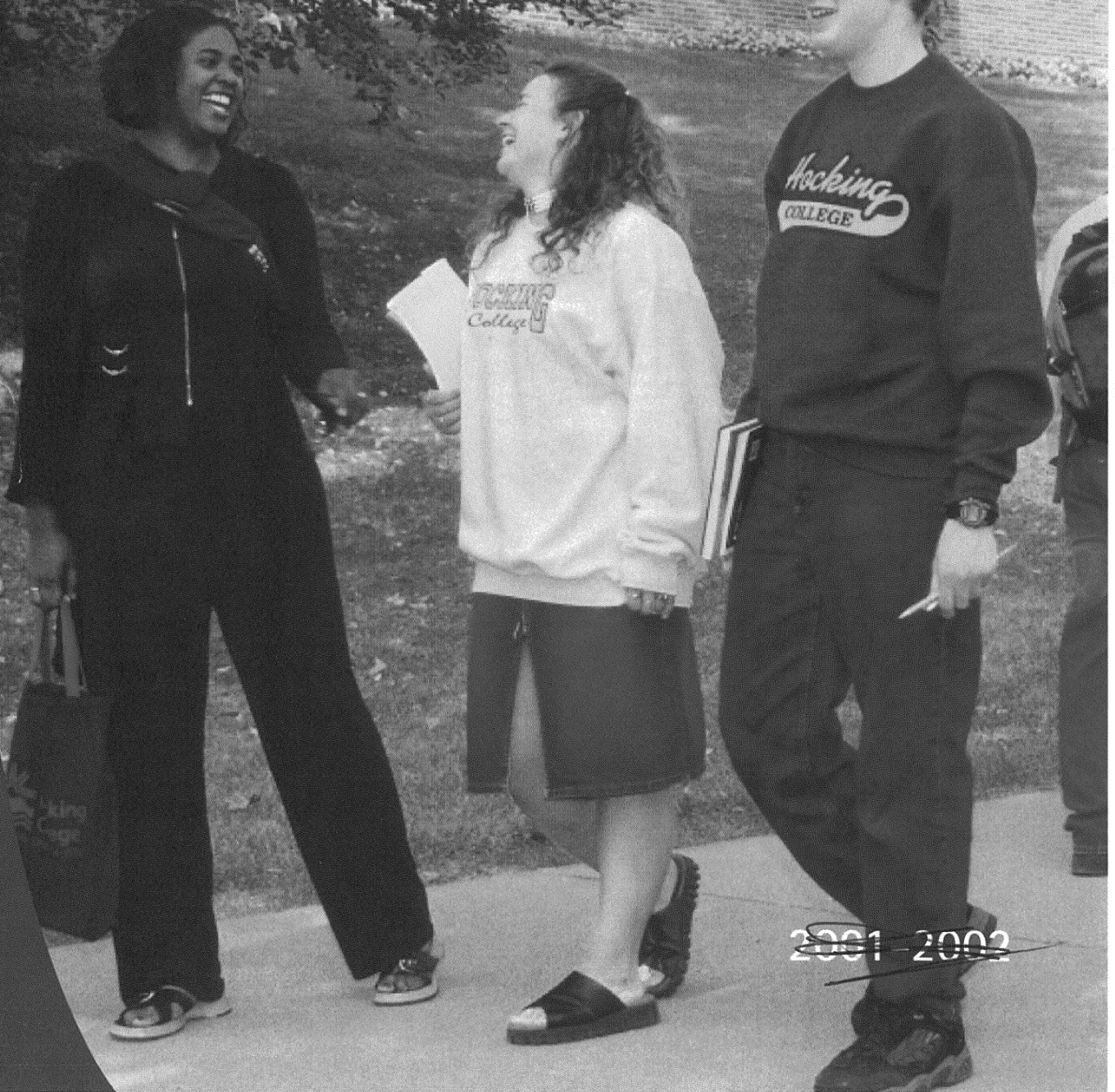


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02-03



HOCKING COLLEGE  
COURSE OF  
STUDY/COURSE  
DESCRIPTION



~~2001 2002~~



### **Course of Study/Course Description 2002-2003**

The Course of Study/Course Description guide is printed annually. New guides are available the first quarter (summer) of each academic year. For the most up-to-date information go to [www.hocking.edu](http://www.hocking.edu).

Programs and curricula at Hocking College are reviewed periodically so that our students are prepared for the constantly changing challenges of business and industry. The college reserves the right to change any provision or requirement in this catalog including fees, at any time without prior notice. The information in this publication is not to be regarded as a contract between the student and the college. Students are subject to the requirements in effect at the time they enroll.

See the current Hocking College catalog for complete technology descriptions, available services, and policies and procedures.

Hocking College does not discriminate against applicants, employees or students on the basis of race, color, creed, religion, age, sex, marital status, veteran status, national origin, ancestry, citizenship, or disability. Questions about this should be directed to Rose Marie Smith, Ph.D., Executive Personnel Director, or Stephen Miller, Ph.D., Dean of Student Life, 3301 Hocking Parkway, Nelsonville OH 45764, 740 753-3591. Accommodations for persons with disabilities may be made through the Access Center, 3301 Hocking Parkway, Nelsonville OH 45764, 740 753-3591.

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## Technical Education

Technical associate degree programs are intended to prepare students for employment immediately after graduation, for advancement, or for a career change. Credits earned in these programs also are transferrable to four-year colleges and universities. Technical programs at Hocking College prepare students for careers in business, computer and information technology, health and nursing, hospitality, industrial, natural resources, and public safety services. These two-year programs also assist students who want formal training toward advancement in their present jobs.

Technical education programs lead to the Associate in Applied Business degree, the Associate in Applied Science degree, or the Associate in Technical Studies degree. Each of these programs has a minimum of 45 technical credit hours and 42 general credit hours with actual specifications listed on the course of study for each individual program. The student must complete the courses specified for the program in order to meet degree requirements.

Although designed to prepare students for employment upon graduation, technical education programs transfer to four-year institutions. Credits accepted for transfer vary according to the program and policy of the receiving institution. Most technical degree programs have more technical courses and fewer general studies courses to transfer as the equivalent of two full years of a baccalaureate degree. Students planning to transfer a technical degree may wish to take additional general studies courses before transferring to the senior institution. Students are strongly encouraged to discuss their options with a faculty advisor.

In addition to associate degree programs, the College offers various types of certificate programs that prepare students for specific occupational positions.

## General Education

General studies courses provide instruction that is essential to a well-rounded education, including written and oral communications, humanities, natural sciences, mathematics, and social and behavioral sciences. General studies courses help the students develop ways of approaching information and experience that strengthen their reasoning capacity, their awareness of relationships and responsibilities in a social and civic context, and their attention to values and moral issues.

All students graduating from Hocking College with an associate degree must complete general education requirements. The purposes of the general education requirements at Hocking are to:

- meet employer demands for these abilities in employees;
- enable graduates to intelligently assume the responsibilities of citizenship by stimulating the examination and understanding of personal, social, and civic values;
- impart common knowledge, intellectual concepts and attitudes that every educated person should possess; and,
- make transfer to a baccalaureate degree program easier.

The Hocking general education requirement is composed of, but not limited to, a minimum of:

- Written Communications  
6 credit hour minimum

COMM 122      Communications II- 3 credits  
and  
COMM 123      Communications III - 3 credits  
or  
ENGL 151      Freshman Composition - 5 credits  
and  
ENGL 152      Advanced Essay Skills - 1 credit

- Oral Communications  
3 credit hour minimum

COMM 130      Speech - 3 credits  
COMM 135      Verbal Career Skills - 3 credits

- Mathematics  
3 credit hour minimum

MATH 108      College Algebra I - 3 credits  
MATH 110      Geometry & Trigonometry - 3 credits  
MATH 111      Intermediate Algebra - 3 credits  
MATH 112      Advanced Algebra - 3 credits  
MATH 113      Comprehensive College Algebra - 5 credits  
MATH 115      Pre Calculus - 5 credits  
MATH 163A      Calculus - 4 credits

- Social Science  
3 credit hour minimum

ARCH 102      World Prehistory - 3 credits  
ARCH 103      North American Prehistory - 3 credits  
ARCH 280      Cultural Anthropology - 3 credits  
ECON 140      Principles of Microeconomics - 4 credits  
ECON 240      Principles of Macroeconomics - 4 credits  
GOVT 142      Interacting with Government & Politics - 3 credits  
PSYC 101      General Psychology - 5 credits  
PSYC 140      Issues in Child Development - 4 credits  
PSYC 150      Introduction to Psychology - 3 credits  
PSYC 151      Developmental Psychology - 3 credits  
PSYC 152      Abnormal Psychology - 3 credits  
PSYC 154      Interpersonal Relationships - 3 credits  
PSYC 160      Behavioral Science Statistics - 5 credits  
PSYC 162      Child and Adolescent Development - 4 credits  
SOC 101      General Sociology - 5 credits  
SOC 153      Social and Cultural Awareness - 4 credits  
SOC 160      Introduction to Sociology - 3 credits  
SOC 161      Sociology of Family Living - 3 credits

SOCI 162	Social Issues – 3 credits
SOCI 165	Cross Cultural Studies - 3 credits
SOCI 169	Human Relations in Organizations - 3 credits
SUPR 235	Supervision and Leadership - 3 credits
WS 100	Intro to Women's Studies – 4 credits

- Natural Science  
3 credit hour minimum

BIOS 100	Health Science: The Human Machine - 3 credits
BIOS 101	Environmental Science - 3 credits
BIOS 102	Ecology - 3 credits
BIOS 103	General Biology – 3 credits
BIOS 107	Biology – 5 credits
BIOS 112	The Human Organism - 3 credits
BIOS 113	Anatomy and Physiology I - 3 credits
BIOS 114	Anatomy and Physiology II - 3 credits
BIOS 120	Botany - 3 credits
BIOS 132	Field Biology -3 credits
BIOS 140	Tech Aspects Anatomy and Physiology - 3 credits
BIOS 170	Zoology - 3 credits
CHEM 100	Introduction to Chemistry - 3 credits
CHEM 102	Introduction to Chemistry II – 3 credits
CHEM 130	Fundamentals of Chemistry - 4 credits
CHEM 131	Environmental Chemistry - 3 credits
GEOL 101	Geology - 3 credits
MICR 201	Microbiology - 4 credits
PHYS 103	Physics - 3 credits
PHYS 201	Physics- M. - 3 credits
PHYS 202	Physics -H.L.S. - 3 credits

## Transfer

Students whose goal is a four year degree may take technical degrees, the Transfer Module, the Associate of Individualized Studies, or selected courses at Hocking College. To transfer efficiently students should work closely with an advisor and the transfer office. Students should take courses which can be applied to specific degree requirements at the institution to which they intend to transfer. Hocking continues to develop and maintain articulation agreements and transfer guides which help simplify the process for students transferring.

## Developmental Education

Developmental courses are available for students whose assessment indicates a need to strengthen reading, writing, or math skills. Students who need developmental courses are assigned a developmental advisor. Courses in study skills are also available. In addition, the Academic Success Center and tutoring services are provided free of charge when extra help is needed.

## Degrees

The College offers a variety of educational programs that lead to associate degrees. Full-time students can complete these programs in two years or less; however, many students take longer to complete their degree requirements.

### **Associate in Applied Business (A.A.B.)**

### **Associate in Applied Science (A.A.S.)**

These degrees are awarded in recognition of successful completion of a technical education program which requires 90–110 credit hours in a specialized curriculum aimed at preparing students for entry into specific occupations.

### **Associate in Individualized Study (A.I.S.)**

This degree is awarded for the satisfactory completion of a minimum of ninety credit hours in an individually planned program designed to serve an educational objective which could not be served through another degree program of the College. The curriculum is designed largely by the student with the assistance of a designated faculty advisor. The program leading to this degree must contain an area of concentration consisting of a minimum of thirty credit hours which is formed according to the following models:

- an intra-institutional, interdisciplinary, but coherent combination of courses drawn from a minimum of two and a maximum of four instructional areas of the awarding institution;
- up to sixty credit hours awarded by the institution for documentable educational experiences or courses completed at other institutions of higher education, or educational enterprises judged by the institution to be of college level; and,
- an unusual but academically coherent combination of technical and general studies courses.

### **Associate in Technical Study (A.T.S.)**

Awarded for successful completion of a prescribed or an individually planned technical education program designed to respond to the needs for specialized technical education with an identifiable career goal. An area equivalent to 45 credit hours in technical studies may be formed either by a) a coherent combination of technical courses selectively drawn from two or more technical programs currently offered or b) courses completed or training received by a student at other post secondary institutions, vocational centers or other educational enterprises judged by the institution to be of college level. A minimum of 90 credit hours is required for the degree.

## Certificates

### **Certificate of Completion**

Awarded for successful completion of a course or series of courses totaling less than twelve credit hours and leading to the acquisition of specific knowledge and skills.

### **Certificate of Concentration**

Awarded for successful completion of a coherent set of courses which complement the associate degree and enable the learner to acquire skills in a specific area (e.g. medical office management, chemical dependency counselor).

### **Occupational Certificate**

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific employment.

**Technical Certificate**

Awarded for successful completion of a prescribed sequence of courses within the given technology in which the certificate is offered. The total credit hours are at least 50% of the number required for the associate degree in that technology. The technical component is 27-33 quarter hours with the balance being in general courses.

**Technologist Certificate**

Awarded for successful completion of higher level courses which provide academic rigor and depth beyond the associate degree. These courses may serve as a bridge to a baccalaureate degree program.



### Associate Degree Requirements

- Successfully complete (with a passing grade) the course requirements as specified on the official technology course of study, or have posted transfer credit or special credit (see approval process for each special credit option: 1] course substitution, 2] credit by advanced standing, 3] credit by exam, 4] credit by life experience or portfolio development, 5] course waiver).
- Earn a minimum of 30 credits at Hocking College (or 15 credits if from a Hocking College approved program) in addition to credits awarded by any special credit method, or credit transferred from other colleges, or any combination of methods. A minimum of 15 credits must be in technical courses (unless transfer is from a Hocking College approved program). (Residency requirement.)
- Attain a "C" (2.00) average in all technical courses for the specific degree program and a "C" (2.00) total overall cumulative point average toward the specified degree at Hocking College.
- Successfully complete COMM 122 (Communications II) and COMM 123 (Communications) or ENGL 151 (Freshman Compositions) and ENGL 152 (Advanced Essay Skills) and any additional communications requirements as specified by the official technology curriculum.
- Successfully complete MATH 108 (Introduction to Algebra) and all math requirements as specified by the official technology curriculum.
- Complete and file an Application for Graduation form with the Records Office.
- Note: Credits in fundamental and developmental courses do not meet graduation requirements. Fundamental courses are MATH 101 (Basic Mathematics), COMM 051 (Fundamentals of Reading), and COMM 050 (Fundamentals of Communication). Developmental courses are MATH 102 (Pre College Algebra), COMM 110 (Reading Communications), and COMM 121 (Communications I).
- Note: Students must meet all financial and library obligations to the College before their diploma or certificate is issued.

### Dual Degrees

To obtain a second degree, a student must have credit for all the technical courses in the second degree program, and must also have the basic or general courses that are determined as necessary by the administrator of that technical program. The student must earn a minimum of 18 technical credits beyond the total required in the first associate degree program.

### Technologist Certificate, Certificate of Concentration, Technical Certificate, Occupational Certificate, and Certificate of Completion Requirements

- Complete, with a passing grade, the course requirements specified for the technologist certificate, occupational certificate, or certificate of completion. Transfer and special credit options may be used.
- Attain a 2.00 GPA in technical courses and a 2.00 GPA for all courses required for the certificate.

## Understanding the Course of Study

The following information is provided to assist in understanding the course of study.

**Quarter:** Hocking College operates on a quarter system. The quarter is the period of time in which most courses are scheduled. Quarters are generally 11 weeks in length.

**Course Number:** The two, three or four letters and three digits (for example, COMM 122) which identify the course being offered. The course number corresponds to the course description, a brief outline of the subject matter of the course, in the course of study/course description catalog and on the web at [www.hocking.edu](http://www.hocking.edu).

**PACE Courses:** Courses preceded by a "P" are offered in a PACE format. PACE courses allow you to enroll in the course any time the college is in session and to proceed through the course work at your own rate of speed. The PACE labs are staffed with full-time instructors who are available to work with you on a one-on-one basis as needed to achieve the stated competencies. In most cases you may choose to complete the course in a traditional method or on PACE.

**Course Name:** Identifies the name of the course being offered.

**Type:** All courses are identified as either technical (T) or general (G). Technical courses provide the technical skills and knowledge required for career competency. General courses provide the common skills required in all work places and serve as a foundation for the technical program.

**Credit Hours:** The credit is a standard unit of measurement for college work. The number of contact hours per credit hour is determined by the type of activities (class hours, laboratory hours or practicum experiences).

**Class Hours:** Time scheduled as part of the instructional plan of most courses utilizing any combination of instructional methods such as presentation, directed discussion, demonstration or use of audiovisual materials.

**Lab Hours:** Time scheduled as part of the instructional plan for the practical application of the theory presented in courses. Laboratory activities may include conducting experiments, practicing procedures or skills, or clinical or field experiences.

**Course Fee:** Course fees are in addition to tuition and will automatically be added to the student's account at the time of course registration. There are three types of course fees which will be shown on your account statement: 1) supply fee - provides for consumable materials used in the course; 2) equipment fee - provides for technical equipment, computers, and software used in the course; and, 3) program fee - provides for national and international experiences, staffing of elective courses, development of alternative modes of instruction, low student to faculty ratios to assure student safety or enhance learning, malpractice liability insurance in appropriate programs, and transportation.

**Communications Course Placement:** Your Communications course sequence will be determined by assessment (ASSET or COMPASS) of reading and writing levels. Depending upon the assessment, you may be required to take COMM 050 (Fundamentals of Communications), COMM 051 (Fundamentals of Reading), COMM 110 (Reading Communications) and/or COMM 121 (Communications I) as prerequisites to COMM 122 (Communications II). Courses which are prerequisites to COMM 122 are required developmental courses and the credit hours must be added to the printed course of study.

**Math Course Placement:** Your math course sequence will also be determined by assessment (ASSET or COMPASS). Depending upon the assessment, you may be required to take MATH

102 (Pre-Algebra) or both MATH 101 (Basic Mathematics) and MATH 102 (Pre-Algebra) as a prerequisite to MATH 108 (Introduction to Algebra) or MATH 104 (Pharmacology Math). MATH 101 and MATH 102 are required developmental courses and the credit hours must be added to the printed course of study.

**Practicum and Coop Work Experiences:** It is required in most programs and recommended in a few programs that you complete a practicum or coop work experience prior to graduation. These experiences involve an on- or off-campus work experience integrated with academic instruction in which learned concepts are applied to practical situations within your technology.

**Additional Courses:** You may take special topics (290) courses (1-5 credits) or individualized study (291) courses (1-5 credit hours) in addition to the traditional course of study listed.

Hocking College reserves the right to modify curricular requirements, to change course content, and to change course fees at any time.

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## School of Arts and Sciences

### Transfer Module/University Bound

Hocking College recognizes the value of providing a program for students who want to pursue a bachelor degree at a four-year college or university. The Transfer Module is designed to provide a guaranteed transition for students transferring to other public Ohio colleges and universities.

The Hocking College Transfer Module/University Bound, meets requirements of the Ohio Board of Regents; it will be accepted at Ohio state subsidized colleges and universities.

Hocking's Transfer Module program includes 54 to 60 quarter hour credits of introductory courses in the areas of English composition, mathematics, arts and humanities, social and behavioral sciences and natural and physical sciences. The Hocking College Module include general courses already in technical programs as well as courses for transfer only. Because individual technologies may differ in specific course requirements for general education, the articulation of the transfer module may vary from one program to another.

### Conditions for Transfer Admission

Students meeting the requirements for the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or the Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of D or better. Students must have an overall grade point average of 2.00 to be given credit for the Transfer Module.
2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade C or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.00 to be given credit for the Transfer Module and only courses in which a C or better has been earned will transfer.
3. The policy encourages receiving institutions to admit on a non-preferential consideration basis students who complete the Transfer Module with a grade of C or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they have received a grade of C or better. Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

### Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore years. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

**Appeals Process**

A multi-level, broad-based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state level Articulation and Transfer Appeals Committee.

The Appeals Review Committee shall review and recommend to institutions the resolutions of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

The Transfer Module must include 54–60 quarter credit hours of courses in the following areas: English Composition, Mathematics, Arts and Humanities, Social and Behavioral Sciences, and Natural and Physical Sciences. Students should follow these directions in selecting courses to fulfill the requirements of the Transfer Module.

**English Composition** Credits  
(minimum of 8 credit hours)

Required:

COMM	122	Communications II	3
COMM	123	Communications III	3
ENGL	151	or Freshman Composition	5

Choose the remaining 3 credit hours from the following:

COMM	124	Communications IV	3
COMM	225	Technical Writing	3

**Mathematics**  
(minimum of 3 credit hours)

MATH	112	Advanced Algebra	3
MATH	115	Pre Calculus	5
MATH	163 A	Calculus	3

**Arts/Humanities**  
(minimum of 9 credit hours)

HUM	200	Introduction to World Literature	3
HUM	201	Western Civilization and Culture	3
HUM	202	Understanding and Appreciating Theatre Art	3
HUM	203	Ethics, Values, and Morality	3
HUM	204	Twentieth Century U.S. Music	3

**Social and Behavioral Sciences**  
(minimum of 11 credit hours)

Required:

PSYC	101	General Psychology	5
		or	
PSYC	150	Introduction to Psychology	3
		or	
PSYC	150 A	Introduction to Psychology Module A	1
		and	
PSYC	150 B	Introduction to Psychology Module B	1
		and	
PSYC	150 C	Introduction to Psychology Module C	1
SOCI	101	General Sociology	5
		or	
SOCI	160	Introduction to Sociology	3

Choose the remaining 6 credit hours from at least two of the following areas:

Sociology

SOCI	161	Sociology of Family	3
SOCI	162	Social Issues	3
SOCI	165	Cross Cultural Studies	3

Psychology

PSYC	151	Developmental Psychology	3
PSYC	152	Abnormal Psychology	3
PSYC	160	Behavioral Sciences Statistics	5
PSYC	162	Child and Adolescent Development	4

Government			
GOVT	142	Interaction with Government and Politics	3
Economics			
ECON	140	Principles of Microeconomics	4
ECON	240	Principles of Macroeconomics	4

**Natural and Physical Sciences**  
(minimum of 9 credit hours)

CHEM	100	Introduction to Chemistry	3
CHEM	102	Introduction to Chemistry II	3
CHEM	130	Fundamentals of Chemistry	4
EGR	102	Physics M	3
EGR	103	Physics HLS	3
HC	100	The Human Organism	3
HC	110	Anatomy and Physiology I	3
HC	120	Anatomy and Physiology II	3
HC	247	Microbiology	4
NR	100	Astronomy	2
NR	120	Botany	3
NR	121	Zoology	3
NR	131	Environmental Chemistry	3
NSC	100	Health Science: The Human Machine	3
NSC	101	Environmental Science	3
NSC	103	Physics	3
REC	131	Field Biology	3
REC	132	Geology	3
REC	209	Terrestrial Ecology	3

# School of Business

## Technical Programs

Programs leading to an Associate Degree.

