spring semester

TOUR 200 - INTERNSHIP IN CUSTOMER SERVICE

Customer service laboratory experience in conjunction with an approved restaurant or hospitality operation. A field experience providing food service administration, restaurant management, and travel/tourism majors with an opportunity to apply their knowledge in a customer service setting.

3 credits, fall semester, spring semester

TOUR 250 - TOURISM PLANNING AND DEVELOPMENT

The goal of this course is to define the major concepts in tourism and to explore those factors influencing tourism. The course will also examine how the economic impact of tourism has become an important factor in the wealth of nations. Transportation Fee: $30

Prerequisites: TOUR 153 or permission of instructor 3 credits (3 lecture hours), fall semester

TOUR 251 - COOPERATIVE WORK EXPERIENCE

Cooperative work experience will be completed in an approved position in the Travel-Tourism/Hospitality industry (320 hours). Comprehensive written and oral reports are required at the end of the work experience during the fall semester.

2 credits (2 lecture hours), fall semester

TOUR 252 - MEETING AND CONVENTION SERVICES

Introduction to convention and group planning as it relates to the Hospitality Industry. This certificate course includes marketing the facility for various meetings and conventions, catered events, planning, cost controls, special services, technology implications, and sales. National Certification by the American Hotel and Lodging

Association.

3 credits (3 lecture hours), spring semester

TOUR 253 - TRAVEL AGENCY OPERATIONS

This course will provide a hands-on experience focusing on customer service for the retail travel industry. The class will take place at the SUNY Morrisville Travel Center utilizing SABRE.

Prerequisites: TOUR 151 and TOUR 152

2 credits (4 hours recitation), spring semester/fall semester

TOUR 255 - TOURISM AGENCY OPERATIONS

This course will provide the student with an advanced practical experience in tourism promotion agencies. The course will be taught in conjunction with a tourism-related business. Students will complete an externship.

Prerequisites: TOUR 151 and TOUR 152

2 credits (4 laboratory hours), fall and spring semester

TOUR 390, CULTURAL IMMERSION AND INTERNATIONAL CUISINE FIELD STUDY

This course is a full international cultural immersion. This special learning community coursework offers knowledge, exposure, and historical insight to international culture and cuisines. (The initial study abroad program is in Italy.) The particular aspects of regional ingredients and traditional cooking techniques along with the lifestyles and historic origins are discovered. Students will be guided to practice cultural relativism using a holistic approach and practice hands-on ethnographic research methods as they study the people, art, and food & wine regions of a country. Students will practice and develop interviewing,

observing, recording and evaluating skills. Students will examine the indigenous lifestyles, family structure, foods and traditions, gender roles, religion, art, architecture, human rights and globalization. Being a conscientious world-traveler makes for a better hospitality professional. Pre and post-trip work will be assigned. Lectures will also take place abroad. (Currently presented by the partner institution, Apicius via the Florence University of the Arts.)

Co-Requisite: ANTH 260 offered at TC3* Prerequisites: FSAD 100 or FSAD 101 or CUL 101, and TOUR 106, and TOUR 215 or FSAD 201. Permission of the Hospitality Technology Department.

*Students enrolled in TOUR 390 will also be required to enroll in the Cultural Field Study Course at TC3 (our Study Abroad travel partners) which will run concurrently with TOUR 390

3 Credit hours, spring semester

WELLNESS

WELL 101 – STRESS AND WELLNESS

This course introduces the student to the concept of stress, the normalization of stress, nutritional and exercise practices as related to stress, personal health strategies and specific skills for stress management.

3 credits (3 lecture hours), fall or spring semester

WOOD PRODUCTS TECHNOLOGY

BOAT 110 – INTRODUCTION TO BOAT BUILDING STRIP PLANK CANOE

A brief review of this history, uses, design and construction of wooden boats, with particular emphasis on canoes and kayaks. Course will include basic techniques for lofting, design and construction of a wooden mold for strip-plank boat building. Student will build a cedar strip canoe in the laboratory.