- Accounting
- Business Management and Entrepreneurship
- Office Management

## Certificate Programs

Programs providing specific technical skills.

### Certificates of Completion

Awarded for successful completion of a course or series of courses (less than twelve credit hours) leading to acquisition of specific knowledge and skills.

- Accounting Clerk/Payroll Clerk
- Accounts Payable/Accounts Receivable Clerk
- Cost Clerk
- File Clerk
- Introduction to International Business
- Salesperson

### Occupational Certificates

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

- Administrative Transcriptionist
- Clerk/Basic Typist
- Computer Applications for Business Owners
- Entrepreneurial Specialist
- Federal Taxation
- Industrial Salesperson
- Management Specialist
- Microcomputer Accounting
- Non-Profit Accounting
- Personnel Specialist I
- Personnel Specialist II
- Real Estate
- Receptionist/Clerk
- Retail Management Specialist
- Small Business Accounting Technician
- Small Business Specialist
- Word Processing

### Technical Certificates

Awarded for successful completion of a prescribed sequence of courses within a given technology in which the certificate is offered. The total credit hours are at least 50% of the number required for the associate degree in that technology. The technical component will be 27-33 quarter hours with the balance being in general courses.

- Accounting
- Office Management

**Certificates of Concentration**

Awarded for successful completion of a coherent set of courses which complement the associate degree and enable the learner to acquire skills in a specific area (e.g. medical office management, chemical dependency counselor).

Legal Office Management

Medical Office Management



# Accounting

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 120	P	Payroll Accounting	T	2.00	3.00	3.00	\$12
ACC 100	P	Accounting I	G	2.00	3.00	3.00	\$5
ACC 130	P	Business and Accounting Machines	G	2.00	2.00	2.00	\$20
BUS 170	P	Fundamentals of Business I	G	3.00	2.00	3.00	\$7
COMM 122	P	Communications II	G	3.00	0.00	3.00	\$20
OAT 180	P	Keyboarding	G	1.00	1.00	1.00	\$25
S/P ●●●		Social Science/Psychology Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
				13.00	11.00	18.00	

## Second Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 101	P	Accounting II	T	2.00	3.00	3.00	\$5
ACC 105		Quickbooks for Small Business	T	1.00	4.00	2.00	\$35
ACC 110	P	Accounting Simulation	T	1.00	1.00	1.00	
ACC 140		Individual Taxation	T	2.00	3.00	3.00	\$36
BUS 171	P	Fundamentals of Business II	G	3.00	2.00	3.00	\$7
COMM 123	P	Communications III	G	3.00	0.00	3.00	\$20
MATH 108 B		Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
				15.00	14.00	18.00	

## Third Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 102	P	Accounting III	T	3.00	4.00	4.00	\$5
ACC 111	P	Advanced Accounting Simulation	T	1.00	1.00	1.00	\$37
ACC 150	P	Business Taxation	T	3.00	4.00	4.00	\$36
ACC 162		Microcomputer Accounting	T	1.00	4.00	2.00	\$30
COMM 130		Speech	G	3.00	0.00	3.00	\$10
MATH 109		Business Math	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	\$16
				15.00	13.00	18.00	

## Summer Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.							

## Fourth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 200	P	Basic Cost Accounting	T	2.00	3.00	3.00	\$12
ACC 220		Non-Profit Accounting I	T	3.00	3.00	4.00	\$5
BUS 125		Principles of Finance	G	3.00	3.00	4.00	
BUS 247		Excel for Windows	G	2.00	3.00	3.00	\$36
COMM 104		Job Search Techniques	G	1.00	0.00	1.00	\$10
S/P ●●●		Social Science/Psychology Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
				11.00	12.00	18.00	

## Fifth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 201		Advanced Cost Accounting	T	3.00	3.00	4.00	\$12
ACC 210		Cost Accounting Simulation	T	0.00	3.00	1.00	\$36
ACC 221		Non-Profit Accounting II	T	3.00	3.00	4.00	\$5
ACC 230		Intermediate Accounting I	T	2.00	3.00	3.00	\$10
BUS 248		Advanced Excel	G	2.00	3.00	3.00	\$36
BIOS 100	P	Health Science: The Human Machine	G	3.00	0.00	3.00	
		or					
BIOS 101		Environmental Science	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
				13.00	15.00	18.00	

## Sixth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 231		Intermediate Accounting II	T	3.00	3.00	4.00	\$10
ACC 250		Auditing	T	2.00	3.00	3.00	\$5
ACC 296		Accounting Practicum	T	1.00	8.00	2.00	
BUS 200		Business Law	G	3.00	0.00	3.00	
COMM 124 A	P	Communications IV (Job Communication)	G	3.00	0.00	3.00	\$20
ACC ●●●		Accounting Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3</u>	
				12.00	14.00	15.00-18.00	

Technical Credit Hours	51.00-54.00
General Credit Hours	54.00
Total Credit Hours	105.00-108.00

# Business Management and Entrepreneurship

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 100	P	Small Business Management I	T	3.00	2.00	3.00	\$5
BUS 102	P	Principles and Practices of Management I	T	3.00	2.00	3.00	
BUS 110		Marketing	T	3.00	2.00	3.00	\$5
BUS 105		History of American Business	G	3.00	0.00	3.00	
COMM 122	P	Communications II	G	3.00	0.00	3.00	\$20
OAT 180	P	Keyboarding	G	1.00	1.00	1.00	\$25
BUS 250		Events Planning and Operations I (Optional)	G	<u>1.00</u>	<u>3.00</u>	<u>1.00-2.00</u>	
				16.00-17.00	7.00-10.00	16.00-18.00	

## Second Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 101	P	Small Business Management II	T	3.00	2.00	3.00	\$5
ACC 100	P	Accounting I	G	2.00	3.00	3.00	\$5
BUS 200		Business Law	G	3.00	0.00	3.00	
COMM 123 A	P	Communications III (Job Communication)	G	3.00	0.00	3.00	\$20
MATH 108 B		Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
BUS •••		Business Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
				14.00	6.00	18.00	

## Third Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 103	P	Principles and Practices of Management II	T	3.00	2.00	3.00	
ACC 101	P	Accounting II	G	2.00	3.00	3.00	\$5
BUS 201		Advanced Business Law	G	4.00	0.00	4.00	
ECON 140		Principles of Microeconomics	G	4.00	0.00	4.00	
MATH 109		Business Math	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	\$16
				17.00	5.00	18.00	

## Summer Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.							

## Fourth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 243		Business Systems Control	T	2.00	3.00	3.00	\$5
BUS 260		Business Planning	T	1.00	3.00	2.00	\$24
SOCI 169	P	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
COMM 130		Speech	G	3.00	0.00	3.00	\$10
		or					
COMM 135		Verbal Career Skills	G	3.00	0.00	3.00	\$10
BUS 251		Events Planning and Operations II (Optional)	G	1.00	3.00	1.00-2.00	
PSYC •••		Psychology Elective (Required)	G	3.00	0.00	3.00	
BUS •••		Business Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
				12.00-13.00	6.00-9.00	17.00-19.00	

## Fifth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 210		Human Resources Management	T	3.00	2.00	3.00	
BUS 247		Excel for Windows	T	2.00	3.00	3.00	\$36
ACC 162		Microcomputer Accounting	G	1.00	4.00	2.00	\$30
COMM 104		Job Search Techniques	G	1.00	0.00	1.00	\$10
BIOS 100	P	Health Science: The Human Machine	G	3.00	0.00	3.00	
		or					
BIOS 101		Environmental Science	G	3.00	0.00	3.00	\$20
BUS •••		Business Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
				10.00	9.00	15.00	

## Sixth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 248		Advanced Excel	T	2.00	3.00	3.00	\$36
BUS 296		Business Management Practicum	T	1.00	7.00	2.00	
HUM 203		Ethics, Values, and Morality	G	3.00	0.00	3.00	\$5
BUS •••		Business Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>6.00</u>	
				6.00	10.00	14.00	

Technical Credit Hours	46.00
General Credit Hours	52.00-56.00
Total Credit Hours	98.00-102.00

**Business Management and Entrepreneurship Notes:** Students must choose from the following Psychology electives: PSYC 121 (Women In Transition), PSYC 150 (Intro To Psychology), PSYC 151 (Developmental Psychology), PSYC 152 (Abnormal Psychology), or PSYC 154 (Interpersonal Relationships).

To earn an Associate Degree, students must complete at least 15 credit hours from the following electives: **Human Resources Management** - BUS 230 (Labor-Management Relations), BUS 285 (Human Resources Policy), SUPR 235 (Supervision and Leadership); **Retail Management** - BUS 130 (Sales), BUS 165 (Advertising), BUS 185 (Retail Store Operations), BUS 206 (Business on the Internet), BUS 211 (Advanced Marketing); **Accounting** - ACC 102 (Accounting III), ACC 105 (Introduction to Quickbooks), ACC 120 (Payroll Accounting), BUS 240 (Managerial Accounting), ACC 140 (Individual Taxation), ACC 150 (Business Taxation), ACC 200 (Basic Cost Accounting); **Real Estate** - RE 101 (Real Estate Principles), RE 102 (Real Estate Law), RE 103 (Real Estate Finance), RE 104 (Real Estate Appraisal); **Transfer Module** - ACC 102 (Accounting III), CS 155 (Applied Statistical Packages), ECON 240 (Principles of Macroeconomics), MATH 205 (Introduction to Calculus); **Microcomputer Applications** - CS 200 (Introduction to Networking), CS 201 (Advanced Networking), EC 100 (Internet Webmaster I), EC 102 (The Internet as a Business Platform), EC 110 (Marketing on the Internet), EC 200 (Internet Webmaster II), EC 205 (Internet Webmaster III), EC 205 (E-Commerce Banking and Finance), MICS 100 (Basic Computer Skills), MICS 110 (Introduction to Visual Basic), MICS 112 (Introduction to DOS), MICS 115 (PC Operating Systems), MICS 121 (Microsoft Office), MICS 142 (Introduction to Microsoft Access), MICS 144 (Introduction to Microsoft Word), MICS 145 (Introduction to Windows), MICS 201 (Desktop Publishing), MICS 210 (Microsoft Publisher), NET 100 (Internet and Web Page Design), NET 120 (Computer Architecture and Hardware), NET 200 (Advanced Web Page Design), OAT 222 (Office Presentations-Powerpoint), OAT 250 (Office Publications); **International Business** - BUS 106 (International Business), BUS 208 (International Money Matters); **Financial Management** - BUS 120 (Personal Finance), BUS 125 (Principles of Finance).

# Office Management

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OAT 107	Telephone Skills	T	1.00	1.00	1.00	\$20
OAT 110	Office Procedures I	T	3.00	2.00	3.00	\$5
OAT 113	Office Management Computer Systems	T	1.00	1.00	1.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
OAT 100	Information Processing	G	2.00	2.00	2.00	\$35
OAT 180	Keyboarding	G	1.00	1.00	1.00	\$25
OAT 190	Business Communication Skills I	G	1.00	3.00	2.00	\$5
BUS 250	Events Planning and Operations I (Optional)		<u>1.00</u>	<u>3.00</u>	<u>1.00-2.00</u>	
			15.00-16.00	11.00-14.00	16.00-18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OAT 111	Office Procedures II	T	3.00	2.00	3.00	\$30
OAT 114	Electronic Communication	T	1.00	2.00	2.00	\$35
OAT 211	Word Processing-Word Perfect	T	2.00	4.00	3.00	\$37
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
COMM 123 A	Communications III (Job Communication)	G	3.00	0.00	3.00	\$20
GS 104	Time Management	G	1.00	0.00	1.00	\$5
OAT 195	Business Communication Skills II	G	<u>1.00</u>	<u>2.00</u>	<u>2.00</u>	\$5
			13.00	13.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OAT 121	Speed Building I	T	1.00	2.00	1.00	\$35
OAT 200	Introduction to Transcription	T	2.00	4.00	3.00	\$30
OAT 216	Word Processing-Microsoft Word	T	2.00	4.00	3.00	\$37
OAT 218	Office Budgeting Using Excel	T	2.00	3.00	3.00	\$37
OAT 296 A	Office Management Practicum I	T	1.00	7.00	2.00	
COMM 124	Communications IV	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			11.00	20.00	15.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OAT 215	Office Database Management Access	T	2.00	2.00	2.00	\$30
OAT 220	Office Procedures III	T	2.00	4.00	3.00	\$37
OAT 222	Office Presentation-PowerPoint	T	1.00	2.00	1.00	\$30
BUS 120	Personal Finance	G	3.00	0.00	3.00	
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
BIOS 100	Health Science: The Human Machine	G	3.00	0.00	3.00	
	or					
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
BUS 251	Events Planning and Operations II (Optional)	G	<u>1.00</u>	<u>3.00</u>	<u>1.00-2.00</u>	
			14.00-15.00	8.00-11.00	15.00-17.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OAT 102	Office Simulation I	T	2.00	4.00	3.00	\$37
OAT 230	Administrative Transcription	T	2.00	4.00	3.00	\$37
OAT 250	Office Publications and Presentations	T	2.00	4.00	3.00	\$37
BUS 200	Business Law	G	3.00	0.00	3.00	
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
PSYC 150	Introduction to Psychology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			13.00	12.00	16.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OAT 240	Integrated Office Software	T	2.00	4.00	3.00	\$37
OAT 260	Office Simulation II (Capstone)	T	2.00	4.00	3.00	\$37
OAT 296 B	Office Management Practicum II	T	1.00	7.00	2.00	
HUM 203	Ethics, Values, and Morality	G	3.00	0.00	3.00	\$5
	or					
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
OAT 122	Speed Building II (Optional)	T	1.00	2.00	1.00	\$35
OAT ●●●	Office Administration Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25- 3.00</u>	
			8.00- 9.00	15.00-17.00	11.00-15.00	

Technical Credit Hours	48.00-52.00
General Credit Hours	42.00-46.00
Total Credit Hours	90.00- 98.00

# School of Business Certificates

## Certificates of Completion

### Accounting Clerk/Payroll Clerk

Objective: To prepare students for entry level accounting tasks of a clerical nature. This includes the ability to compute and record payroll and related taxes. (3 quarters)

Course No.	Course Name	Credits
ACC 120 P	Payroll Accounting	3
ACC 140	Individual Taxation	3
ACC 150 P	Business Taxation	4
		10

### Accounts Payable/Accounts Receivable Clerk

Objective: To prepare students for entry level accounting tasks of a clerical nature. Specifically Accounts Payable Clerk/Accounts Receivable Clerk. (2 quarters)

Course No.	Course Name	Credits
ACC 100 P	Accounting I	3
ACC 101 P	Accounting II	3
ACC 130 P	Business and Accounting Machines	2
ACC 162	Microcomputer Accounting	2
		10

### Cost Clerk

Objective: To prepare the student for all clerical tasks involved in accounting for manufacturers that use cost systems. Prerequisite: Accounting Clerk/Payroll Clerk Certificate. (3 quarters)

Course No.	Course Name	Credits
ACC 200 P	Basic Cost Accounting	3
ACC 201	Advanced Cost Accounting	4
ACC 210	Cost Accounting Simulation	1
		8

### File Clerk

Objective: To prepare the student to sort and file business records by alphabetic, numeric, subject, and geographic systems. Special activity is also needed. The student must complete ten (10) hours of microfilming procedures in the Records Office of Hocking College.

Course No.	Course Name	Credits
OAT 110	Office Procedures I	3
GS 104	Time Management	1
		4

### Introduction to International Business

Objective: To introduce the student to the concepts of international business matters in the areas of importing, exporting, and money matters.

Course No.	Course Name	Credits
BUS 106	International Business	3
BUS 208	International Money Matters	3
		6

### Salesperson

Objective: To prepare the student for the position of Salesperson Level I.

Course No.	Course Name	Credits
BUS 100 P	Small Business Management I	3
BUS 130	Sales	3
BUS 110	Marketing	3
		9

## Occupational Certificates

### Administrative Transcriptionist

Objective: To prepare students to use the typewriter to transcribe letters, reports, or other recorded data heard through earphones or transcribing machines.

Course No.	Course Name	Credits
OAT 100 P	Information Processing	2
OAT 102	Office Simulation I	3
OAT 113	Office Administration Computer	1

OAT 114	Systems		
OAT 180 P	Electronic Communication		2
OAT 190	Keyboarding		1
OAT 195	Business Communication Skills I		2
OAT 200	Business Communication Skills II		2
OAT 211	Introduction to Transcription		3
OAT 216	Word Processing-Word Perfect		3
OAT 230	Word Processing-Microsoft Word		3
COMM 122 P	Administrative Transcription		3
	Communications II		3
			28

### Clerk/Basic Typist

Objective: To prepare students to perform entry level duties in a business or professional office.

Course No.	Course Name	Credits
OAT 100 P	Information Processing	2
OAT 107	Telephone Skills	1
OAT 110	Office Procedures I	3
OAT 111	Office Procedures II	3
OAT 113	Office Management Computer Systems	1
OAT 114	Electronic Communication	2
OAT 180 P	Keyboarding	1
OAT 190	Business Communication Skills I	2
OAT 195	Business Communication Skills II	2
OAT 211	Word Processing-Word Perfect	3
	or	
OAT 216	Word Processing-Microsoft Word	3
		20

### Computer Applications for Business Owners

Objective: To train students for the basic microcomputer skills necessary to run a small business.

Course No.	Course Name	Credits
ACC 100 P	Accounting I	3
BUS 247	Excel for Windows	3
ACC 101 P	Accounting II	3
ACC 162	Microcomputer Accounting	2
OAT 211	Word Processing-Word Perfect	3
MICS 201	Desktop Publishing	2
BUS 248	Advanced Excel	3
OAT 240	Integrated Office Software	3
		22

### Entrepreneurial Specialist

Objective: To prepare the student to manage his/her own business in an innovative and creative manner.

Course No.	Course Name	Credits
ACC 100 P	Accounting I	3
ACC 120 P	Payroll Accounting	3
ACC 150 P	Business Taxation	4
BUS 102 P	Principles and Practices of Management I	3
BUS 110	Marketing	3
BUS 130	Sales	3
BUS 100 P	Small Business Management I	3
BUS 200	Business Law	3
BUS 101 P	Small Business Management II	3
BUS 260	Business Planning	2
BUS 247	Excel for Windows	3
		33

### Federal Taxation

Objective: Students will be able to use forms, manuals, and techniques associated with Federal tax laws and regulations. The student will acquire skills in the preparation of tax forms and knowledge of commercial software packages. The student will qualify for tax preparation positions with private and governmental agencies.

Course No.	Course Name	Credits
ACC 100 P	Accounting I	3
ACC 120 P	Payroll Accounting	3
ACC 101 P	Accounting II	3
ACC 140	Individual Taxation	3
ACC 150 P	Business Taxation	4
ACC 162	Microcomputer Accounting	2
		18

**Industrial Salesperson**

Objective: To train engineering and business graduates for entry level positions in industrial selling.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
BUS 110	Marketing	3
BUS 130	Sales	3
COMM 130	Speech	3
ISE 107	Manufacturing I	3
BUS 211	Advanced Marketing	3
SUPR 235	Supervision and Leadership	3
CER 203	Statistical Quality and Process Control	3
	or	
CS 155	Applied Statistical Packages	3
		<u>21</u>

**Management Specialist**

Objective: To prepare the student for the position of management specialist.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
BUS 102	P Principles and Practices of Management I	3
ACC 100	P Accounting I	3
BUS 125	Principles of Finance	4
BUS 103	Principles and Practices of Management II	3
	or	
BUS 230	Labor-Management Relations	3
BUS 100	P Small Business Management I	3
BUS 101	P Small Business Management II	3
BUS 210	Human Resources Management	3
BUS 260	Business Planning	2
BUS 296	Business Practicum/Seminar	2
SUPR 235	Supervision and Leadership	3
		<u>29</u>

**Microcomputer Accounting**

Objective: Students will be able to choose appropriate commercial software packages, acquire skills in the use of microcomputer accounting software, and enter job markets associated with bookkeeping, folio auditing, and as an accountant's assistant.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ACC 100	P Accounting I	3
ACC 120	P Payroll Accounting	3
ACC 101	P Accounting II	3
ACC 162	Microcomputer Accounting	2
BUS 247	Excel for Windows	3
BUS 248	Advanced Excel	3
		<u>17</u>

**Non-Profit Accounting**

Objective: Students will be able to apply the special accounting procedures and practices of non-profit accounting and acquire skill in tax form selection and preparation. Students will be able to gain entry into non-profit agencies and organizations as a bookkeeper/accountant.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ACC 100	P Accounting I	3
ACC 120	P Payroll Accounting	3
ACC 101	P Accounting II	3
ACC 162	Microcomputer Accounting	2
ACC 220	Non-Profit Accounting I	4
ACC 221	Non-Profit Accounting II	4
		<u>19</u>

**Personnel Specialist I**

Objective: To prepare the student for the position of Personnel Specialist Level I.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ACC 100	P Accounting I	3
ACC 120	P Payroll Accounting	3
BUS 102	P Principles and Practices of Management I	3
BUS 100	P Small Business Management I	3
BUS 101	P Small Business Management II	3
BUS 210	Human Resources Management	3
		<u>18</u>

**Personnel Specialist II**

Objective: To prepare the student for the position of Personnel Specialist Level II. Prerequisite: Personnel Specialist Level I

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
BUS 210	Human Resources Management	3
SOCI 169	P Human Relations in Organizations	3
SUPR 235	Supervision and Leadership	3
BUS 103	Principles and Practices of Management II	3
	or	
BUS 230	Labor-Management Relations	3
		<u>12</u>

**Real Estate**

Objective: In response to the changing licensing requirements in the State of Ohio, Hocking College will be providing the courses necessary to become a salesperson. After successful completion of these courses, the candidate can take the licensing exam to become a Real Estate Salesperson.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
RE 101	Real Estate Principles	4
RE 102	Real Estate Law	4
RE 103	Real Estate Finance	2
RE 104	Real Estate Appraisal	2
		<u>12</u>

**Receptionist/Clerk**

Objective: To prepare students to perform receptionist duties in a business or professional office.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
OAT 100	P Information Processing	2
OAT 107	Telephone Skills	1
OAT 110	Office Procedures I	3
OAT 180	P Keyboarding	1
OAT 190	Business Communication Skills I	2
COMM 122	P Communications II	3
GS 104	Time Management	1
		<u>13</u>

**Retail Management Specialist**

Objective: To prepare the student for the position of Retail Management Specialist.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
BUS 100	P Small Business Management I	3
BUS 110	Marketing	3
BUS 130	Sales	3
BUS 165	Advertising	3
BUS 170	Fundamentals of Business I	3
	or	
BUS 185	Retail Management	3
BUS 171	P Fundamentals of Business II	3
		<u>18</u>

**Small Business Accounting Technician**

Objective: To prepare the student in all aspects of bookkeeping for a small business.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ACC 100	P Accounting I	3
ACC 120	P Payroll Accounting	3
ACC 150	P Business Taxation	4
ACC 101	P Accounting II	3
BUS 100	P Small Business Management I	3
BUS 101	P Small Business Management II	3
ACC 162	Microcomputer Accounting	2
		<u>21</u>

**Small Business Specialist**

Objective: To prepare the student for the position of Small Business Specialist Level I.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
BUS 102	P Principles and Practices of Management I	3
ACC 100	P Accounting I	3
ACC 101	P Accounting II	3
BUS 100	P Small Business Management I	3
BUS 200	Business Law	3

BUS	101	P	Small Business Management II	3
ACC	162		Microcomputer Accounting	2
BUS	247		Excel for Windows	3
BUS	248		Advanced Excel	3
				26

**Word Processing**

Objective: To prepare the student for an entry-level position as a word processor specialist.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>	
OAT	200	Introduction to Transcription	3
OAT	211	Word Processing - WordPerfect	3
OAT	216	Word Processing - Microsoft Word	3
OAT	240	Integrated Office Software	3
OAT	350	Office Publications and Presentations	3
BUS	247	Excel for Windows	3
			18

**Technical Certificates****Accounting**

Objective: To prepare students for entry level banking tasks which require knowledge of all phases of accounting for manufacturing. This also prepares the student for employment as a junior accountant in small public accounting firms.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>	
ACC	100	P Accounting I	3
ACC	120	P Payroll Accounting	3
ACC	130	P Business and Accounting Machines	2
BUS	170	P Fundamentals of Business I	3
COMM	122	p Communications II	3
ACC	101	P Accounting II	3
ACC	140	Individual Taxation	3
COMM	123	P Communications III	3
MATH	108 B	P Introduction to Algebra for Business	3
ACC	102	P Accounting III	4
ACC	150	P Business Taxation	4
ACC	162	Microcomputer Accounting	2
ACC	200	P Basic Cost Accounting	3
SOCI	169	P Human Relations in Organizations	3
ACC	201	Advanced Cost Accounting	4
ACC	210	Cost Accounting Simulation	1
			47

**Office Management**

Objective: To prepare the student for an entry level position in a business office.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>	
OAT	100	P Information Processing	2
OAT	107	Telephone Skills	1
OAT	110	Office Procedures I	3
OAT	111	Office Procedures II	3
OAT	121	P Speed Building I	1
OAT	180	P Keyboarding	1
OAT	190	Business Communication Skills I	2
OAT	211	Word Processing-Word Perfect	3
COMM	101	Spelling Skills	1
COMM	122	P Communications II	3
COMM	123	P Communications III	3
OAT	102	Office Simulation I	3
OAT	113	Office Administration Computer Systems	1
OAT	296 A	Office Management Practicum	2
OAT	200	Introduction to Transcription	3
OAT	230	Administrative Transcription	3
OAT	216	Word Processing-Microsoft Word	3
ACC	100	P Accounting I	3
COMM	102	Vocabulary Skills	1
OAT	114	Electronic Communication	2
MATH	108	P Introduction to Algebra	3
COMM	104	Job Search Techniques	1
			48

Objective: To prepare the student for the legal office with courses that will make the transition easier from the classroom to the office.

Prerequisite: This certificate is awarded only with an Associate Degree in Office Management.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>	
BUS	200	Business Law	3
OAT	220	Office Procedures III	3
OAT	280	Legal Transcription	3
			9

**Medical Office Management**

Objective: To prepare the student for the medical office with courses that will make the transition easier from the classroom to the office.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>	
MA	115	Medical Transcription	3
MA	112	Medical Law and Ethics	3
OAT	220	Office Procedures III	3
			9

**Certificates of Concentration****Legal Office Management**

# School of Computer and Information Technology

## Technical Programs

Programs leading to an Associate Degree, Diploma or Technologist Certification.

- Computer Programming
- E-Commerce
- Interactive Multimedia
- Network Systems

## Certificate Program

Programs providing specific technical skills.

### Occupational Certificates

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

- Cisco Networking Academy Level I
- Internet Webmaster
- Micro Computer Software User
- Networking and Web Design

# Computer Programming

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 100	Program Analysis I	T	3.00	2.00	3.00	
CS 120	Introduction to Data Processing	T	3.00	2.00	3.00	\$35
MICS 115	PC Operating Systems	T	1.00	3.00	2.00	\$30
MICS 144	Introduction to Word	T	1.00	1.00	1.00	\$30
BUS 170	Fundamentals of Business I	G	3.00	2.00	3.00	\$7
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 B	Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			17.00	11.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 101	Program Analysis II	T	3.00	2.00	3.00	
CS 200	Introduction to Networking	T	3.00	2.00	3.00	\$35
MICS 110	Introduction to Visual Basic	T	2.00	2.00	2.00	\$35
MICS 141	Introduction to Excel	T	1.00	1.00	1.00	\$30
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
CS 155	Applied Statistical Packages	G	3.00	2.00	3.00	\$35
	or					
MATH 111	Intermediate Algebra	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			17.00	11.00-12.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 110	Introduction to COBOL	T	4.00	5.00	5.00	\$35
CS 140	Job Controls and Utilities	T	3.00	2.00	3.00	\$35
MICS 142	Introduction to Access	T	1.00	1.00	1.00	\$30
NET 100	Internet and Web Page Design	T	1.00	1.00	1.00	\$30
ACC 101	Accounting II	G	2.00	3.00	3.00	\$5
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			14.00	12.00	16.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 111	Advanced COBOL	T	4.00	5.00	5.00	\$35
CS 201	Advanced Networking	T	3.00	3.00	4.00	\$35
CS 210	Programming in C++	T	2.00	4.00	3.00	\$35
SOCI 153	Social and Cultural Awareness	G	4.00	0.00	4.00	\$7
	or					
SOCI 160	Introduction to Sociology	G	3.00	0.00	3.00	\$7
	or					
SOCI 161	Sociology of Family Living	G	3.00	0.00	3.00	\$7
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
NSC •••	Natural Science Elective (Required)	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			15.00-16.00	12.00	18.00-19.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 125	Computer Numbering Systems	T	1.00	0.00	1.00	
CS 220	Programming in RPG	T	3.00	3.00	4.00	\$35
CS 240	Database Management	T	2.00	2.00	2.00	\$35
CS 280	Mainframe Applications	T	3.00	5.00	4.00	\$35
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
A/B •••	Comm/Soci/Hum/Acc/Bus/Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>6.00</u>	
			10.00	10.00	18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 211	Advanced Programming in C++	T	2.00	4.00	3.00	\$35
CS 214	Applications in Information Technology	T	2.00	4.00	3.00	\$35
CS 250	Basic Assembler Language	T	3.00	2.00	3.00	\$35
SOCI 169	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
	or					
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
CS •••	Computer Science Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3.00</u>	
			13.00	10.00	15.00-18.00	

Technical Credit Hours	60.00-63.00
General Credit Hours	43.00-44.00
Total Credit Hours	103.00-107.00

**Computer Programming Notes:** Business/Accounting elective may be any 3-credit Business or Accounting course not already on your curriculum.

Students must choose from the following Social Science electives: A: PSYC 150 (Introduction To Psychology) or PSYC 154 (Interpersonal Relationships); B: SOCI 160 (Introduction To Sociology) or SOCI 165 (Cross Cultural Studies) or SOCI 161 (Sociology of Family Living).

One occupational certificate, Microcomputer Software User, is available. Please see a Computer Science instructor for more information.



# E-Commerce

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 100	Internet Webmaster I	T	4.00	0.00	4.00	\$200
EC 102	The Internet as a Business Platform	T	3.00	0.00	3.00	\$25
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
OAT 180	Keyboarding (Optional)	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$25
			15.00-16.00	4.00-5.00	16.00-17.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 101	Business Needs Analysis	T	3.00	0.00	3.00	
EC 110	Marketing on the Internet	T	4.00	0.00	4.00	\$35
EC 115	E-Commerce Law, Legal Issues, and Ethics	T	3.00	0.00	3.00	\$35
EC 200	Internet Webmaster II	T	3.00	2.00	4.00	\$200
COMM 123A	Communications III - Job Communications	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			16.00	2.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 130	Web Marketing Research	T	2.00	3.00	3.00	\$35
EC 150	Advanced Internet Networking and Security	T	3.00	0.00	3.00	\$35
EC 201	Internet Webmaster III	T	3.00	2.00	4.00	\$200
ACC 101	Accounting II	G	2.00	3.00	3.00	\$5
MATH 109	Business Math	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	\$16
			14.00	8.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
	See your advisor regarding course offerings.					

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 266	Entrepreneurship	T	3.00	0.00	3.00	\$36
EC 205	E- Commerce Banking and Finance	T	2.00	3.00	3.00	
MISC 142	Introduction to Access	G	1.00	1.00	1.00	\$30
SOCI 169	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
PSYC ●●●	Psychology Elective (Required)	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			15.00	4.00	16.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 210	Supply Chain Management	T	3.00	0.00	3.00	\$35
EC 212	E-Commerce Brand Management	T	3.00	0.00	3.00	\$35
IM 120	Interactive Media I	T	2.00	3.00	3.00	\$100
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
HUM 203	Ethics, Values, and Morality	G	3.00	0.00	3.00	\$5
BIOS 100	Health Science: The Human Machine	G	3.00	0.00	3.00	
	or					
BIOS 101	Environmental Science	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			15.00	3.00	16.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 250	E-Commerce Regulation	T	3.00	0.00	3.00	\$35
EC 280	E-Commerce Current Topics	T	0.25	0.00	0.25-3.00	\$35
EC 296	E-Commerce Practicum	T	1.00	8.00	2.00-3.00	
BUS 267	Project Management	G	3.00	0.00	3.00	\$25
MICS 152	Advanced Access	G	2.00	2.00	2.00	\$30
SUPR 235	Supervision and Leadership	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			12.25-15.00	10.00-18.00	13.25-17.00	

Technical Credit Hours	51.25-55.00
General Credit Hours	44.00-45.00
Total Credit Hours	95.25-100.00

# Interactive Multimedia

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 100	Internet Webmaster I	T	4.00	0.00	4.00	\$200
IM 110	Graphic Design	T	2.00	3.00	3.00	\$100
IM 112	Illustration	T	1.00	3.00	2.00	\$100
BUS 100	P Small Business Management I	G	3.00	2.00	3.00	\$5
COMM 122	P Communications II	G	3.00	0.00	3.00	\$20
PSYC 150	P Introduction to Psychology	G	3.00	0.00	3.00	\$7
	or					
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			16.00	8.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 210	Audio/Video Production I	T	2.00	3.00	3.00	\$60
EC 200	Internet Webmaster II	T	3.00	2.00	4.00	\$200
IM 120	Interactive Media I	T	2.00	3.00	3.00	\$100
BUS 101	P Small Business Management II	G	3.00	2.00	3.00	\$5
MATH 108	P Introduction to Algebra	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			13.00	11.00	16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EC 201	Internet Webmaster III	T	3.00	2.00	4.00	\$200
EE 240	Computers for Electronic Technicians I	T	3.00	3.00	4.00	\$60
IM 130	Interactive Media II	T	2.00	3.00	3.00	\$100
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			11.00	8.00	14.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 215	Audio/Video Production II	T	2.00	3.00	3.00	\$60
EE 241	Computer for Electronic Technicians II	T	3.00	3.00	4.00	\$60
BUS 106	International Business	G	3.00	0.00	3.00	\$60
COMM 123	P Communications III	G	3.00	0.00	3.00	\$20
NSC •••	Natural Science Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
			11.00	6.00	16.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
IM 220	Video Composting	T	1.00	3.00	2.00	\$100
IM 222	Dynamic Web Media	T	1.00	3.00	2.00	\$100
IM 224	Interactive Media Distribution	T	1.00	3.00	2.00	\$100
ACC 100	P Accounting I	G	2.00	3.00	3.00	\$5
EC 110	Marketing on the Internet	G	4.00	0.00	4.00	\$35
	or					
BUS 200	Business Law	G	3.00	0.00	3.00	
EC 115	E-Commerce Law, Legal Issues, and Ethics	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$35
			12.00	12.00	16.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 200	Media Portfolio Development	T	2.00	3.00	3.00	\$60
BC 207	Multitrack Audio Recording	T	2.00	3.00	3.00	\$60
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
COMM 225	P Technical Writing	G	3.00	0.00	3.00	\$20
SOCI 153	Social and Cultural Awareness	G	4.00	0.00	4.00	\$7
	or					
SOCI 160	Introduction to Sociology	G	3.00	0.00	3.00	\$7
	or					
SOCI 161	Sociology of Family Living	G	3.00	0.00	3.00	\$7
	or					
SOCI 165	Cross Cultural Studies	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			11.00-12.00	6.00	13.00-14.00	

Technical Credit Hours	49.00
General Credit Hours	44.00-45.00
Total Credit Hours	93.00-94.00

**Interactive Multimedia Notes:** Students must choose from the following Social Science electives: A: PSYC 150 Introduction to Psychology or PSYC 154 Interpersonal Relationships; B: SOCI 160 Introduction to Sociology or SOCI 165 Cross Cultural Studies, or SOCI 161 Sociology of Family Living, or SOCI 153 Social and Cultural Awareness.

# Network Systems

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 100	Program Analysis I	T	3.00	2.00	3.00	
CS 120	Introduction to Data Processing	T	3.00	2.00	3.00	\$35
MICS 115	PC Operating Systems	T	1.00	3.00	2.00	\$30
MICS 144	Introduction to Word	T	1.00	1.00	1.00	\$30
BUS 170	Fundamentals of Business I	G	3.00	2.00	3.00	\$7
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 B	Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			17.00	11.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 200	Introduction to Networking	T	3.00	2.00	3.00	\$35
MICS 110	Introduction to Visual Basic	T	2.00	2.00	2.00	\$35
MICS 141	Introduction to Excel	T	1.00	1.00	1.00	\$30
NET 100	Internet and Web Page Design	T	1.00	1.00	1.00	\$30
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
CS 155	Applied Statistical Packages or	G	3.00	2.00	3.00	\$35
MATH 111	Intermediate Algebra	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			15.00	10.00-11.00	16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 125	Computer Numbering Systems	T	1.00	0.00	1.00	
MICS 142	Introduction to Access	T	1.00	1.00	1.00	\$30
NET 110	Cisco I	T	3.00	3.00	4.00	\$50
NET 120	Computer Architecture and Hardware	T	1.00	3.00	2.00	\$30
ACC 101	Accounting II	G	2.00	3.00	3.00	\$5
COMM 130	Speech or	G	3.00	0.00	3.00	\$10
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			11.00	10.00	14.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 201	Advanced Networking	T	3.00	3.00	4.00	\$35
NET 200	Advanced Web Page Design	T	2.00	4.00	3.00	\$30
NET 210	Cisco II	T	2.00	5.00	3.00	\$50
NET 225	Network Communication Theory	T	2.00	1.00	2.00	
SOCI 153	Social and Cultural Awareness or	G	4.00	0.00	4.00	\$7
SOCI 160	Introduction to Sociology or	G	3.00	0.00	3.00	\$7
SOCI 161	Sociology of Family Living or	G	3.00	0.00	3.00	\$7
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
NSC ●●●	Natural Science Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
			12.00-13.00	13.00	18.00-19.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CS 240	Database Management	T	2.00	2.00	2.00	\$35
MICS 152	Advanced Access	T	2.00	2.00	2.00	\$30
NET 211	Cisco III	T	2.00	6.00	4.00	\$50
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
A/B ●●●	Comm/Soci/Hum/Acc/Bus Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>6.00</u>	
			7.00	10.00	15.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NET 212	Cisco IV	T	2.00	6.00	4.00	\$50
NET 215	Network Systems Security	T	2.00	3.00	3.00	\$30
NET 220	Server Management	T	3.00	4.00	4.00	\$30
SOCI 169	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
PSYC 150	Introduction to Psychology or	G	3.00	0.00	3.00	\$7
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
NET 220	Server Management	T	<u>3.00</u>	<u>4.00</u>	<u>4.00</u>	\$30
			13.00	13.00	17.00	

Technical Credit Hours 55.00

General Credit Hours 43.00-44.00

Total Credit Hours 98.00-99.00

**Network Systems Notes:** Communications/Social Science/Humanities/Accounting/Business elective may be any 3 credit course in any of these five subject areas not already on your curriculum. Students must choose from the following Social Science electives: A: PSYC 150 (Introduction to Psychology) or PSYC 154 (Interpersonal Relationships); B: SOCI 160 (Introduction to Sociology) or SOCI 165 (Cross Cultural Studies), SOCI 161 (Sociology of Family Living), or SOCI 153 (Social and Cultural Awareness). Three occupational certificates, Microcomputer Software User, CISCO Academy I-IV, and Networking and Web Design are available. Please see a Computer Programming instructor for more information.

# School of Computer and Information Technology Certificates

## Occupational Certificates

### Cisco Networking Academy Level I

Objective: To provide the student with basic skills in router and switch administration. Completion of this certificate also prepares the student to sit for the Cisco Certified Network Assistant (CCNA) exam.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
NET 110	Cisco I	4
NET 210	Cisco II	3
NET 211	Cisco III	4
NET 212	Cisco IV	4
		15

### Internet Webmaster

Objective: To prepare the student to sit for the Certified Internet Web Master exam.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
EC 100	Internet Webmaster I	4
EC 200	Internet Webmaster II	4
EC 201	Internet Webmaster III	4
		12

### Micro Computer Software User

Objective: To prepare students for entry level use of microcomputer software packages.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
CS 155	Applied Statistical Packages	3
MICS 110	Introduction to Visual Basic	2
MICS 141	Introduction to Excel	1
MICS 142	Introduction to Access	1
MICS 144	Introduction to Word	1
MICS 152	Advanced Access	2
MICS 201	Desktop Publishing (IBM's)	2
NET 100	Internet and Web Page Design	1
OAT 180	P Keyboarding	1
MICS 115	PC Operating Systems	2
		16

### Networking and Web Design

Objective: To provide the student with basic concepts in networking, internet, and web page design for business applications.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
CS 200	Introduction to Networking	3
CS 201	Advanced Networking	4
NET 100	Internet and Web Page Design	1
NET 200	Advanced Web Page Design	3
MICS 144	Introduction to Word	1
		12

# School of Health and Nursing

## Technical Programs

Programs leading to an Associate Degree, Diploma or Technologist Certification.

Early Childhood Development - Nanny/Business  
 Early Childhood Development - Nanny/Dietetics  
 Fitness Management  
 Massage Therapy/Business Management  
 Medical Assistant  
 Medical Records/Health Information Management  
 Nursing Level I - Practical Nursing  
 Nursing Level II - Associate Degree  
 Nutrition and Dietetics  
 Opticianry  
 Physical Therapist Assistant  
 Radiologic Technician  
 Surgical/Operating Room Technology

## Certificate Programs

Programs providing specific technical skills.

### Certificate of Completion

Awarded for successful completion of a course or series of courses (less than twelve credit hours) leading to acquisition of specific knowledge and skills.

Electrocardiograph Technician  
 Phlebotomist

### Occupational Certificate

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

Coding Clerk  
 Dietary Manager  
 Early Childhood Development - Nanny  
 Health Information Management Clerk  
 Massage Therapy  
 Medical Transcriptionist  
 Surgical Assistant

### Technical Certificate

Awarded for successful completion of a prescribed sequence of courses within a given technology in which the certificate is offered. The total credit hours are at least 50% of the number required for the associate degree in that technology. The technical component will be 27-33 quarter hours with the balance being in general courses.