Co - Prerequisites: WOOD 101 or with permission of instructor. 3 credits, (1 lecture hour, 3 hours laboratory) spring semester

WOOD 101 - WOOD PRODUCTS AND PROCESSES

An introduction to the furniture/lumber industry and its products, including commercial woods, furniture and cabinets, layout, hardware and assembly, as well as safety and nomenclature of machines are topics in this course. Laboratory includes introduction to common woodworking equipment and construction of small furniture project. There is a laboratory fee.

3 credits (2 lecture hours, 2 laboratory hours), fall semester

WOOD 160 - WOOD TECHNOLOGY

Anatomical features and physical properties and uses of wood are covered in this course as well as macro identification of commercially important species. 3 credits (2 lecture hours, 3 laboratory hours), spring semester

WOOD 170 - LUMBER MANUFACTURE AND GRADING

This course covers basic sawmilling practices, the breakdown of logs into lumber, basic equipment and applications, air-drying of lumber and lumber grading rules.

Prerequisite: MAGN 101 or permission of instructor

3 credits (2 lecture hours, 3 laboratory hours), spring semester

WOOD 180 - FURNITURE DESIGN AND CONSTRUCTION

Survey of the various styles of furniture, their design and construction. Students will design and construct a piece of furniture.

Prerequisite: WOOD 101, DRFT 151, CAD 181 or permission of instructor

3 credits (2 lecture hours, 2 laboratory hours), spring semester

WOOD 190 - SUMMER WORK STUDY

This consists of work experience of at least 10 weeks in the wood industry between the first and second year a report is required. Prior instructor's approval and pre-registration is necessary.

3 credits, fall or spring semester

WOOD 201 - WOOD DESIGN PROBLEM

Special problem in wood design and fabrication as approved by instructor are among the topics covered in this course.

Prerequisite: WOOD 101 1 credit, spring semester

WOOD 211 - WOOD INDUSTRY FIELD TRIP

Supervised field trip for observation and study of organizations, facilities and processes in the various industries within the wood industry. A SWOT analysis report is required

1 credit, spring semester, senior year

WOOD 221 - WOOD GLUES, LAMINATES AND FINISHES

Basic concepts of surface preparation and application techniques used in gluing and finishing wood are covered in this course. Wood-adhesive and woodcutting relationships to assist diagnosing problems are also covered.

Prerequisite: WOOD 160

3 credits (2 lecture hours, 3 laboratory hours), fall semester

WOOD 231 - SEASONING AND PRESERVATION

Students will learn principles of wood seasoning, dry kiln operation, wood-water relationship and species variation which affect the production of defect-free dried lumber and basic wood preservation practices.

Prerequisite: WOOD 160

3 credits (2 lecture hours, 2 laboratory hours), fall semester

WOOD 241 - SECONDARY WOOD PROCESSING

Students will explore the theory, principles and methods of machining wood, fastenings and assemblies. In a production environment. There is a laboratory fee.

Prerequisites: WOOD 160, WOOD 170, WOOD 180

4 credits (2 lecture hours, 6 laboratory hours), fall semester

WOOD 260 - PRODUCTION MAINTENANCE SUPERVISION

General background in OSHA regulations pertaining to the wood & construction industry for production, installation & maintenance personnel. Basic CNC programming and job setup using “G Code” & “Master Cam” software. Course includes molder setup and operations including knife design & grinding and machine alignment.

2 credits (2 lecture hours, 2 laboratory hours), spring semester

WOOD 270 - WOOD PRODUCTION ENGINEERING

This course is a complete engineering economic feasibility study course relative to the organization, location, establishment of a wood products manufacturing plant.

Prerequisite: senior standing, WOOD 241

3 credits (1 lecture hour, 4 seminar hours), spring semester

WOOD 271 – CABINET DESIGN AND MANUFACTURING

Introduction to the principles of cabinet design and construction including emphasis on practical production problems relative to planning, layout and design, terminology, estimating, production sequence, types of construction, finishing, man-made boards, and installation.

Prerequisite or co-requisite: WOOD 101, DRFT 151, CAD 181 or permission of instructor. 3 credits (1 lecture hours, 4 laboratory hours), spring semester.