Medical Assistant

# Early Childhood Development – Nanny/Business

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EDEC 100	Fundamentals of Child Care	T	3.00	1.00	3.00	\$20
EDEC 110	Child Care Practicum I	T	1.00	7.00	2.00	\$30
BIOS 100	Health Science - The Human Machine	G	3.00	0.00	3.00	
COMM 115	Children's Literature	G	3.00	0.00	3.00	\$10
GS 133	Defensive Driving	G	0.25	0.00	0.25	\$50
PSYC 150	Introduction to Psychology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			13.25	8.00	14.25	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EDEC 111	Child Care Practicum II	T	1.00	7.00	2.00	\$55
EDEC 120	Creative Activity for Children	T	4.00	1.00	4.00	\$30
DT 109	Infant and Early Child Nutrition	G	1.00	0.00	1.00	
EM 133	CPR for the Professional Rescuer	G	1.00	0.00	1.00	\$25
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
PSYC 162	Child/Adolescent Development	G	4.00	0.00	4.00	\$7
SOCI 161	Sociology of Family Living	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			15.00	8.00	16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EDEC 112	Child Care Practicum III	T	1.00	7.00	2.00	\$55
EDEC 115	Dynamics of Child Care	T	3.00	0.00	3.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
DT 104	Food Preparation Principles for Children	G	1.00	3.00	2.00	\$7
PSYC 140	Issues in Child Development	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	\$7
			15.00	10.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 120	Payroll Accounting	T	2.00	3.00	3.00	\$12
BUS 100	Small Business Management I	T	3.00	2.00	3.00	\$5
BUS 102	Principles and Practices of Management I	T	3.00	2.00	3.00	
BUS 110	Marketing	T	3.00	2.00	3.00	\$5
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
OAT 180	Keyboarding	G	1.00	1.00	1.00	\$25
BUS 165	Advertising (Optional)	T	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	\$15
			14.00-17.00	13.00-15.00	16.00-19.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 101	Accounting II	T	2.00	3.00	3.00	\$5
ACC 140	Individual Taxation	T	2.00	3.00	3.00	\$36
BUS 101	Small Business Management II	T	3.00	2.00	3.00	\$5
BUS 200	Business Law	G	3.00	0.00	3.00	
COMM 123 A	Communications III Job Communication	G	3.00	0.00	3.00	\$20
MATH 108 B	Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			16.00	9.00	18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ACC 150	Business Taxation	T	3.00	4.00	4.00	\$36
ACC 162	Microcomputer Accounting	T	1.00	4.00	2.00	\$30
BUS 260	Business Planning	T	1.00	3.00	2.00	\$24
BUS 120	Personal Finance	G	3.00	0.00	3.00	
BUS 247	Excel for Windows	G	2.00	3.00	3.00	\$36
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
HUM 203	Ethics, Values, and Morality	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$5
			14.00	14.00	18.00	

Technical Credit Hours	45.00-48.00
General Credit Hours	54.25
Total Credit Hours	99.25-102.25

# Early Childhood Development – Nanny/Dietetics

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EDEC 100	Fundamentals of Child Care	T	3.00	1.00	3.00	\$20
EDEC 110	Child Care Practicum I	T	1.00	7.00	2.00	\$30
BIOS 100	Health Science – The Human Machine	G	3.00	0.00	3.00	
COMM 115	Children's Literature	G	3.00	0.00	3.00	\$10
GS 133	Defensive Driving	G	.25	0.00	.25	\$50
PSYC 150	Introduction to Psychology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			13.25	8.00	14.25	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EDEC 111	Child Care Practicum II	T	1.00	7.00	2.00	\$55
EDEC 120	Creative Activities for Children	T	4.00	1.00	4.00	\$30
DT 109	Infant and Early Child Nutrition	G	1.00	0.00	1.00	
EM 133	CPR for the Professional Rescuer	G	1.00	0.00	1.00	\$25
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
PSYC 162	Child and Adolescent Development	G	4.00	0.00	4.00	\$7
SOCI 161	Sociology of Family Living	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			15.00	8.00	16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EDEC 112	Child Care Practicum III	T	1.00	7.00	2.00	\$55
EDEC 115	Dynamics of Child Care	T	3.00	0.00	3.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
DT 104	Food Preparation Principles for Children	G	1.00	3.00	2.00	\$20
PSYC 140	Issues in Child Development	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	\$7
			15.00	10.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 100	Survey of Dietetics	T	2.00	0.00	2.00	
DT 101	Dietetic Directed Practice I	T	1.00	7.00	2.00	\$30
DT 102	Basic Nutrition	T	5.00	0.00	5.00	\$10
HLTH 202	Community Health	G	2.00	0.00	2.00	
HOTR 110	Quality Sanitation Management	G	2.00	1.00	2.00	
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
OAT 180	Keyboarding	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$25
			16.00	10.00	17.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 103	Food Preparation Principles	T	2.00	4.00	3.00	\$30
DT 106	Food Production Management	T	3.00	0.00	3.00	
DT 111	Dietetic Directed Practice II	T	1.00	7.00	2.00	\$35
DT 120	Normal and Modified Menu Planning	T	3.00	0.00	3.00	
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			14.00	14.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 119	Food Purchasing for Health Care Institutions	T	3.00	0.00	3.00	
DT 121	Dietetic Directed Practice III	T	1.00	7.00	2.00	\$35
DT 122	Supervision in Dietetics	T	3.00	0.00	3.00	
DT 212	Nutrition Education Methods	T	2.00	0.00	2.00	
DT 220	Current Topics in Dietetics	T	0.25	0.00	0.25-2.00	\$10
HOTR 233	Food and Beverage Controls	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			12.25-14.00	7.00	13.25-15.00	

Technical Credit Hours	46.25-48.00
General Credit Hours	48.25
Total Credit Hours	94.50- 96.25

# Fitness Management

First Quarter



# Massage Therapy/Business Management

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 100	P	Small Business Management I	T	3.00	2.00	3.00	\$5
BUS 102	P	Principles and Practices of Management I	T	3.00	2.00	3.00	
BUS 165		Advertising	T	3.00	2.00	3.00	\$15
MT 110		Swedish Massage I	T	2.00	3.00	3.00	\$70
BIOS 151		Massage Anatomy and Physiology I	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	
				15.00	9.00	16.00	

## Second Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 101	P	Small Business Management II	T	3.00	2.00	3.00	\$5
MT 120		Swedish Massage II	T	2.00	3.00	3.00	\$70
BIOS 152		Massage Anatomy and Physiology II	G	4.00	0.00	4.00	
BUS 200		Business Law	G	3.00	0.00	3.00	
EM 134	P	Standard First Aid	G	1.00	0.00	1.00	\$25
MATH 108 B		Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
				16.00	6.00	17.00	

## Third Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 103	P	Principles and Practices of Management II	T	3.00	2.00	3.00	
MT 130		Swedish Massage III	T	2.00	3.00	3.00	\$70
MT 135		Myology for Massage Therapists	T	2.00	2.00	3.00	\$40
BIOS 153		Massage Anatomy and Physiology III	G	4.00	0.00	4.00	
EM 133	P	CPR for the Professional Rescuer	G	1.00	0.00	1.00	\$25
MICS 121 A		Microsoft Office - Word Processing	G	1.00	1.00	1.00	\$15
PSYC 150	P	Introduction to Psychology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
				16.00	8.00	18.00	

## Fourth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MT 210		Massage Techniques I	T	2.00	3.00	3.00	\$70
ACC 100	P	Accounting I	G	2.00	3.00	3.00	\$5
BIOS 154		Massage Anatomy and Physiology IV	G	4.00	0.00	4.00	
COMM 104		Job Search Techniques	G	1.00	0.00	1.00	\$10
PSYC 154		Interpersonal Relationships	G	3.00	0.00	3.00	\$7
BUS •••		Business Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
				12.00	6.00	17.00	

## Fifth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 260		Business Planning	T	1.00	3.00	2.00	\$24
MT 220		Massage Techniques II	T	2.00	3.00	3.00	\$70
BIOS 155		Massage Anatomy and Physiology V	G	4.00	0.00	4.00	
COMM 122	P	Communications II	G	3.00	0.00	3.00	\$20
COMM 130		Speech	G	3.00	0.00	3.00	\$10
		or					
COMM 135		Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
				13.00	6.00	15.00	

## Sixth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MT 230		Massage Techniques III	T	2.00	3.00	3.00	\$70
MT 240		Massage Integration Seminar	T	4.00	0.00	4.00	
MT 250		Massage Clinical	T	1.00	3.00	2.00	\$70
COMM 123	P	Communications III	G	3.00	0.00	3.00	\$20
PSYC 151	P	Developmental Psychology	G	3.00	0.00	3.00	\$7
SOCI 165		Cross Cultural Studies	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
				16.00	6.00	18.00	

Technical Credit Hours	47.00
General Credit Hours	54.00
Total Credit Hours	101.00

# Medical Assistant

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MA 100	Basic Clinical Assistant Procedures	T	4.00	3.00	5.00	\$55
MA 102	Medical Office Procedures I	T	2.00	2.00	2.00	\$20
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
HLTH 101	Medical Terminology I	G	3.00	0.00	3.00	
OAT 180	Keyboarding	G	1.00	1.00	1.00	\$25
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
			16.00	8.00	17.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MA 112	Medical Law and Ethics	T	3.00	0.00	3.00	
MA 120	OB, GYN, Pediatric Clinical Assisting Procedures	T	3.00	3.00	4.00	\$55
MA 122	Medical Office Procedures II	T	2.00	2.00	2.00	\$20
BIOS 113	Anatomy and Physiology I	G	3.00	2.00	3.00	\$30
EM 133	CPR for the Professional Rescuer	G	1.00	0.00	1.00	\$25
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
MA 221	Medical Management Computerization	G	3.00	3.00	4.00	\$55
			16.00	10.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MA 110	Family Practice Clinical Assisting Procedures	T	3.00	3.00	4.00	\$55
MA 223	Computer Applications in Medical Assisting	T	1.00	3.00	2.00	\$55
BIOS 114	Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
MATH 108	Introduction to Algebra	G	3.00	1.00	3.00	\$16
			16.00	9.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MA 200	Advanced Clinical Assisting Procedures	T	4.00	3.00	5.00	\$55
MA 202	Basic Pharmacology for Medical Assistants	T	4.00	0.00	4.00	
MA 203	Medical Assistant Externship I	T	0.00	13.00	4.00	\$25
PSYC 151	Developmental Psychology	G	3.00	0.00	3.00	\$7
			11.00	16.00	16.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MA 115	Medical Transcription	T	2.00	4.00	3.00	\$37
MA 204	Medical Assistant Externship II	T	0.00	13.00	4.00	\$25
MA 222	Medical Office Procedures III	T	3.00	3.00	4.00	\$40
MA 224	Advanced Pharmacology for Medical Assistants	T	3.00	0.00	3.00	
MA 113	Nutrition for Medical Assistants	G	4.00	0.00	4.00	
MA 239	Principles and Techniques of Electrocardiography (Optional)	T	0.00	2.00	1.00	\$55
			12.00	20.00-22.00	18.00-19.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
MA 205	Medical Assistant Externship III	T	0.00	13.00	4.00	\$25
MA 220	Medical Laboratory Procedures	T	5.00	3.00	6.00	\$55
MA 225	Case Studies in Medical Assisting	T	3.00	0.00	3.00	
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
HPE ●●●	Health Promotion Elective (Required)	G	0.00	0.00	1.00	
			12.00	16.00	18.00	

Technical Credit Hours	62.00-63.00
General Credit Hours	43.00
Total Credit Hours	105.00-106.00

**Medical Assistant Notes:** Speed development typing required for students who need to meet their Medical Assistant typing requirement (50 wpm).

Externship requirements: MA 203 Externship I: MA 100, MA 102, MA 110, MA 112, MA 120, MA 121, MA 122, OAT 100, HC 100, HC 101, HC 111, NT 104, MA 221, MA 223, MA 200 or concurrently. MA 204 Externship II: MA 202, MA 203, HC 106, HC 114. MA 205 Externship III: MA 204, prerequisites or concurrently: MA 220, MA 222.

# Medical Records/Health Information Management

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HIM 100	Health Information and Health Agency Orientation	T	3.00	0.00	3.00	\$35
HIM 110	Health Records and Procedures I	T	2.00	4.00	3.00	\$35
HLTH 101	Medical Terminology I	T	3.00	0.00	3.00	
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
MICS 144	Introduction to Word	G	1.00	1.00	1.00	\$30
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			15.00	7.00	16.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HIM 112	Health Information and the Law	T	3.00	0.00	3.00	\$35
HLTH 111	Medical Terminology II	T	3.00	0.00	3.00	
BIOS 113	Anatomy and Physiology I	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
COMM 150	Punctuation and Grammar	G	2.00	0.00	2.00	\$10
MICS 141	Introduction to Excel	G	1.00	1.00	1.00	\$30
MICS 142	Introduction to Access	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$30
			16.00	4.00	16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HIM 121	Health Records and Procedures II	T	2.00	4.00	3.00	\$35
BIOS 114	Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
MICS 152	Advanced Access	G	2.00	2.00	2.00	\$30
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
HPE •••	Health Elective (Required)	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	
			15.00	9.00	16.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HIM 120	Basic Coding Elements	T	2.00	4.00	3.00	\$35
HIM 201	Health Information Mgt. Directed Practice I	T	0.00	14.00	4.00	\$25
HIM 215	Interpreting Diagnostic Data	T	2.00	1.00	2.00	\$35
BIOS 135	Basics of Health and Disease	G	1.00	1.00	1.00	
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
SOCI 169	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
HIM 204	Current Topics in HIM (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3.00</u>	
			11.00	20.00	16.00-19.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HIM 200	Health Statistics	T	2.00	3.00	3.00	\$35
HIM 203	Applied Concepts of Coding	T	2.00	4.00	3.00	\$35
HIM 210	Healthcare Reimbursement Methodologies	T	1.00	2.00	2.00	\$35
HIM 211	Health Information Mgt. Directed Practice II	T	0.00	14.00	4.00	\$25
HIM 212	Health Information Management Quality Control	T	2.00	0.00	2.00	
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			10.00	23.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HIM 220	Planning for Health Information Services	T	3.00	0.00	3.00	\$35
HIM 221	Health Information Mgt. Directed Practice III	T	0.00	14.00	4.00	\$25
HIM 222	CPT Coding	T	3.00	1.00	3.00	\$35
HIM 223	Personnel Supervision	T	3.00	0.00	3.00	
COMM 104	Job Search Techniques	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	\$10
			10.00	15.00	14.00	

Technical Credit Hours	54.00-57.00
General Credit Hours	41.00
Total Credit Hours	95.00-98.00

# Nursing Level I – Practical Nursing

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 100	Fundamentals and Gerontological Nursing	T	3.00	0.00	3.00	\$10
NT 101	Nursing Clinical Experience I	T	0.00	13.00	4.00	\$100
NT 102	Nursing Dynamics I	T	1.00	1.00	1.00	
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
NT 103	Nutrients	G	1.00	0.00	1.00	
MATH 104	Pharmacology Math	G	1.00	1.00	1.00	\$10
	or					
NT 106	Clinical Math Skills	G	1.00	1.00	1.00	\$20
NT 105	Nursing Charting Skills (Optional)	T	1.00	0.00	1.00	\$20
PSYC 150	Introduction to Psychology (Required) *	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			12.00-13.00	17.00	16.00-17.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 110	Fundamentals of Maternal-Newborn Nursing	T	3.00	0.00	3.00	\$10
NT 111	Nursing Clinical Experience II	T	0.00	13.00	4.00	\$100
NT 112	Nursing Dynamics II	T	1.00	1.00	1.00	
NT 114	Pharmacology Introduction and Drug Administration	T	1.00	0.00	1.00	
BIOS 113	Anatomy and Physiology I	G	3.00	2.00	3.00	\$30
BIOS 135	Basics of Health and Disease	G	1.00	1.00	1.00	
NT 113	Lifespan Nutrition	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	
			10.00	17.00	14.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 120	Nursing of the Adult	T	3.00	0.00	3.00	\$10
NT 121	Nursing Clinical Experience III	T	0.00	13.00	4.00	\$100
NT 122	Nursing Dynamics III	T	1.00	0.00	1.00	
NT 123	Nutritional Care I	T	1.00	0.00	1.00	
NT 124	Pharmacology Drug Classification I	T	1.00	1.00	1.00	
BIOS 114	Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
PSYC 151	Developmental Psychology (Required) *	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			12.00	16.00	16.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 130	Nursing of the Adult and Child	T	3.00	0.00	3.00	\$20
NT 131	Nursing Clinical Experience IV	T	0.00	13.00	4.00	\$110
NT 132	Nursing Dynamics IV	T	1.00	0.00	1.00	
NT 134	Pharmacology Drug Classification II	T	1.00	1.00	1.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
NT 133	Nutrition Economics	G	1.00	0.00	1.00	
PSYC 152	Abnormal Psychology (Required) *	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			12.00	14.00	16.00	

Level I Technical Credit Hours	36.00-37.00
Level I General Credit Hours	26.00
Level I Total Credit Hours	62.00- 63.00

# Nursing Level II – Associate Degree

For students entering June, 2002 through May, 2003

## Enrichment Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 140	Technical Aspects of Anatomy and Physiology	T	3.00	1.00	3.00	
NT 140	Technical Aspects of the Adult Health Nursing	T	4.00	4.00	5.00	\$70
NT 142	Technical Aspects of Nursing Dynamics	T	1.00	1.00	1.00	
NT 143	Technical Aspects of Nutrition	T	1.00	0.00	1.00	
NT 144	Technical Aspects of Pharmacology	T	2.00	0.00	2.00	
NT 146	Technical Aspects of Child Health Nursing	T	2.00	0.00	2.00	
NT 147	Technical Aspects of Maternal-Newborn Nursing	T	<u>2.00</u>	<u>0.00</u>	<u>2.00</u>	
			15.00	6.00	16.00	
Enrichment Technical Credit Hours			16.00			
Enrichment General Credit Hours			0.00			
Enrichment Total Credit Hours			16.00			

## Level II (RN)

### Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 200	Mental Health Nursing	T	3.00	1.00	3.00	\$10
NT 201	Nursing Clinical Experience V	T	0.00	9.00	3.00	\$85
BIOS 200	Pathophysiology for Nurses	G	3.00	1.00	3.00	
NT 202	Role Transition LPN to RN	G	1.00	0.00	1.00	
MATH 108 H	Introduction to Algebra for Health (Required) **	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			10.00	12.00	13.00	

### Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 210	Advanced Nursing of the Adult I	T	3.00	0.00	3.00	\$10
NT 211	Nursing Clinical Experience VI	T	0.00	16.00	5.00	\$110
NT 213	Nutritional Care II	T	1.00	0.00	1.00	
COMM 123	Communications III (Required) **	G	3.00	0.00	3.00	\$20
SOCI 160	Introduction to Sociology **	G	3.00	0.00	3.00	\$7
	or					
SOCI 161	Sociology of Family Living **	G	3.00	0.00	3.00	\$7
	or					
SOCI 165	Cross Cultural Studies **	G	3.00	0.00	3.00	\$7
HLTH 149	Stress and Stress Management	G	1.00	0.00	1.00	\$20
	or					
HPE ●●●	Health Elective	G	1.00	0.00	1.00	
NT ●●●	Nursing Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>1.00-3.00</u>	
			11.00	16.00	16.00-19.00	

### Seventh Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NT 215	Leadership in Nursing	T	1.00	1.00	1.00	
NT 220	Advanced Nursing of the Adult II	T	3.00	1.00	3.00	\$20
NT 221	Nursing Clinical Experience VII	T	0.00	15.00	5.00	\$90
NT 222	Nursing Dynamics V	T	1.00	1.00	1.00	
NT 225	Advanced Maternal and Child Nursing	T	1.00	1.00	1.00	
COMM 130	Speech (Required) **	G	3.00	0.00	3.00	\$10
HLTH 202	Community Health (Required) **	G	<u>2.00</u>	<u>0.00</u>	<u>2.00</u>	
			11.00	19.00	16.00	

Level II Technical Credit Hours	26.00
Level II General Credit Hours	19.00
Level II Total Credit Hours	45.00-48.00

### Nursing Career Ladder Notes

\* These courses are not included in some practical nursing programs. They may be taken prior to enrollment. If not, they must be taken in addition to second year work. Introduction to Psychology will be scheduled with the Enrichment Quarter. Abnormal Psychology and Communications II will be scheduled in the fifth quarter. Developmental Psychology will be scheduled in the sixth quarter.

\*\* These courses may be taken prior to entering the Enrichment Quarter.

College Algebra I for Health (MATH 108 H) must be completed prior to NT 210. Students may take Algebra I (MATH 108) and Pharmacology Math (MATH 104) or Algebra I (MATH 108) and Clinical Math Skills (NT 106) as a substitute for MATH 108 H. Students placing in MATH 101 and/or MATH 102 are required to complete those courses prior to enrollment in MATH 108 H.

Annual certification in CPR for the health professional is a prerequisite for all clinical courses starting with NT 111 and NT 201. This certification may be obtained through Hocking College course EM 133 (CPR for the Professional Rescuer), Red Cross or American Heart Association (Course C) or the National Safety Council Green Cross Certification.

LPNs may have credit for Sociology of Family and Community Health from their PN programs and should check with the Associate Dean before registering.

Credit by advanced standing or transfer credit will be assigned after successful completion of all Enrichment courses and enrollment in Quarter 5.

# Nutrition and Dietetics

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 100	P	Survey of Dietetics	T	2.00	0.00	2.00	
DT 101		Dietetic Directed Practice I	T	1.00	7.00	2.00	\$30
DT 102	P	Basic Nutrition	T	5.00	0.00	5.00	\$10
COMM 122	P	Communications II	G	3.00	0.00	3.00	\$20
HOTR 110		Quality Sanitation Management	G	2.00	1.00	2.00	
OAT 180	P	Keyboarding	G	1.00	1.00	1.00	\$25
MATH 108	P	Introduction to Algebra	G	3.00	1.00	3.00	\$16
		or					
MATH 108 B		Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
				17.00	10.00	18.00	

## Second Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 103		Food Preparation Principles	T	2.00	4.00	3.00	\$30
DT 106		Food Production Management	T	3.00	0.00	3.00	
DT 111		Dietetic Directed Practice II	T	1.00	7.00	2.00	\$35
DT 120	P	Normal and Modified Menu Planning	T	3.00	0.00	3.00	
BIOS 112		The Human Organism	G	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	\$30
				12.00	13.00	14.00	

## Third Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 110	P	Applied Nutrition	T	3.00	0.00	3.00	\$10
DT 119		Food Purchasing for Health Care Institutions	T	3.00	0.00	3.00	
DT 121		Dietetic Directed Practice III	T	1.00	7.00	2.00	\$35
DT 122		Supervision in Dietetics	T	3.00	0.00	3.00	
COMM 123	P	Communications III	G	3.00	0.00	3.00	\$20
HLTH 101		Medical Terminology I	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
				16.00	7.00	17.00	

## Summer Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.							

## Fourth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 200	P	Diet Therapy I	T	3.00	0.00	3.00	
DT 202	P	Nutrition Care Process	T	3.00	0.00	3.00	
DT 205		Dietetic Directed Practice IV	T	1.00	7.00	2.00	\$30
BIOS 113		Anatomy and Physiology I	G	3.00	2.00	3.00	\$30
COMM 130		Speech	G	3.00	0.00	3.00	\$10
MICS 121		Microsoft Office	G	2.00	3.00	3.00	\$45
HPE ●●●		Health Promotion Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>1.00</u>	
				15.00-14.00	12.00	18.00	

## Fifth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 210	P	Diet Therapy II	T	3.00	0.00	3.00	
DT 212	P	Nutrition Education Methods	T	2.00	0.00	2.00	
DT 215		Dietetic Directed Practice V	T	1.00	7.00	2.00	\$35
DT 230		Management of Quantity Food Systems	T	3.00	0.00	3.00	
BIOS 114		Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
COMM 104		Job Search Techniques	G	1.00	0.00	1.00	\$10
SOCI 160		Introduction to Sociology	G	3.00	0.00	3.00	\$7
		or					
SOCI 169	P	Human Relations in Organizations	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
				16.00	9.00	17.00	

## Sixth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DT 225		Dietetic Directed Practice VI	T	1.00	10.00	3.00	\$35
COMM 225	P	Technical Writing	G	3.00	0.00	3.00	\$20
EM 133	P	CPR for the Professional Rescuer	G	1.00	0.00	1.00	\$25
HLTH 202		Community Health	G	2.00	0.00	2.00	
PSYC 150	P	Introduction to Psychology	G	3.00	0.00	3.00	\$7
DT 104		Food Preparation Principles For Children (Optional)	T	1.00	3.00	2.00	\$20
DT 220		Current Topics in Dietetics (Required)	T	<u>2.00</u>	<u>0.00</u>	<u>2.00</u>	\$10
				12.00-13.00	10.00-13.00	14.00-16.00	

Technical Credit Hours	54.00-56.00
General Credit Hours	44.00
Total Credit Hours	98.00-100.00

**Nutrition and Dietetics Notes:** Directed Practice prerequisites: Enrollment in or completion of technical, basic and general courses coordinated with each quarter of Directed Practices I, II, III, IV, V, VI and permission of the program coordinator.

# Opticianry

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
EM 133	CPR for the Professional Rescuer	G	1.00	0.00	1.00	\$25
HLTH 101	Medical Terminology I	G	3.00	0.00	3.00	
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
OPT 100	Introduction to Optical	G	2.00	0.00	2.00	
PSYC 150	Introduction to Psychology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			18.00	3.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OPT 101	Geometric Optics I	T	2.00	3.00	3.00	\$35
OPT 131	Ophthalmic Dispensing I	T	2.00	3.00	3.00	\$50
BIOS 115	Anatomy and Physiology of the Eye	G	3.00	0.00	3.00	\$30
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
HPE ●●●	Health Promotion Elective (Required)	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	
			15.00	6.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OPT 102	Geometric Optics II	T	2.00	3.00	3.00	\$35
OPT 121	Optical Clinical Experience I	T	1.00	6.00	3.00	\$25
OPT 132	Ophthalmic Dispensing II	T	2.00	3.00	3.00	\$50
MICS 121	Microsoft Office	G	2.00	3.00	3.00	\$45
BUS 100	Small Business Management I	G	3.00	2.00	3.00	\$5
	or					
BUS 102	Principles and Practices of Management I	G	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	
			10.00	17.00	15.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OPT 103	Geometric Optics III	T	2.00	3.00	3.00	\$35
OPT 122	Optical Clinical Experience II	T	1.00	6.00	3.00	\$25
OPT 133	Ophthalmic Dispensing III	T	2.00	3.00	3.00	\$50
OPT 201	Contact Lenses I	T	2.00	3.00	3.00	\$50
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
BUS 101	Small Business Management II	G	3.00	2.00	3.00	\$5
	or					
BUS 103	Principles and Practices of Management II	G	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	
			11.00	17.00	16.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OPT 111	Mechanical Optics I	T	2.00	3.00	3.00	\$50
OPT 123	Optical Clinical Experience III	T	1.00	6.00	3.00	\$25
OPT 202	Contact Lenses II	T	2.00	3.00	3.00	\$50
OPT 204	Ophthalmic Assisting	T	2.00	0.00	2.00	\$50
HUM 203	Ethics, Values, and Morality	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$5
			10.00	12.00	14.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
OPT 112	Mechanical Optics II	T	2.00	3.00	3.00	\$50
OPT 124	Optical Clinical Experience IV	T	1.00	16.00	6.00	\$25
OPT 203	Contact Lenses III	T	2.00	3.00	3.00	\$50
OPT 220	Refraction	T	2.00	3.00	3.00	\$50
COMM 130	Speech	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			10.00	25.00	18.00	

Technical Credit Hours	53.00
General Credit Hours	45.00
Total Credit Hours	98.00

# Physical Therapist Assistant

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	P	3.00	0.00	3.00	\$20
HLTH 101	Medical Terminology I	G	3.00	0.00	3.00	
MATH 108	Introduction to Algebra	P	3.00	1.00	3.00	\$16
PSYC 150	Introduction to Psychology	P	3.00	0.00	3.00	\$7
PTA 100	Introduction to Physical Therapy	G	<u>2.00</u>	<u>0.00</u>	<u>2.00</u>	
			17.00	3.00	17.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 113	Anatomy and Physiology I	G	3.00	2.00	3.00	\$30
CHEM 130	Fundamentals of Chemistry	G	3.00	3.00	4.00	\$110
COMM 123	Communications III	P	3.00	0.00	3.00	\$20
HLTH 111	Medical Terminology II	G	3.00	0.00	3.00	
PYSC 151	Developmental Psychology	P	3.00	0.00	3.00	\$7
HPE •••	Health Elective (Required)	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	
				16.00	5.00	17.00

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 114	Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
MICS 121	Microsoft Office	G	2.00	3.00	3.00	\$45
PHYS 103	Physics	G	3.00	2.00	3.00	
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
SOCI 153	Social and Cultural Awareness	G	4.00	0.00	4.00	\$7
	or					
SOCI 165	Cross Cultural Studies	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			14.00-15.00	7.00	15.00-16.00	

## Fourth (Summer) Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 201	Advanced Anatomy	T	3.00	3.00	4.00	\$115
BIOS 202	Kinesiology	T	3.00	2.00	4.00	\$55
PTA 200	Fundamentals of Physical Therapy	T	3.00	4.00	4.00	\$75
PTA 203	Physical Therapy Procedures	T	3.00	4.00	4.00	\$75
EM 133	CPR for the Professional Rescuer	P	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	\$25
			13.00	13.00	17.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PTA 204	Musculoskeletal Problems	T	3.00	4.00	4.00	\$55
PTA 206	PTA Clinical Experience I	T	1.00	16.00	5.00	\$25
PTA 211	Pathophysiology of Disease	T	3.00	0.00	3.00	
EM 134	Standard First Aid	P	1.00	0.00	1.00	\$25
HUM 203	Ethics, Values, and Morality	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$5
			11.00	20.00	16.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PTA 210	Cardiopulmonary Function	T	2.00	3.00	3.00	\$35
PTA 214	Rehabilitation Procedures	T	4.00	4.00	5.00	\$55
PTA 216	PTA Clinical Experience II	T	1.00	16.00	5.00	\$25
COMM 104	Job Search Techniques	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	\$10
			8.00	23.00	14.00	

## Seventh Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PTA 207	PTA Clinical Issues and Role Transition	T	2.00	0.00	2.00	
PTA 226	PTA Clinical Experience III	T	<u>0.00</u>	<u>36.00</u>	<u>12.00</u>	\$25
			2.00	36.00	14.00	

Technical Credit Hours	55.00
General Credit Hours	55.00-56.00
Total Credit Hours	110.00-111.00



# Radiologic Technology -

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ALH 103	Introduction to Health Care Delivery	G	3.00	0.00	3.00	
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
HLTH 101	Medical Terminology I	G	3.00	0.00	3.00	
HLTH 136	Introduction to Health Care Practice	G	1.00	2.00	2.00	
MATH 113	Comprehensive College Algebra	G	<u>5.00</u>	<u>0.00</u>	<u>5.00</u>	\$16
			18.00	4.00	19.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 121	Introduction to Radiology and Positioning	T	3.00	2.00	4.00	
RAT 131	Patient Care In Radiology	T	1.00	2.00	2.00	
BIOS 114	Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
COMM 123A	Communications III - Job Communication	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			10.00	6.00	12.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 111	Clinical Education I	T	0.00	16.00	4.00	
RAT 122	Radiographic Positioning	T	3.00	2.00	4.00	
RAT 265	Seminar In Radiology	T	1.00	0.00	1.00	
ALH 104	Allied Health Informatics	G	1.00	2.00	2.00	
BIOS 113	Anatomy and Physiology I	G	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	\$30
			8.00	22.00	14.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 112	Clinical Education II	T	0.00	16.00	4.00	
RAT 123	Fluoroscopy In Radiology	T	4.00	2.00	5.00	
PHY 106	Physics for Radiologic Technology	G	<u>4.00</u>	<u>2.00</u>	<u>5.00</u>	
			8.00	20.00	14.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 212	Clinical Education IV	T	0.00	24.00	6.00	
RAT 218	Advanced Radiographic Practice	T	2.00	0.00	2.00	
RAT 219	Pharmacology for Radiography	T	1.00	0.00	1.00	
RAT 222	Principles of Radiographic Technique	T	<u>4.00</u>	<u>2.00</u>	<u>5.00</u>	
			7.00	26.00	14.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 199	Computers In Medical Imaging	T	2.00	0.00	2.00	
RAT 213	Clinical Education V	T	0.00	24.00	6.00	
RAT 231	Sectional Anatomy	T	2.00	2.00	3.00	
SOCI 160	Introduction to Sociology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			7.00	26.00	14.00	

## Seventh Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 211	Clinical Education III	T	0.00	24.00	4.00	
RAT 215	Pathology for Radiographers	T	2.00	0.00	2.00	
RAT 217	Special Procedures In Radiography	T	1.00	0.00	1.00	
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
SOCI 165	Cross Cultural Studies	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			9.00	24.00	13.00	

## Eighth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RAT 214	Clinical Education VI	T	0.00	24.00	4.00	
RAT 226	Synopsis In Radiography	T	2.00	0.00	2.00	
RAT 232	Radiation Biology	T	2.00	0.00	2.00	
HUM 203	Ethics, Values, and Morality	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$5
			7.00	24.00	11.00	

Technical Credit Hours	64.00
General Credit Hours	47.00
Total Credit Hours	111.00

**Radiologic Notes:** Required prerequisites for admission to the Radiologic Technology: PHYS 103 (Physics), 3 credits, or high school physics within the last five years.

All courses in the first quarter are required prerequisites to the second quarter.

Recommended prerequisite: BIOS 112 (The Human Organism), 3 credits.

To meet clinical affiliate requirements, students are required to maintain certification in Basic Life Support (CPR). BLS for health care providers offered through the American Heart Association or the American Red Cross is also acceptable. EM 133 (CPR for the Professional Rescuer), 1 credit, also satisfies this requirement and provides certification for two years.

# Surgical/Operating Room Technology

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ST 100	Fundamentals of Surgical Technology Lab	T	0.00	4.00	2.00	\$50
ST 101	Patient Care Concepts Laboratory	T	0.00	4.00	2.00	\$50
STCT 4631	Fundamentals of Surgical Technology - Theory (COTC4631)	T	3.00	0.00	3.00	\$26
STCT 4633	Patient Care Concepts - Theory (COTC4633)	T	3.00	0.00	3.00	\$26
BIOS 110	Human Anatomy and Physiology I - Lab (COTC4016)	G	0.00	2.00	1.00	\$76
HLTH 101	Medical Terminology I	G	3.00	0.00	3.00	
STCT 4016	Human Anatomy and Physiology I - Theory (COTC4016)	G	5.00 14.00	0.00 10.00	5.00 19.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ST 110	Basic Case Preparation - Lab	T	0.00	2.00	1.00	
ST 111	Surgical Procedures I - Clinical	T	0.00	15.00	3.00	\$25
STCT 4635	Basic Case Preparation - Theory (COTC4635)	T	2.00	0.00	2.00	
STCT 4637	Surgical Procedures I - Theory (COTC4637)	T	2.00	0.00	2.00	
BIOS 111	Human Anatomy and Physiology II - Lab (COTC 4026)	G	0.00	2.00	1.00	\$76
COMM 122	P Communications II	G	3.00	0.00	3.00	\$20
STCT 4026	Human Anatomy and Physiology II - Theory (COTC4026)	G	5.00 12.00	0.00 19.00	5.00 17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ST 120	Surgical Procedures II - Clinical	T	0.00	15.00	3.00	\$25
STCT 4601	Pharmacology for Surgical Assistants (COTC4601)	T	3.00	0.00	3.00	
STCT 4639	Surgical Procedures II - Theory (COTC4601)	T	2.00	0.00	2.00	
COMM 123	P Communications III	G	3.00	0.00	3.00	\$20
MICR 201	Microbiology	G	4.00 12.00	1.00 16.00	4.00 15.00	\$15

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ST 200	Surgical Procedures III - Clinical	T	0.00	15.00	3.00	\$25
ST 201	Pediatric Surgery - Clinical	T	0.00	5.00	1.00	\$25
STCT 4641	Surgical Procedures III - Theory (COTC4641)	T	2.00	0.00	2.00	
STCT 4643	Pediatric Surgery - Theory (COTC4643)	T	2.00	0.00	2.00	
MICS 121	Microsoft Office	G	2.00	3.00	3.00	\$45
PSYC 154	Interpersonal Relationships	G	3.00 9.00	0.00 23.00	3.00 14.00	\$7

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ST 210	Advanced Surgical Technologist Practicum - Clinical	T	0.00	15.00	3.00	\$25
STCT 4645	Advanced Surgical Technologist Practicum (COTC4645)	T	2.00	0.00	2.00	
STCT 4647	Professional Trends and Issues in Surgical Technology (COTC4647)	T	3.00	0.00	3.00	
PSYC 101	General Psychology	G	5.00	0.00	5.00	\$7
SOCI •••	Social Science Elective (Required)	G	5.00 15.00	0.00 15.00	5.00 18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ST 220	Specialty Surgical Practice - Clinical	T	0.00	15.00	3.00	\$25
STCT 4649	Surgical Technology Seminar (COTC4649)	T	2.00	0.00	2.00	
STCT 4651	Specialty Surgical Practice Theory (COTC4651)	T	2.00	0.00	2.00	
MATH 113	Comprehensive College Algebra	G	5.00 9.00	0.00 15.00	5.00 12.00	\$16

Technical Credit Hours	49.00
General Credit Hours	46.00
Total Credit Hours	95.00

**Surgical/Operating Room Notes:** All students must have CPR for the Professional Rescuer (EM 133) prior to the beginning of the second quarter.

# School of Health and Nursing Certificates

## Certificates of Completion

### Electrocardiograph Technician

Objective: To prepare the student for entry level employment as an EKG technician.

Course No.	Course Name	Credits
MA 200	Advanced Clinical Assisting Procedures	5
MA 239	Principles and Techniques of Electrocardiography	1
		1-5

### Phlebotomist

Objective: The student will learn the skills necessary for successful venipuncture. The student will also have the opportunity to visit a laboratory to observe the roll of the phlebotomist. Venipuncture will be performed in the laboratory preceptor.

Course No.	Course Name	Credits
HLTH 132	How to Obtain Blood Samples	1
HLTH 133	How to Obtain Blood Samples Clinical	0.5
		1.5

## Occupational Certificates

### Coding Clerk

Objective: To prepare the student for a position as an outpatient ICD-9-CM/CPT coding specialist in an acute care hospital, large group physician practice or insurance company.

Course No.	Course Name	Credits
HLTH 101	Medical Terminology I	3
BIOS 113	Anatomy and Physiology I	3
HLTH 111	Medical Terminology II	3
BIOS 114	Anatomy and Physiology II	3
BIOS 125	Basic Pathology	2
HIM 120	Basic Coding Elements	3
HIM 203	Applied Concepts of Coding	3
HIM 215	Interpreting Diagnostic Data	2
BIOS 112	The Human Organism	3
		25

### Dietary Manager

Objective: This program is designed to prepare the student to manage food service operations in health care and other institutional facilities.

Course No.	Course Name	Credits
DT 101	Dietetic Directed Practice I	2
DT 102	P Basic Nutrition	5
CULA 109	Safety and Sanitation	2
	or	
HOTR 110	Quality Sanitation Management	2
DT 103	Food Preparation Principles	3
DT 106	Food Production Management	3
DT 111	Dietetic Directed Practice II	2
DT 120	P Normal and Modified Menu Planning	3
DT 119	Food Purchasing for Health Care Institutions	3
DT 121	Dietetic Directed Practice III	2
DT 122	Supervision in Dietetics	3
DT 110	P Applied Nutrition	3
		31

### Early Child Development and Nanny

Objective: Prepares students to provide child care in private homes as nannies or child care centers. This program has been reviewed and critiqued by the faculty from the Nanny Program at Havering College, Hornchurch, England. Clinical experience for the program is obtained at day care centers, head start programs, preschool programs, and in selected private homes.

Course No.	Course Name	Credits
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EDEC 110	Child Care Practicum I	2
EDEC 100	Fundamentals of Child Care	3
GS 133	Defensive Driving	0.25
BIOS 100	Health Science: The Human Machine	3
COMM 115	Children's Literature	3
PSYC 150	P Introduction to Psychology	3
EDEC 111	Child Care Practicum II	2
EDEC 120	Creative Activities for Children	4
DT 110 A	P Maternal and Infant Nutrition	1
EM 133	P CPR for the Professional Rescuer	1
EM 134	P Standard First Aid	1
PSYC 162	Child/Adolescent Development	4
SOCI 161	Sociology of Family Living	3
EDEC 115	Dynamics of Child Care	3
EDEC 112	Child Care Practicum III	2
DT 104	Food Preparation Principles for Children	2
COMM 122	P Communications II	3
COMM 135	Verbal Career Skills	3
PSYC 140	Issues in Child Development	4
		47.25

### Health Information Management Clerk

Objective: To prepare the student for entry-level employment as a unit secretary in an acute care hospital or as a receptionist/secretary in a healthcare facility.

Course No.	Course Name	Credits
HLTH 101	Medical Terminology I	3
HLTH 111	Medical Terminology II	3
HIM 100	Health Information and Health Agency Orientation	3
HIM 110	Health Records and Procedures I	3
HIM 121	Health Records and Procedures II	3
BIOS 112	The Human Organism	3
BIOS 113	Anatomy and Physiology I	3
BIOS 114	Anatomy and Physiology II	3
MICS 112	Introduction to DOS	1
MICS 142	Introduction to Access	1
OAT 180	P Keyboarding	1
		27

### Massage Therapy

Objective: To prepare individuals for entry level careers as massage therapists.

Course No.	Course Name	Credits
MT 110	Swedish Massage I	3
BIOS 151	Massage Anatomy and Physiology	4
MT 120	Swedish Massage II	3
EM 134	P Standard First Aid	1
BIOS 152	Massage Anatomy and Physiology II	4
EM 133	P CPR for the Professional Rescuer	1
MT 130	Swedish Massage III	3
BIOS 153	Massage Anatomy and Physiology III	4
MT 210	Massage Techniques I	3
BIOS 154	Massage Anatomy and Physiology IV	4
MT 220	Massage Techniques II	3
BIOS 155	Massage Anatomy and Physiology V	4
MT 250	Massage Clinical	2
MT 230	Massage Techniques III	3
MT 240	Massage Integration Seminar	4
MT 135	Myology for Massage Therapists	3
		49

### Medical Transcriptionist

Objective: To prepare students for entry level positions as Medical Transcriptionists.

Course No.	Course Name	Credits
COMM 101	Spelling Skills	1
COMM 150	Punctuation and Grammar	2
BIOS 112	The Human Organism	3
HLTH 101	Medical Terminology I	3
OAT 100	P Information Processing	2
HLTH 111	Medical Terminology II	3
OAT 211	Word Processing - Word Perfect or	3

OAT	216	Word Processing - MS Word	3
MA	115	Medical Transcription	<u>3</u>
			20

**Surgical Assistant**

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ST 100	Fundamentals of Surgical Technology Lab	2
ST 101	Patient Care Concepts Laboratory	2
STCT 4631	Fundamentals of Surgical Technology - Theory	3
STCT 4633	Patient Care Concepts - Theory	3
BIOS 110	Human Anatomy and Physiology I - Lab	1
HLTH 101	Medical Terminology I	3
STCT 4016	Human Anatomy and Physiology I - Theory	5
ST 110	Basic Care Preparation - Lab	1
ST 111	Surgical Procedures I - Clinical	3
STCT 4635	Basic Care Preparation - Theory	2
STCT 4637	Surgical Procedures I - Theory	2
BIOS 111	Human Anatomy and Physiology II - Lab	1
COMM 122	P Communications II	3
STCT 4026	Human Anatomy and Physiology II - Theory	5
ST 120	Surgical Procedures II - Clinical	3
STCT 4601	Pharmacology for Surgical Assistants	3
STCT 4639	Surgical Procedures II - Theory	2
MICR 201	Microbiology	4
ST 200	Surgical Procedures III - Clinical	3
ST 201	Pediatric Surgery - Clinical	1
STCT 4641	Surgical Procedures III - Theory	2
STCT 4643	Pediatric Surgery - Theory	<u>2</u>
		56

**Technical Certificate****Medical Assistant**

Objective: To prepare the student for an entry level, non-certified position as a Medical Assistant

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
HLTH 101	Medical Terminology I	3
MA 100	Basic Clinical Assisting Procedures	5
MA 102	Medical Office Procedures I	2
BIOS 112	The Human Organism	3
OAT 100	P Information Processing	2
HLTH 111	Medical Terminology II	3
MA 110	Family Practice Clinical Assisting Procedures	4
MA 112	Medical Law and Ethics	3
MA 122	Medical Office Procedures II	2
MA 221	Medical Management Computerization	4
MA 115	Medical Transcription	3
MA 120	Obstetrics, Gynecology, Pediatrics Clinical Assisting Procedures	4
MA 223	Computer Applications in Medical Assisting	2
EM 133	P CPR for the Professional Rescuer	1
EM 134	P Standard First Aid	1
MATH 104	P Pharmacology Math	1
MA 200	Advanced Clinical Assisting Procedures	5
MA 202	Basic Pharmacology for Medical Assistants	4
MA 203	Medical Assistant Externship I	4
MA 204	Medical Assistant Externship II	4
MA 222	Medical Office Procedures III	4
MA 205	Medical Assistant Externship III	4
MA 220	Medical Laboratory Procedures	6
COMM 104	Job Search Techniques	1
MA 224	Advanced Pharmacology for Medical Assistants	<u>3</u>
		76

# School of Hospitality

## Technical Programs

Programs leading to an Associate Degree, Diploma or Technologist Certification.

Culinary Arts  
Hotel and Restaurant Management

## Certificate Programs

Programs providing specific technical skills.

### Certificate of Completion

Awarded for successful completion of a course or series of courses (less than twelve credit hours) leading to acquisition of specific knowledge and skills.

Bartender Training

### Occupational Certificate

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

Bake Shop Operations  
Baking Certificate  
Bar Management  
Cooking  
Engineering and Facility Management  
Executive Housekeeping Management Specialist  
Food and Beverage Management Specialist  
Marketing and Sales Management Specialist  
Rooms Division Management  
Rooms Division Management Specialist

### Technical Certificates

Awarded for successful completion of a prescribed sequence of courses within a given technology in which the certificate is offered. The total credit hours are at least 50% of the number required for the associate degree in that technology. The technical component will be 27-33 quarter hours with the balance being in general courses.

Food Service Management  
Hospitality Management

### Technologist Certificate

Awarded for successful completion of higher level courses which provide academic rigor and depth beyond the associate degree. These courses may serve as a bridge to a baccalaureate degree program.

Culinary Arts  
Hotel and Restaurant Management

# Culinary Arts

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 111	Stocks, Sauces, and Soups	T	2.00	3.00	3.00	\$100
CULA 240	Festival Catering Production	T	1.00	1.00	1.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
CULA 101	Introduction to Culinary Arts	G	2.00	1.00	2.00	\$125
CULA 109	Safety and Sanitation	G	2.00	1.00	2.00	
CULA 150	Nutrition in Community Food Service Operations	G	3.00	0.00	3.00	
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
MATH 108 B	Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			17.00	7.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 112	Salads, Sandwiches, and Eggs	T	2.00	3.00	3.00	\$100
CULA 115	Breads and Baking Basics	T	2.00	3.00	3.00	\$100
CULA 201	Culinary Arts Lab I	T	1.00	15.00	6.00	\$50
CULA 145	Food Production Identification and Purchasing	G	3.00	0.00	3.00	\$25
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			10.00	24.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 106	Meat, Poultry, and Seafood Processing	T	2.00	3.00	3.00	\$175
CULA 113	A La Carte Cookery	T	1.00	4.00	3.00	\$150
CULA 125	Basic Table Service	T	2.00	3.00	3.00	\$25
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
	or					
HOTR 140	Basic Financial Accounting	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$25
			13.00-14.00	10.00-13.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 294	Culinary Arts Cooperative Work Experience	T	<u>2.00</u>	<u>40.00</u>	<u>6.00</u>	\$25
			2.00	40.00	6.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 105	Pastries and Desserts	T	1.00	4.00	3.00	\$125
CULA 107	Basic Garde Manger	T	1.00	4.00	3.00	\$150
CULA 116	Hospitality Menu Planning	T	2.00	1.00	2.00	\$50
CULA 218	American Regional Cuisine	T	1.00	4.00	3.00	\$150
SUPR 117	Hospitality Supervision	G	3.00	0.00	3.00	
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			11.00	13.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 217	Classical and International Cuisine	T	2.00	3.00	3.00	\$150
CULA 250	Culinary Capstone Experience	T	1.00	4.00	3.00	\$125
CULA 270	Catering	T	1.00	4.00	3.00	\$80
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
BIOS 100	Health Science: The Human Machine	G	3.00	0.00	3.00	
	or					
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
BUS 120	Personal Finance	G	3.00	0.00	3.00	
	or					
SOCI 169	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
CULA •••	Culinary Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3.00</u>	
			11.00	11.00	16.00-19.00	

Technical Credit Hours	51.00-54.00
General Credit Hours	42.00
Total Credit Hours	93.00- 96.00

# Hotel and Restaurant Management

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 240	Festival Catering Production	T	1.00	1.00	1.00	
HOTR 223	Food and Beverage Lab	T	0.00	12.00	4.00	\$25
HOTR 231	Serving Alcohol with Care	T	1.00	0.00	1.00	\$45
HOTR 233	Food and Beverage Controls	T	3.00	0.00	3.00	
HOTR 235	Food and Beverage Services	T	2.00	0.00	2.00	\$25
HOTR 110	Quality Sanitation Management	G	2.00	1.00	2.00	
HOTR 234	Bar and Beverage Management	G	2.00	0.00	2.00	
SUPR 117	Hospitality Supervision	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			14.00	14.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HOTR 118	Hospitality Computer Systems	T	2.00	0.00	2.00	
HOTR 224	Financial Management Lab	T	0.00	12.00	4.00	\$25
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
HOTR 140	Basic Financial Accounting	G	3.00	0.00	3.00	\$25
HOTR 241	Front Office Operations	G	3.00	0.00	3.00	\$25
MATH 108 B	Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			14.00	13.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HOTR 115	Security Management	T	2.00	0.00	2.00	
HOTR 225	Rooms Division Lab	T	0.00	12.00	4.00	\$25
HOTR 263	Facilities Management	T	2.00	0.00	2.00	\$25
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
HOTR 242	Housekeeping Management	G	2.00	0.00	2.00	\$10
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			13.00	12.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HOTR 122	Tourism and Hospitality Industry	T	2.00	0.00	2.00	
HOTR 124	Convention Management and Service	T	3.00	0.00	3.00	
HOTR 170	Hospitality Sales and Marketing	T	3.00	0.00	3.00	\$20
HOTR 226	Marketing and Sales Lab	T	0.00	12.00	4.00	\$25
HOTR 260	Marketing of Hospitality Services	T	3.00	0.00	3.00	\$25
BIOS 100	Health Science: The Human Machine	G	3.00	0.00	3.00	
	or					
BIOS 101	Environmental Science	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			14.00	12.00	18.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HOTR 107	Hospitality Industry Training	T	2.00	0.00	2.00	
HOTR 108	Hospitality Human Resources Management	T	2.00	0.00	2.00	
HOTR 126	Managing for Quality	T	3.00	0.00	3.00	\$25
HOTR 227	Human Resources Lab	T	0.00	12.00	4.00	\$25
HOTR 230	International Hotels - Development and Marketing	T	2.00	0.00	2.00	
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
HOTR 114	Food Management and Preparation I	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$75
			12.00	15.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
HOTR 104	Hospitality Management Development	T	1.00	10.00	4.00	\$50
HOTR 232	Contemporary Club Management	T	2.00	0.00	2.00	
MICS 121	Microsoft Office	G	2.00	3.00	3.00	\$45
HOTR 119	Food Management and Preparation II	G	2.00	3.00	3.00	\$75
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
SOCI ●●●	Social Science Elective (Required)	G	3.00	0.00	3.00	
HOTR ●●●	Hotel/Restaurant Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25- 3.00</u>	
			13.00	16.00	18.00-21.00	

Technical Credit Hours	59.00-62.00
General Credit Hours	47.00
Total Credit Hours	106.00-109.00

**Hotel and Restaurant Management Notes:** Students must choose from the following social science electives: PSYC 150 (Introduction to Psychology), SOCI 160 (Introduction to Sociology), GOVT 142 (Interacting With Government and Politics), SOCI 161 (Sociology of Family Living), or SOCI 165 (Cross Cultural Studies).

# School of Hospitality Certificates

## Certificate of Completion

### Bartender Training

Objective: To prepare the student for the art and science of bartending.

Course No.	Course Name	Credits
HOTR 101	Mixology and Bar Management	1
HOTR 102	Wines and Beers	1
HOTR 231	Serving Alcohol With Care	1
		3

## Occupational Certificates

### Bake Shop Operations

Objective: To prepare the student for employment as bakers in bakeries, restaurants, and grocery outlets with deli and bakeshop production.

Course No.	Course Name	Credits
CULA 105	Pastries and Desserts	3
CULA 130	Introduction to Baking Industry	2
CULA 131	Baking Technology	3
CULA 132	Baking Lab I	5
CULA 133	Baking Lab II	5
CULA 134	Baking Lab III	5
CULA 136	Yeast Dough Production	3
CULA 137	Cake Production	3
CULA 138	Classical Pastries	3
CULA 139	Cookie Development	3
CULA 262	Candy and Confections	3
CULA 263	Bakeshop Operations	2
HOTR 110	Quality Sanitation Management	2
CULA 115	Breads and Baking Basics	3
MATH 150	Food Service Math	2
		47

### Baking Certificate

Objective: To prepare those persons seeking an entry level baker's position and to provide the required courses for certified pastry cook through the American Culinary Federation.

Course No.	Course Name	Credits
CULA 130	Introduction to Baking Industry	2
CULA 132	Baking Lab I	5
CULA 150	Nutrition in Community Food Service Operations	3
CULA 115	Breads and Baking Basics	3
HOTR 110	Quality Sanitation Management	2
CULA 105	Pastries and Desserts	3
CULA 133	Baking Lab II	5
CULA 136	Yeast Dough Production	3
CULA 139	Cookie Development	3
CULA 263	Bakeshop Operations	2
SUPR 117	Hospitality Supervision	3
CULA 131	Baking Technology	3
CULA 134	Baking Lab III	5
CULA 137	Cake Production	3
CULA 138	Classical Pastries	3
CULA 262	Candy and Confections	3
CULA 294	Coop Work Experience (Culinary)	4
CULA 296	Culinary Practicum/Seminar	2
		58

### Bar Management

Objective: To train students in the art and science of bar management. Must be 21 years of age to participate.

Course No.	Course Name	Credits
HOTR 223	Food and Beverage Lab	4
HOTR 115	Security Management	2
HOTR 235	Food and Beverage Services	2
HOTR 101	Mixology and Bar Management	1
HOTR 231	Serving Alcohol With Care	1

COMM 122	P	Communications II	3
EM 134	P	Standard First Aid	1
HOTR 110		Quality Sanitation Management	2
COMM 123	P	Communications III	3
HOTR 260		Marketing of Hospitality Services	3
HOTR 233		Food and Beverage Controls	3
COMM 104		Job Search Techniques	1
SUPR 117	P	Hospitality Supervision	3
HOTR 224		Bar and Beverage Management	2
PSYC 154		Interpersonal Relationships	3
			34

### Cooking

Objective: To prepare those persons seeking an entry level position as a cook and to provide the required courses for certified cook through the American Culinary Federation.

Course No.	Course Name	Credits	
CULA 101	Introduction to Culinary Arts	2	
CULA 105	Pastries and Desserts	3	
CULA 106	Meat, Poultry, and Seafood Processing	3	
CULA 150	Nutrition in Community Food Service Operations	3	
CULA 201	Culinary Arts Lab I	6	
HOTR 110	Quality Sanitation Management	2	
CULA 111	Stocks, Sauces, and Soups	3	
CULA 112	Salads, Sandwiches, and Eggs	3	
CULA 113	A La Carte Cookery	3	
CULA 115	Breads and Baking Basics	3	
SUPR 117	P	Hospitality Supervision	3
COMM 104		Job Search Techniques	1
			35

### Engineering and Facility Management

Objective: To prepare the student to supervise or manage in engineering and facility management division in hotels, hospitals, schools, and larger corporations.

Course No.	Course Name	Credits	
HOTR 115	P	Security Management	2
HOTR 263		Facilities Management	2
MICS 121		Microsoft Office	3
COMM 122	P	Communications II	3
EM 134	P	Standard First Aid	1
COMM 123	P	Communications III	3
SUPR 117	P	Hospitality Supervision	3
HOTR 225		Rooms Division Lab	4
			21

### Executive Housekeeping Management Specialist

Objective: To prepare the student to supervise or manage in hotels, hospitals, schools, and large corporations as housekeeper, maintaining the building and grounds.

Course No.	Course Name	Credits	
HOTR 115	P	Security Management	2
BUS 210		Human Resources Management	3
HOTR 263		Facilities Management	2
MICS 121		Microsoft Office	3
COMM 122	P	Communications II	3
EM 134	P	Standard First Aid	1
COMM 123	P	Communications III	3
HOTR 241		Front Office Operations	3
HOTR 260		Marketing of Hospitality Services	3
HOTR 242	P	Housekeeping Management	2
SUPR 117	P	Hospitality Supervision	3
COMM 104		Job Search Techniques	1
PSYC 154		Interpersonal Relationships	3
HOTR 225		Rooms Division Lab	4
			36

### Food and Beverage Management Specialist

Objective: To prepare the student to supervise or manage a dining room, restaurant, banquet or conference center. Emphasis will be on organization and preparation of buffets as well.

Course No.	Course Name	Credits	
HOTR 223		Food and Beverage Lab	4
HOTR 115	P	Security Management	2
HOTR 235		Food and Beverage Services	2



HOTR	263	Facilities Management	2
HOTR	101	Mixology and Bar Management	1
CULA	116	Hospitality Menu Planning	2
MICS	121	Microsoft Office	3
HOTR	231	Serving Alcohol With Care	1
COMM	122	P Communications II	3
EM	134	P Standard First Aid	1
HOTR	110	Quality Sanitation Management	2
COMM	123	P Communications III	3
HOTR	260	Marketing of Hospitality Services	3
HOTR	233	Food and Beverage Controls	3
CULA	112	Salads, Sandwiches, and Eggs	3
SUPR	117	P Hospitality Supervision	3
HOTR	234	Bar and Beverage Management	2
PSYC	154	Interpersonal Relationships	3
HOTR	114	Food Management and Preparation I	3
HOTR	119	Food Management and Preparation II	3
HOTR	140	Basic Financial Accounting	3
			53

#### Marketing and Sales Management Specialist

Objective: To prepare the student to supervise or manage in sales and marketing divisions in hotels, hospitals, schools, and large corporations.

Course No.	Course Name	Credits	
HOTR	226	Marketing and Sales Lab	4
HOTR	230	Food and Beverage Services	2
BUS	130	Sales	3
HOTR	101	Mixology	1
CULA	116	Hospitality Menu Planning	2
MICS	121	Microsoft Office	3
HOTR	124	Convention Management and Services	3
HOTR	231	Serving Alcohol With Care	1
COMM	122	P Communications II	3
COMM	123	P Communications III	3
HOTR	241	P Front Office Operations	3
HOTR	260	Marketing of Hospitality Services	3
HRCA	233	Food and Beverage Controls	3
SUPR	117	P Hospitality Supervision	3
HOTR	170	Hospitality Sales and Marketing	3
HOTR	234	Bar and Beverage Management	2
PSYC	154	Interpersonal Relationships	3
			45

#### Rooms Division Management

Objective: To prepare the student to supervise or manage the rooms division of large corporations, hotels, hospitals, and schools.

Course No.	Course Name	Credits	
HOTR	225	Rooms Division Lab	4
HOTR	115	P Security Management	2
BUS	130	Sales	3
BUS	170	P Fundamentals of Business I	3
BUS	210	Human Resources Management	3
COMM	124	P Communications IV	3
COMM	122	P Communications II	3
COMM	123	P Communications III	3
HOTR	241	P Front Office Operations	3
COMM	104	Job Search Techniques	1
HOTR	140	Basic Financial Accounting	3
HOTR	242	P Housekeeping Management	2
SUPR	117	P Hospitality Supervision	3
PSYC	154	Interpersonal Relationships	3
			39

#### Rooms Division Management Specialist

Objective: To prepare the student to supervise or manage the rooms division in hotels, hospitals, schools, and large corporations.

Course No.	Course Name	Credits	
HOTR	223	Food and Beverage Lab	4
HRCA	120	P Security Management	2
BUS	130	Sales	3
MICS	121	Microsoft Office	3
HOTR	224	Financial Management Lab	4
COMM	122	P Communications II	3
COMM	123	P Communications III	3
HOTR	241	Front Office Operations	3
COMM	104	Job Search Techniques	1

HOTR	242	P Housekeeping Management	2
SUPR	117	P Hospitality Supervision	3
PSYC	154	Interpersonal Relationships	3
HOTR	225	Rooms Division Lab	4
			38

## Technical Certificates

#### Food Service Management

Objective: To prepare the student for employment in hotels, restaurants, hospitals, nursing homes, and prisons as entry level cooks and kitchen supervisors.

Course No.	Course Name	Credits	
CULA	150	Nutrition in Community Food Service Operations	3
HOTR	110	Quality Sanitation Management	2
CULA	111	Stocks, Sauces, and Soups	3
CULA	112	Salads, Sandwiches, and Eggs	3
CULA	115	Breads and Baking Basics	3
CULA	116	Hospitality Menu Planning	2
HOTR	235	Food and Beverage Services	2
BUS	200	Business Law	3
COMM	122	P Communications II	3
COMM	135	Verbal Career Skills	3
EM	134	P Standard First Aid	1
MATH	150	Food Service Math	2
OAT	180	P Keyboarding	1
CULA	217	Classical and International Cuisine	3
CULA	218	American Regional Cuisine	3
HOTR	111	Food Management I	3
BUS	120	P Personal Finance	3
BUS	185	Retail Management	3
BUS	186	Retail Store Operations	3
HOTR	233	P Food and Beverage Controls	3
GS	129	Orientation to College and Service Learning	3
			55

#### Hospitality Management

Objective: To prepare the student for employment in the hospitality industry in hotels, restaurants, and resorts providing services to guests and supervisory employees.

Course No.	Course Name	Credits	
HOTR	241	P Front Office Operations	3
HOTR	242	P Housekeeping Management	2
HOTR	260	Marketing of Hospitality Services	3
HOTR	110	Quality Sanitation Management	2
CULA	111	Stocks, Sauces, and Soups	3
CULA	112	Salads, Sandwiches, and Eggs	3
HOTR	115	P Security Management	2
HOTR	121	Hospitality Ethics	2
HOTR	223	P Food and Beverage Controls	3
HOTR	234	Bar and Beverage Management	2
HOTR	235	Food and Beverage Services	2
BUS	100	P Small Business Management I	3
BUS	200	Business Law	3
COMM	122	P Communications II	3
COMM	135	Verbal Career Skills	3
EM	134	P Standard First Aid	1
MATH	150	Food Service Math	2
OAT	180	P Keyboarding	1
HOTR	140	Basic Financial Accounting	3
			46

## Technologist Certificates

#### Culinary Arts

Objective: To prepare students for management positions in the food service industry with advanced training in management and problem/conflict resolution.

Course No.	Course Name	Credits	
CULA	108	Advanced Garde Manger	3
CULA	138	Classical Pastries	3
CULA	275	Food and Beverage Manager	5
HOTR	107	P Hospitality Industry Training	2

HOTR	108	P	Hospitality Human Resource Management	2
HOTR	126	P	Managing for Quality	<u>3</u>
				18

**Hotel and Restaurant Management**

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
HOTR 240	Hospitality Managerial Accounting	3
HOTR 244	Audits and Controls for Lodging Establishments	2
HOTR 276	Introduction to Hospitality Real Estate	2
HOTR 277	Architectural Development and Design	2
HOTR 104	Hospitality Management Development	4
CULA 116	Hospitality Menu Planning	2
HOTR 236	Budgeting for Hospitality	<u>3</u>
		18

# School of Industrial Technology

## Technical Programs

Programs leading to an Associate Degree, Diploma or Technologist Certification.

- Audio/Video Production and Engineering
- Compressed Air and Gas Systems
- Drafting and Design
- Electronics
- Industrial Ceramics

## Certificate Programs

Programs providing specific technical skills.

### Certificate of Completion

Awarded for successful completion of a course or series of courses (less than twelve credit hours) leading to acquisition of specific knowledge and skills.

- Broadcast Production
- Industrial Hydraulics/Pneumatics
- Refrigeration

### Occupational Certificate

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

- Compressed Natural Gas Fill Station and Compressor Installation and Maintenance Compressor
- Computer Builder/Maintenance Worker
- Electronics
- Natural Gas Vehicle Compressor Fill Station Specialist
- Rotating Compressor Specialist

### Technical Certificate

Awarded for successful completion of a prescribed sequence of courses within a given technology in which the certificate is offered. The total credit hours are at least 50% of the number required for the associate degree in that technology. The technical component will be 27-33 quarter hours with the balance being in general courses.

- Basic Drafter
- Industrial Plastics

# Audio/Video Production and Engineering

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 110	Studio Production	T	2.00	3.00	3.00	\$60
EE 150	Technical Basis for Broadcast I	T	3.00	3.00	4.00	\$35
BUS 120	Personal Finance	G	3.00	0.00	3.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
OAT 180	Keyboarding	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$25
			12.00	7.00	14.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 210	Audio/Video Production I	T	2.00	3.00	3.00	\$60
EE 151	Technical Basis for Broadcast II	T	3.00	3.00	4.00	\$35
COMM 123 N	Communications III (Writing for Television and Radio)	G	3.00	0.00	3.00	\$20
MICS 112	Introduction to DOS	G	1.00	1.00	1.00	\$25
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			12.00	7.00	14.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 207	Multitrack Audio Recording	T	2.00	3.00	3.00	\$60
BC 296 A	Broadcast Practicum I	T	2.00	8.00	3.00	
EE 152	Technical Basis for Broadcasting III	T	3.00	3.00	4.00	\$35
EE 240	Computers for Electronic Technicians I	T	3.00	3.00	4.00	\$60
DD 101	Engineering Drawing I	G	<u>1.00</u>	<u>5.00</u>	<u>3.00</u>	\$15
			11.00	22.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 201	Audio/Video Systems I	T	3.00	3.00	4.00	\$60
BC 215	Audio/Video Production II	T	2.00	3.00	3.00	\$60
BUS 100	Small Business Management I	G	3.00	2.00	3.00	\$5
MATH 108 E	Introduction to Algebra for Engineering	G	3.00	1.00	3.00	\$16
PHYS 103	Physics	G	3.00	2.00	3.00	
	or					
PHYS 202	Physics - Heat, Light, and Sound	G	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	\$30
			14.00	11.00	16.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 209	Audio/Video Systems II	T	3.00	3.00	4.00	\$60
BC 230	Advanced Post Production	T	2.00	3.00	3.00	\$60
BUS 101	Small Business Management II	G	3.00	2.00	3.00	\$5
DD 203	Electrical Drawing	G	2.00	5.00	4.00	\$60
MATH 110	Geometry and Trigonometry	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			13.00	14.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BC 200	Media Portfolio Development	T	2.00	3.00	3.00	\$60
BC 296 B	Broadcast Practicum II	T	2.00	8.00	3.00	
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
SOCI 169	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
BC •••	Broadcast Engineering Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25- 3.00</u>	
			11.00	11.00	13.00-16.00	

Technical Credit Hours	48.00-51.00
General Credit Hours	43.00
Total Credit Hours	91.00- 94.00

# Compressed Air and Gas Systems

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CAGS 100 A	Precision Instruments A	T	1.00	1.00	1.00	\$13
CAGS 101	Introduction to Compressed Air Systems	T	3.00	0.00	3.00	\$40
CAGS 102	Compressed Air Applications	T	3.00	0.00	3.00	\$35
EM 134	P Standard First Aid	G	1.00	0.00	1.00	\$25
MATH 108 E	Introduction to Algebra for Engineering	G	3.00	1.00	3.00	\$16
COMM 122	P Communications II	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			14.00	2.00	14.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CAGS 100 B	Precision Instruments B	T	1.00	1.00	1.00	\$13
CAGS 110	Reciprocating Compressors I	T	2.00	6.00	4.00	\$40
CAGS 111	Lubricants, Gears, and Bearings	T	2.00	0.00	2.00	\$30
CAGS 112	Air and Gas Condition	T	1.00	6.00	3.00	\$45
MATH 111	P Intermediate Algebra	G	3.00	1.00	3.00	\$16
MICS 144	Introduction to Word	G	1.00	1.00	1.00	\$30
COMM 123	P Communications III	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			13.00	15.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CAGS 100 C	Precision Instruments C	T	1.00	1.00	1.00	\$13
CAGS 116	Reciprocating Compressors II	T	2.00	6.00	4.00	\$40
CAGS 118	Process Gas Compressors and Boosters	T	2.00	3.00	3.00	\$40
CAGS 117	Hydraulics and Pneumatics	G	2.00	3.00	3.00	\$40
COMM 124	P Communications IV	G	3.00	0.00	3.00	\$20
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			13.00	13.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CAGS 200	Rotary Screw Compressors	T	2.00	6.00	4.00	\$30
CAGS 201	Plant Equipment - Installation	T	2.00	3.00	3.00	\$30
CAGS 208	Basic Refrigeration	T	3.00	3.00	4.00	\$45
ISE 201	Occupational Safety	G	3.00	0.00	3.00	\$5
PHYS 201	P Physics - Motion	G	3.00	2.00	3.00	\$30
COMM 104	Job Search Techniques	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	\$10
			14.00	14.00	18.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CAGS 202	Controls I	T	2.00	3.00	3.00	\$40
CAGS 204	Compressed Air Systems Troubleshooting	T	2.00	3.00	3.00	\$40
CAGS 210	Vacuum Pumps and Blowers	T	2.00	3.00	3.00	\$40
COMM 225	P Technical Writing	G	3.00	0.00	3.00	\$20
SOCI 169	P Human Relations in Organizations	G	3.00	0.00	3.00	\$7
CAGS ●●●	Compressor Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3.00</u>	
			12.00	9.00	15.00-18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CAGS 205	Controls II	T	2.00	3.00	3.00	\$50
CAGS 206	Centrifugal Compressors	T	2.00	3.00	3.00	\$40
CAGS 207	Air Systems Design	T	2.00	3.00	3.00	\$40
SUPR 212	Industrial Supervision	G	3.00	0.00	3.00	\$5
COMM 130	Speech	G	3.00	0.00	3.00	\$10
CAGS 296	Compressor Practicum (Required)	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	\$10
			13.00	16.00	17.00	

Technical Credit Hours	56.00-59.00
General Credit Hours	42.00
Total Credit Hours	98.00-101.00

# Drafting and Design

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 101	P	Engineering Drawing I	T	1.00	5.00	3.00	\$15
DD 203	P	Electrical Drawing	T	2.00	5.00	4.00	\$60
DD 110		Discover Drafting	G	1.00	0.00	1.00	\$15
COMM 122	P	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 E		Introduction to Algebra for Engineering	G	3.00	1.00	3.00	\$16
SOCI 169	P	Human Relations in Organizations	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
				13.00	11.00	17.00	

## Second Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 102	P	Engineering Drawing II	T	1.00	5.00	3.00	\$60
DD 115		AutoCAD Concepts I	T	1.00	3.00	2.00	\$60
ISE 107		Manufacturing I	T	3.00	2.00	3.00	\$45
COMM 123	P	Communications III	G	3.00	0.00	3.00	\$20
EE 126	P	Introduction to Electricity	G	2.00	4.00	3.00	\$30
MATH 110	P	Geometry and Trigonometry	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
				13.00	15.00	17.00	

## Third Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 103	P	Engineering Drawing III	T	1.00	5.00	3.00	\$60
ISE 108		Manufacturing II	T	3.00	2.00	3.00	\$30
COMM 135		Verbal Career Skills	G	3.00	0.00	3.00	\$10
MATH 111	P	Intermediate Algebra	G	3.00	1.00	3.00	\$16
PHYS 202	P	Physics-Heat, Light, and Sound	G	3.00	2.00	3.00	\$30
PSYC 150	P	Introduction to Psychology	G	3.00	0.00	3.00	\$7
		or					
SOCI 160		Introduction to Sociology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
				16.00	10.00	18.00	

## Summer Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.							

## Fourth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 200	P	Architecture I - Detailing	T	1.00	7.00	3.00	\$60
DD 210		Geometric Tolerancing and Dimensioning	T	2.00	0.00	2.00	\$60
DD 215		AutoCAD Concepts II	T	2.00	4.00	3.00	\$70
ISE 109		Manufacturing III	T	2.00	4.00	3.00	\$40
ISE 201		Occupational Safety	T	3.00	0.00	3.00	\$5
PHYS 201	P	Physics - Motion	G	<u>3.00</u>	<u>2.00</u>	<u>3.00</u>	\$30
				13.00	17.00	17.00	

## Fifth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 201	P	Architecture II - Residential	T	1.00	5.00	3.00	\$60
DD 202	P	Advanced Drafting/CAD	T	2.00	4.00	3.00	\$60
COMM 104		Job Search Techniques	G	1.00	0.00	1.00	\$10
COMM 225	P	Technical Writing	G	3.00	0.00	3.00	\$20
DD 204	P	Descriptive Geometry	G	2.00	4.00	3.00	\$60
MATH 112	P	Advanced Algebra	G	3.00	1.00	3.00	\$16
DD •••		Drafting and Design Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25- 3.00</u>	
				12.00	14.00	16.00-19.00	

## Sixth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 205	P	Die Design	T	2.00	4.00	3.00	\$60
ISE 213		Control Systems II	T	3.00	2.00	3.00	\$60
SUPR 212		Industrial Supervision	T	3.00	0.00	3.00	\$5
BUS 120	P	Personal Finance	G	3.00	0.00	3.00	
NRM 123		Surveying and Mapping I	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$15
				13.00	9.00	15.00	

Technical Credit Hours	50.00-53.00
General Credit Hours	50.00
Total Credit Hours	100.00-103.00

# Electronics

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EE 261		Digital Logic I	T	3.00	3.00	4.00	\$35
BUS 120	P	Personal Finance	G	3.00	0.00	3.00	
COMM 122	P	Communications II	G	3.00	0.00	3.00	\$20
EE 101		D.C. Circuits	G	3.00	3.00	4.00	\$35
MATH 108 E		Introduction to Algebra for Engineering	G	3.00	1.00	3.00	\$16
OAT 180	P	Keyboarding	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$25
				16.00	8.00	18.00	

## Second Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EE 262		Digital Logic II	T	3.00	3.00	4.00	\$35
COMM 123	P	Communications III	G	3.00	0.00	3.00	\$20
DD 207	P	Electronic Drawing	G	2.00	4.00	3.00	\$60
EE 102		A.C. Circuits	G	3.00	3.00	4.00	\$35
MATH 110	P	Geometry and Trigonometry	G	3.00	1.00	3.00	\$16
MICS 112		Introduction to DOS	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$25
				15.00	12.00	18.00	

## Third Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EE 109		Semiconductor Devices I	T	3.00	3.00	4.00	\$35
EE 240		Computers for Electronic Technicians I	T	3.00	3.00	4.00	\$60
DD 101	P	Engineering Drawing I	G	1.00	5.00	3.00	\$15
PHYS 201	P	Physics - Motion	G	3.00	2.00	3.00	\$30
COMM 130		Speech	G	3.00	0.00	3.00	\$10
		or					
COMM 135		Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
				13.00	13.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EE 115		Semiconductor Devices II	T	3.00	3.00	4.00	\$35
EE 119		Electronic Communication I	T	2.00	3.00	3.00	\$35
EE 123		Electronic Applications I	T	1.00	3.00	2.00	\$35
EE 241		Computer for Electronic Technicians II	T	3.00	3.00	4.00	\$60
COMM 225	P	Technical Writing	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
				12.00	12.00	16.00	

## Fifth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EE 124		Electronic Applications II	T	1.00	3.00	2.00	\$35
EE 160		Electronic Equipment Maintenance I	T	3.00	3.00	4.00	\$60
EE 225		Industrial Electronics I	T	2.00	3.00	3.00	\$35
EE 230		Linear IC's	T	2.00	3.00	3.00	\$35
COMM 104		Job Search Techniques	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	\$10
				9.00	12.00	13.00	

## Sixth Quarter

<u>Course No.</u>		<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EE 161		Electronic Equipment Maintenance II	T	3.00	3.00	4.00	\$60
EE 226		Electronic Certification	T	1.00	3.00	2.00	
EE 228		Industrial Electronics II	T	2.00	3.00	3.00	\$35
EE 296		Electronic Practicum	T	2.00	8.00	3.00	
SOCI 169	P	Human Relations in Organizations	G	3.00	0.00	3.00	\$7
EE 227		Current Topics and Technology (Optional)	T	0.50	0.00	0.50-5.00	
EE •••		Electronics Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3.00</u>	
				11.00-11.50	17.00	15.00-23.00	

Technical Credit Hours	53.00-61.00
General Credit Hours	44.00
Total Credit Hours	97.00-105.00

# Industrial Ceramics

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CER 105	Structural Clay Products	T	3.00	2.00	3.00	\$60
CER 110	Focus on Ceramics I	G	1.00	1.00	1.00	
CHEM 100	Introduction to Chemistry I	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 E	Introduction to Algebra for Engineering	G	3.00	1.00	3.00	\$16
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			15.00	9.00	16.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CER 120	Refractories	T	3.00	2.00	3.00	\$60
DD 101	Engineering Drawing I	T	1.00	5.00	3.00	\$15
CHEM 102	Introduction to Chemistry II	G	3.00	2.00	3.00	\$30
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
MATH 110	Geometry and Trigonometry	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			16.00	10.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CER 104	Combustion I	T	3.00	2.00	3.00	\$60
CER 130	Whitewares	T	3.00	2.00	3.00	\$60
DD 104	Introduction to AutoCAD	T	1.00	1.00	1.00	\$20
DD 105	AutoCAD Applications	T	1.00	3.00	2.00	\$40
MATH 111	Intermediate Algebra	G	3.00	1.00	3.00	\$16
PHYS 202	Physics – Heat, Light, and Sound	G	3.00	2.00	3.00	\$30
SOCI 165	Cross Cultural Studies	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$ 7
			17.00	11.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CER 203	Statistical Quality and Process Control	T	2.00	4.00	3.00	\$60
CER 210	Glasses, Glazes, and Enamels	T	3.00	3.00	4.00	\$60
EE 126	Introduction to Electricity	T	2.00	4.00	3.00	\$30
CER 115	Focus on Ceramics II	G	1.00	1.00	1.00	
MATH 112	Advanced Algebra	G	3.00	1.00	3.00	\$16
SOCI ●●●	Social Science Elective (Required)	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			14.00	13.00	17.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CER 220	Engineering Ceramics	T	3.00	2.00	3.00	
CER 230	Design of Experiments and Statistical Applications	T	3.00	2.00	3.00	
ISE 130	AC Power Systems	T	3.00	2.00	3.00	
ISE 210	Control Systems I	T	3.00	2.00	3.00	\$60
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
BUS ●●●	Business Elective (Required)	G	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
			13.00	8.00	16.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CER 208	Technical Laboratory	T	3.00	3.00	4.00	\$60
CER 296	Ceramic Practicum	T	1.00	8.00	2.00	
ISE 213	Control Systems II	T	3.00	2.00	3.00	\$60
SUPR 212	Industrial Supervision	T	3.00	0.00	3.00	\$ 5
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
CER 205	Current Topics and Technology (Optional)	T	<u>0.50</u>	<u>0.00</u>	<u>0.50-3.00</u>	
			13.00-13.50	13.00	15.00-18.00	

Technical Credit Hours	52.00-55.00
General Credit Hours	48.00
Total Credit Hours	100.00-103.00



# School of Industrial Technology Certificates

## Certificate of Completion

### Broadcast Production

Objective: To prepare students for entry level employment in the broadcast production field.

Course No.	Course Name	Credits
BC 110	Studio Production	3
BC 210	Audio/Video Production I	3
BC 215	Audio/Video Production II	3
BC 230	Advanced Post Production	3
		12

### Industrial Hydraulics/Pneumatics

Objective: To prepare the student for certification through the Fluid Power Society that verifies technician competency in the areas of industrial hydraulic and pneumatic air systems.

Course No.	Course Name	Credits
CAGS 117	Hydraulics and Pneumatics	3
	or	
CAGS 281	FPS Pneumatic Technician Certification	2-3

### Refrigeration

Objective: To prepare the student for EPA mandated certification that permits the technician to service refrigeration dryers in compressed air systems and dispose of refrigerants.

Course No.	Course Name	Credits
CAGS 280	Refrigerant Technician Seminar	1
		1

## Occupational Certificates

### CNG Fill Station and Compressor Installation and Maintenance

Course No.	Course Name	Credits
CAGS 110	Reciprocating Compressor I	4
CAGS 202	Controls I	3
CAGS 207	Air System Design	3
DD 101 P	Engineering Drawing I	3
COMM 122 P	Communications II	3
COMM 123 P	Communications III	3
COMM 124 P	Communications IV	3
COMM 225 P	Technical Writing	3
		25

### Compressor

Course No.	Course Name	Credits
CAGS 100	Precision Instruments	3
CAGS 101	Introduction to Compressed Air Systems	3
CAGS 102	Compressed Air Applications	3
CAGS 110	Reciprocating Compressors I	4
CAGS 112	Air and Gas Conditioning	3
CAGS 116	Reciprocating Compressors II	4
CAGS 117	Hydraulics and Pneumatics	3
CAGS 118	Processor Gas Compressor/Boosters	3
MATH 108 E P	Introduction to Algebra for Engineering	3
COMM 122 P	Communications II	3
COMM 123 P	Communications III	3
		35

### Computer Builder/Maintenance Worker

Objective: To repair, maintain, and upgrade personal computers.

Course No.	Course Name	Credits
EE 240	Computers/Electronic Technician I	4
EE 241	Computers/Electronic Technician II	4
EE 262	Digital Logic II	4

EE 261	Digital Logic I	4
		16

### Electronics

Objective: To prepare students for entry level employment as an electronic parts clerk/inspector or an electronic draftsman in training.

Course No.	Course Name	Credits
EE 101	D.C. Circuits	4
EE 102	A.C. Circuits	4
EE 261	Digital Logic I	4
MATH 108 E P	Introduction to Algebra for Engineering	3
DD 207 P	Electronic Drawing	3
EE 109	Semiconductor Devices I	4
EE 123	Electronic Applications	2
		24

### NGV Compressor Fill Station Specialist

Objective: To provide the student with special skills to maintain, troubleshoot, and repair NGV compressor stations.

Course No.	Course Name	Credits
CAGS 100	Precision Instruments	3
MATH 108 E P	Introduction to Algebra for Engineering	3
CAGS 111	Lubricants, Gears, and Bearings	2
CAGS 112	Air and Gas Conditioning	3
ISE 201	Occupational Safety	3
CAGS 202	Controls I	3
CAGS 205	Controls II	3
CAGS 110	Reciprocating Compressors I	4
		24

### Rotating Compressor Specialist

Objective: To provide student with special skills to maintain, trouble-shoot, and repair rotating compressors.

Course No.	Course Name	Credits
CAGS 117	Hydraulics and Pneumatics	3
CAGS 200	Rotary Screw Compressors	4
ISE 201	Occupational Safety	3
CAGS 202	Controls I	3
CAGS 208	Basic Refrigeration	4
CAGS 206	Centrifugal Compressors	3
		20

## Technical Certificates

### Basic Drafter

Objective: To prepare an entry level drafter.

Course No.	Course Name	Credits
DD 101 P	Engineering Drawing I	3
MATH 108 E P	Introduction to Algebra for Engineering	3
COMM 122 P	Communications II	3
DD 102 P	Engineering Drawing II	3
ISE 108	Manufacturing I	3
MATH 110 P	Geometry and Trigonometry	3
COMM 123 P	Communications III	3
DD 103 P	Engineering Drawing III	3
DD 115	AutoCAD Concepts I	2
DD 200 P	Architecture I - Detailing	3
DD 203 P	Electrical Drawing	4
DD 215	AutoCAD Concepts II	3
ISE 109	Manufacturing II	3
MATH 203 P	Intermediate Algebra	3
SOCI 169 P	Human Relations in Organizations	3
PSYC 150	Introduction to Psychology	3
	or	
SOCI 160	Introduction to Sociology	3
ISE 110	Manufacturing III	3
		51

### Industrial Plastics

Course No.	Course Name	Credits
CER 207	Standards in Industry	3
MATL 100	Properties of Materials	3
MATL 102	Steel and Mechanical Properties	3

MATL	103		Material Properties of Polymers	3
MATL	111		Processing Polymers	3
DD	101	P	Engineering Drawing I	3
DD	104	P	Introduction to AutoCAD	1
ISE	115		Environmental and Safety Fundamentals	3
CHEM	100		Introduction to Chemistry I	3
MICS	121		Microsoft Office	3
COMM	122	P	Communications II	3
COMM	123	P	Communications III	3
CHEM	102		Introduction to Chemistry II	3
MATL	205		Composite Compositions	3
MATH	108	P	Introduction to Algebra	3
MATH	110	P	Geometry and Trigonometry	3
MATH	111	P	Intermediate Algebra	<u>3</u>
				49

# School of Natural Resources

## Technical Programs

Programs leading to an Associate Degree, Diploma or Technologist Certification.

- Archaeology
- Backcountry Horsemanship
- Backcountry Horsemanship and Wilderness Skills
- Ecotourism and Adventure Travel
- Environmental Restoration
- Equine Health and Complimentary Therapies
- Farrier Science and Business
- Fish Management and Aquaculture
- Forest Management
- Natural and Historical Interpretation
- Natural Resource Management
- Ranger Services
- Reclamation
- Wildlife Management

## Certificate Programs

Programs providing specific technical skills.

### Certificate of Completion

Awarded for successful completion of a course or series of courses (less than twelve credit hours) leading to acquisition of specific knowledge and skills.

- Backpacking and Survival
- Herbal Studies
- Nature Art
- Wilderness Skills I
- Wilderness Skills II

### Occupational Certificate

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

- Apprentice Field Operator
- Apprentice Field Operator Maintenance
- Apprentice Field Operator Reclamation
- Aquaculture and Fish Hatchery Aide
- Archaeological Laboratory Methods
- Archaeological Field Methods
- Backcountry Horse I
- Backcountry Horse II
- Fisheries Conservation Aide
- Forester's Aide
- Geographic Information and Global Positioning Systems (GIS/GPS)
- Park Maintenance
- Timber Harvesting and Tree Care I
- Timber harvesting and Tree Care II
- Water Adventure Leader
- Wilderness Adventure Travel Leader
- Wilderness Skills and Adventure Leader - Land

Wilderness Skills and Adventure Leader - Water  
Wildlife Conservation Aide I  
Wildlife Conservation Aide II  
Wood Procurement

**Technologist Certificate**

Awarded for successful completion of higher level courses which provide academic rigor and depth beyond the associate degree. These courses may serve as a bridge to a baccalaureate degree program.

Environmental Restoration

# Archaeology

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ARCH 101	Principles of Archaeology	T	4.00	0.00	4.00	
ARCH 102	World Prehistory	T	4.00	0.00	4.00	
ARCH 210	Archaeological Careers	G	1.00	0.00	1.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
GEOL 101	Geology	G	2.00	3.00	3.00	\$25
MATH 108N	Introduction to Algebra for Natural Resources	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			17.00	4.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ARCH 217	Peruvian Prehistory	T	3.00	6.00	5.00	\$690
ARCH 110	Peruvian Ethnology	G	2.00	3.00	3.00	\$414
BIOS 130	Rainforest Ecology	G	1.00	6.00	3.00	\$414
LANG 110	Spanish	G	<u>5.00</u>	<u>0.00</u>	<u>5.00</u>	\$690
			11.00	15.00	16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ARCH 103	North American Prehistory	T	4.00	3.00	5.00	
ARCH 104	Archaeology Lab Methods - Lithics	T	1.00	3.00	2.00	\$20
ARCH 105	Geoarchaeology	T	2.00	6.00	4.00	\$10
NRM 123	Surveying and Mapping I	T	2.00	3.00	3.00	\$15
ARCH 280	Cultural Anthropology	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	
			13.00	15.00	18.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ARCH 201	Archaeological Field Methods	T	4.00	24.00	12.00	\$100
NRM 124	Surveying and Mapping II	T	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$15
			6.00	27.00	15.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ARCH 202	Photography for Archaeology	T	0.00	6.00	2.00	\$150
ARCH 212	Archaeology Research Lab	T	1.00	6.00	3.00	\$10
ARCH 214	Archaeology Lab Methods - Zooarchaeology	T	1.00	3.00	2.00	\$20
ARCH 220	Historic Preservation and Environmental Law	T	2.00	3.00	3.00	
GEO 100	Introduction to GIS	T	1.00	3.00	2.00	\$55
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
COMM 123	Communications III	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			10.00	24.00	18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ARCH 216	Archaeology Lab Methods - Prehistoric Ceramics	T	1.00	3.00	2.00	\$20
GEO 102	Introduction to GPS	T	1.00	3.00	2.00	\$55
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
MATH 110	Geometry and Trigonometry	G	3.00	1.00	3.00	\$16
MICS 121	Microsoft Office	G	2.00	3.00	3.00	\$45
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			12.00	13.00	16.00	

Technical Credit Hours	58.00
General Credit Hours	43.00
Total Credit Hours	101.00

# Backcountry Horsemanship

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 109	Dendrology	T	2.00	3.00	3.00	\$35
EQSI 103	Horse Care Handling	T	2.00	5.00	3.00	
EQSI 110	Horsemanship I: Beginning Riding	T	2.00	3.00	3.00	\$200
NRM 110	Chainsaw Operation	T	0.00	2.00	1.00	\$85
NRM 130	Recreation Area Equipment	T	0.00	2.00	1.00	\$65
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MICS 121A	Microsoft Office - Word Processing	G	1.00	1.00	1.00	\$15
NRM 169	Natural Resources Exposition I (Optional)	T	0.00	1.50	0.50	
			12.00	19.00-20.50	18.00-18.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
WLM 156	Wildlife Investigative Techniques I	G	2.00	3.00	3.00	\$35
EQSI 115	Horsemanship II - Intermediate Riding	T	2.00	3.00	3.00	\$200
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
EQSI 111	Equine Employment Seminar	G	2.00	0.00	2.00	\$80
MATH 108N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
MICS 121B	Microsoft Office - Database	G	1.00	1.00	1.00	\$15
			15.00	11.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 120	Horsemanship III - Advanced Trail Riding	T	2.00	3.00	3.00	\$200
NRM 125	Map Reading and Interpretation	T	2.00	2.00	2.00	
NRM 134	Environmental Issues	T	2.00	3.00	3.00	
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
GEOL 105	Soils	G	2.00	3.00	3.00	
MICS 121C	Microsoft Office - Spreadsheet	G	1.00	1.00	1.00	\$15
SOCI ●●●	Social Science Elective (Required)	G	3.00	0.00	3.00	
			14.00	15.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 294	Equine Science Cooperative Work Experience	T	2.00	40.00	6.00	
	or					
EQSI 296	Equine Science Practicum	T	1.00	7.00	2.00	
EQSI 255	Advanced Packing and Wilderness Skills (Optional)	T	0.00	12.00	4.00	\$380
			1.00-2.00	7.00-52.00	2.00-10.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 200	Horse Packing	T	2.00	3.00	3.00	\$75
FOR 222	Introduction to Forestry	T	2.00	3.00	3.00	\$50
NRM 113	Watercraft Operations and Maintenance	T	0.00	4.00	2.00	\$75
NRM 210	Woodland Ecology	T	2.00	3.00	3.00	
NRM 217	Aquatic Ecology	T	2.00	3.00	3.00	\$25
WLM 215	Wildlife Management I	T	2.00	3.00	3.00	\$10
NRM 269	Natural Resources Exposition II (Optional)	T	0.00	1.50	0.50-2.00	
			10.00	19.00-20.50	17.00-19.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 201	Horse Program Management	T	2.00	3.00	3.00	
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
EM 129	First Responder	G	1.00	3.00	2.00	\$50
EQSI 210	Horseshoeing I	G	2.00	3.00	3.00	\$100
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
	or					
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
			13.00	12.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 220	Trail Maintenance	T	2.00	3.00	3.00	\$125
EQSI 225	Campus Park Patrol - Capstone	T	1.00	6.00	3.00	\$200
BIOS 271	Ornithology	G	2.00	3.00	3.00	\$10
GEOL 101	Geology	G	2.00	3.00	3.00	\$25
EQSI 230	Team Driving I	T	2.00	3.00	3.00	\$75
	or					
EQSI 240	Colt Training I	T	1.00	6.00	3.00	\$75
	or					
EQSI 250	Teaching Horseback Riding	T	1.00	7.00	3.00	\$50
			8.00-9.00	18.00-22.00	15.00	

Technical Credit Hours	56.00-66.50
General Credit Hours	49.00
Total Credit Hours	105.00-115.50

**Backcountry Horsemanship Notes:** To complete graduation requirements, students must enroll in EQSI 296 Equine Science Practicum (2 credits) or EQSI 294 Equine Science Cooperative Work Experience (6 credits) at the beginning of any quarter beginning with the third quarter.

# Backcountry Horsemanship and Wilderness Skills

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 103	General Biology	T	2.00	3.00	3.00	\$25
EQSI 103	Horse Care and Handling	T	2.00	5.00	3.00	
EQSI 110	Horsemanship I – Beginning Riding	T	2.00	3.00	3.00	\$200
EQSI 112	Equine Health Care I	T	3.00	1.00	3.00	\$155
EQSI 150	Leathercraft I	T	2.00	4.00	3.00	\$160
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
NRM 169	Natural Resources Exposition I (Optional)	T	0.00	1.50	0.50	
			14.00	16.00-17.50	18.00-18.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 113	Equine Nutrition and Supplements	T	2.00	3.00	3.00	
EQSI 115	Horsemanship II – Intermediate Riding	T	2.00	3.00	3.00	\$200
EQSI 116	Equine Anatomy and Physiology I	T	3.00	6.00	5.00	\$25
NRM 110	Chainsaw Operation	T	0.00	2.00	1.00	\$85
EQSI 111	Equine Employment Seminar	G	2.00	0.00	2.00	\$80
MATH 108N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
MICS 121A	Microsoft Office – Word Processing	G	1.00	1.00	1.00	\$15
			13.00	16.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 120	Horsemanship III – Advanced Trail Riding	T	2.00	3.00	3.00	\$200
EQSI 130	Farm Equipment Operation and Maintenance	T	3.00	2.00	3.00	
EQSI 220	Trail Maintenance	T	2.00	3.00	3.00	\$125
NRM 125	Map Reading and Interpretation	T	2.00	2.00	2.00	
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
MICS 121B	Microsoft Office – Database	G	1.00	1.00	1.00	\$15
SOCI ●●●	Social Science Elective (Required)	G	3.00	0.00	3.00	
			16.00	11.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 294	Equine Science Cooperative Work Experience	T	2.00	40.00	6.00	
	or					
EQSI 296	Equine Science Practicum	T	1.00	7.00	2.00	
EQSI 255	Advanced Packing and Wilderness Skills (Optional)	T	0.00	12.00	4.00	\$380
			1.00-2.00	7.00-52.00	2.00-10.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 104	Primitive Tools	T	1.00	3.00	2.00	
EQSI 200	Horse Packing	T	2.00	3.00	3.00	\$75
EQSI 119	Equine Business Management	G	3.00	0.00	3.00	
EQSI 210	Horseshoeing I	G	2.00	3.00	3.00	\$100
MICS 121C	Microsoft Office – Spreadsheet	G	1.00	1.00	1.00	\$15
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
NRM 269	Natural Resources Exposition I (Optional)	T	1.00	1.50-3.00	0.50	
			12.00-13.00	11.50-13.00	15.00-15.50	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 201	Horse Program Management	T	2.00	3.00	3.00	
EQSI 250	Teaching Horseback Riding	T	1.00	7.00	3.00	\$50
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
ECO 229	Wilderness First Responder	G	1.00	6.00	3.00	\$450
	or					
EM 129	First Responder	G	1.00	3.00	2.00	\$50
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
	or					
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
			10.00	13.00-16.00	14.00-15.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 225	Campus Park Patrol – Capstone	T	1.00	6.00	3.00	\$200
EQSI 262	Equine Conformation	T	2.00	3.00	3.00	
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
EQSI 143	Equine Marketing and Brochure Development	G	2.00	3.00	3.00	
EQSI 230	Team Driving I	T	2.00	3.00	3.00	\$75
	or					
EQSI 240	Colt Training I	T	1.00	6.00	3.00	\$75
			8.00-9.00	18.00-21.00	15.00	

Technical Credit Hours 60.00-69.00

General Credit Hours 40.00-41.00

Total Credit Hours 100.00-110.00

# Ecotourism and Adventure Travel

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 230	Northwoods Eco Lodge Management	T	1.00	6.00	3.00	\$300
INTP 109	Night Interpretation	T	1.00	3.00	2.00	
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
BIOS 109	Dendrology	G	2.00	3.00	3.00	\$35
ECO 100	Introduction to Ecotourism	G	<u>2.00</u>	<u>6.00</u>	<u>4.00</u>	\$60
			8.00	21.00	15.00	

## Second Quarter (Resort Management Focus)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 108	Sustainable Development	T	1.00	3.00	2.00	\$35
ECO 115	Ecotour Packaging and Marketing	T	3.00	3.00	4.00	\$35
ECO 117	Ecotourism Business	T	3.00	1.00	3.00	
FOR 120	Photo Interpretation	T	1.00	6.00	3.00	\$5
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108B	Introduction to Algebra for Business	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			14.00	14.00	18.00	

## Third Quarter (Outdoor Focus)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CULA 110	Outdoor Cookery and Indigenous Foods	T	2.00	3.00	3.00	\$120
BIOS 102	Ecology	G	2.00	3.00	3.00	\$20
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
BIOS 271	Ornithology	G	2.00	3.00	3.00	\$10
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			10.00	15.00	15.00	

## Summer Quarter (See Ecotourism and Adventure Travel Notes on next page)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 292	Ecotourism Field Experience	T	0.00	36.00	3.00	
	or					
ECO 296	Ecotourism Practicum	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	
			1.00	7.00-36.00	2.00-3.00	

## Fourth Quarter (Outdoor Focus)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 101	Island Resource Planning and Management	T	2.00	3.00	3.00	\$396
ECO 131	Ecotourism Lodge and Field Station Management	T	1.00	6.00	3.00	\$348
ECO 145	Self and Wind Propelled Watercraft	T	0.00	7.00	3.00	\$408
ECO 199	Open Water Scuba Diver (PADI)	T	2.00	3.00	3.00	\$678
BIOS 104	Subtropical Ecology	G	2.00	3.00	3.00	\$405
SUPR 136	Outdoor Leadership Development	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$361
			9.00	25.00	18.00	

## Fifth Quarter (Outdoor Focus)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 185	Resource Area Management	T	2.00	3.00	3.00	
INTP 230	Self-Guided Interpretation and Exhibit Design	T	2.00	3.00	3.00	\$15
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
COMM 123H	Communications III - Nature Readings	G	3.00	0.00	3.00	\$20
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			14.00	6.00	16.00	

## Sixth Quarter (Water/Adventure Focus)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 146	Rafting	T	0.00	4.00	2.00	\$150
ECO 154	Canoeing II - Whitewater	T	0.00	4.00	2.00	\$150
ECO 155	Whitewater Rescue	T	0.00	2.00	1.00	\$70
ECO 181	Kayaking II - Whitewater	T	0.00	4.00	2.00	\$150
ECO 144	Canoeing I - Fundamentals	G	0.00	2.00	1.00	\$70
ECO 180	Kayaking I - Fundamentals	G	0.00	2.00	1.00	\$70
ECO 183	Low Impact Camping Equipment	G	1.00	1.00	1.00	\$35
ECO 229	Wilderness First Responder	G	1.00	6.00	3.00	\$450
ECO 283	Adventure Leadership - Flatwater Paddling	T	2.00	9.00	5.00	\$350
	or					
ECO 287	Adventure Leadership - Whitewater Paddling	T	<u>2.00</u>	<u>9.00</u>	<u>5.00</u>	\$450
			4.00	34.00	18.00	

## Optional Sixth Quarter (Wilderness/Adventure Focus)

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ECO 128	Basic Rock Climbing	T	0.75	2.25	1.50	\$75
ECO 289	Adventure Leadership - Backpacking	T	2.00	9.00	5.00	\$450
RNGR 123	Rappelling and Rope Techniques	T	0.75	2.25	1.50	\$55
ECO 178	Ropes Course Facilitation	G	1.00	3.00	2.00	\$250
ECO 188	Camping Equipment and Backpacking	G	1.00	6.00	3.00	\$75
ECO 229	Wilderness First Responder	G	1.00	6.00	3.00	\$450
RNGR 226	Vertical Rope Rescue	G	0.75	1.50	1.25	\$85
ECO ●●●	Ecotourism Elective (Optional)	G	<u>0.00</u>	<u>0.00</u>	<u>0.25-5.00</u>	
			7.25	30.00	17.25-22.25	

Technical Credit Hours	51.00-56.00
General Credit Hours	50.00-58.25
Total Credit Hours	101.00-114.25

**Ecotourism and Adventure Travel Notes:** To complete graduation requirements, students must enroll in ECO 296 (Ecotourism Practicum - 2 credits) or ECO 292 (Field Experience in Ecotourism - 3 credits) any quarter after the third quarter.



# Environmental Restoration

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 101	Equipment Operations I	T	2.00	12.00	6.00	\$450
ERT 107	Heavy Equipment Maintenance and Repair I	T	1.00	3.00	2.00	\$25
EM 129	First Responder	G	1.00	3.00	2.00	\$50
ERT 110	Construction Basics	G	2.00	3.00	3.00	\$25
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			9.00	21.00	16.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 100	Blueprint Reading	T	1.00	2.00	1.00	\$10
ERT 102	Equipment Operations II	T	2.00	12.00	6.00	\$450
ERT 108	Heavy Equipment Maintenance and Repair II	T	1.00	3.00	2.00	\$25
ERT 121	Welding	T	1.00	3.00	2.00	\$65
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
MATH 108 N	Introduction to Algebra for Natural Resources	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			9.00	21.00	15.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 103	Equipment Operations III	T	2.00	12.00	6.00	\$450
ERT 109	Heavy Equipment Maintenance and Repair III	T	1.00	3.00	2.00	\$25
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
MATH 110	P Geometry and Trigonometry	G	3.00	1.00	3.00	\$16
MISC 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			11.00	19.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 296	Environmental Restoration Practicum	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	
			1.00	7.00	2.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 175	Commercial Drivers License 40 Hour	T	1.00	3.00	2.00	\$375
NRM 123	Surveying and Mapping I	T	2.00	3.00	3.00	\$15
COMM 122	P Communications II	G	3.00	0.00	3.00	\$20
GEOL 101	Geology	G	2.00	3.00	3.00	\$25
ERT 204	Equipment Operations IV	T	2.00	12.00	6.00	\$450
ERT 294A	or Equipment Operations Co-op/Apprenticeship A	T	<u>2.00</u>	<u>40.00</u>	<u>6.00</u>	
			10.00	21.00-49.00	17.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 215	Job Appraisal and Bidding	T	1.00	6.00	3.00	\$20
COMM 123	P Communications III	G	3.00	0.00	3.00	\$20
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
ERT 205	Equipment Operations V	T	2.00	12.00	6.00	\$450
ERT 294B	or Equipment Operations Co-op/Apprenticeship B	T	<u>2.00</u>	<u>40.00</u>	<u>6.00</u>	
			9.00	18.00-46.00	15.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BUS 120	P Personal Finance	G	3.00	0.00	3.00	
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
ERT 206	Equipment Operations VI	T	2.00	12.00	6.00	\$450
ERT 294C	or Equipment Operations Co-op/Apprenticeship	T	2.00	40.00	6.00	
COMM 124	P Communications IV	G	3.00	0.00	3.00	\$20
COMM 225	P Technical Writing	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			11.00	12.00-40.00	15.00	

Technical Credit Hours 55.00  
 General Credit Hours 42.00  
 Total Credit Hours 97.00

# Equine Health and Complimentary Therapies

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 103	Horse Care Handling	T	2.00	5.00	3.00	
EQSI 110	Horsemanship I – Beginning Riding	T	2.00	3.00	3.00	\$200
EQSI 112	Equine Health Care I	T	3.00	1.00	3.00	\$155
BIOS 103	General Biology	G	2.00	3.00	3.00	\$25
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MICS 121A	Microsoft Office – Word Processing	G	1.00	1.00	1.00	\$15
NRM 169	Natural Resources Exposition I (Optional)	T	<u>0.00</u>	<u>1.50</u>	<u>0.50</u>	
			13.00	13.00-14.50	16.00-16.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 113	Equine Nutrition and Supplements	T	2.00	3.00	3.00	
EQSI 116	Equine Anatomy and Physiology I	T	3.00	6.00	5.00	\$25
EQSI 201	Horse Program Management	T	2.00	3.00	3.00	
EQSI 210	Horseshoeing I	T	2.00	3.00	3.00	\$100
EQSI 111	Equine Employment Seminar	G	2.00	0.00	2.00	\$80
MICS 121B	Microsoft Office – Database	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$15
			12.00	16.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 160	Equine Massage	T	2.00	3.00	3.00	\$80
EQSI 262	Equine Conformation	T	2.00	3.00	3.00	
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
EM 129	First Responder	G	1.00	3.00	2.00	\$50
EQSI 143	Equine Marketing and Brochure Development	G	2.00	3.00	3.00	
MICS 121C	Microsoft Office – Spreadsheet	G	1.00	1.00	1.00	\$15
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			14.00	13.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 294	Equine Science Cooperative Work Experience or	T	2.00	40.00	6.00	
EQSI 296	Equine Science Practicum	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	
			1.00-2.00	7.00-40.00	2.00-6.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 123	Equine Health Care II	T	3.00	6.00	5.00	\$155
EQSI 124	Equine Acupressure I	T	1.00	3.00	2.00	\$210
EQSI 161	Advanced Equine Massage	T	2.00	3.00	3.00	\$80
EQSI 119	Equine Business Management	G	3.00	0.00	3.00	
COMM 130	Speech or	G	3.00	0.00	3.00	\$10
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
NRM 269	Natural Resources Exposition II (Optional)	T	<u>0.00</u>	<u>1.50</u>	<u>0.50-2.00</u>	
			12.00	12.00-13.50	16.00-18.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 117	Equine Anatomy and Physiology II	T	3.00	6.00	5.00	\$25
EQSI 126	Animal Acupressure – The Animal Meridian System	T	1.00	0.00	1.00	
EQSI 127	Animal Acupressure – Acupoints	T	1.00	0.00	1.00	
EQSI 128	Animal Acupressure – The Five Elements	T	1.00	0.00	1.00	
EQSI 129	Animal Acupressure – Traditional Chinese Method	T	1.00	0.00	1.00	
EQSI 263	Broodmare and Foal Care	T	2.00	3.00	3.00	
COMM 124	Communications IV or	G	3.00	0.00	3.00	\$20
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
EQSI ●●●	Equine Science Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
			12.00	9.00	18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 132	Equine Acupressure II	T	2.00	3.00	3.00	\$210
EQSI 267	Equine Reproduction and Breeding – Capstone	T	2.00	3.00	3.00	\$25
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
BUS 120	Personal Finance	G	3.00	0.00	3.00	
MATH 108N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
SOCI ●●●	Social Science Elective (Required)	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			15.00	10.00	18.00	

Technical Credit Hours	62.00-68.50
General Credit Hours	43.00
Total Credit Hours	105.00-111.50

# Farrier Science and Business

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 103	Horse Care Handling	T	2.00	5.00	3.00	
EQSI 112	Equine Health Care I	T	3.00	1.00	3.00	\$155
EQSI 150	Leathercraft I	T	2.00	4.00	3.00	\$160
BIOS 103	General Biology	G	2.00	3.00	3.00	\$25
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
EQSI 210	Horseshoeing I	G	2.00	3.00	3.00	\$100
NRM 169	Natural Resources Exposition I (Optional)	T	<u>0.00</u>	<u>1.50</u>	<u>0.50</u>	
			14.00	16.00-17.50	18.00-18.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 116	Equine Anatomy and Physiology I	T	3.00	6.00	5.00	\$25
EQSI 215	Horseshoeing II	T	2.00	3.00	3.00	\$100
BUS 100	Small Business Management I	G	3.00	2.00	3.00	\$5
MATH 108 N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			13.00	15.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 135	Forging I	T	2.00	3.00	3.00	
EQSI 262	Equine Conformation	T	2.00	3.00	3.00	
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
EQSI 143	Equine Marketing and Brochure Development	G	2.00	3.00	3.00	
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			12.00	9.00	15.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 294	Equine Science Cooperative Work Experience or	T	2.00	40.00	6.00	
EQSI 296	Equine Science Practicum	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	
			1.00-2.00	7.00-40.00	2.00-6.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 136	Forging II	T	2.00	3.00	3.00	
EM 129	First Responder	G	1.00	3.00	2.00	\$50
EQSI 119	Equine Business Management	G	3.00	0.00	3.00	
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
	or					
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
EQSI 151	Leathercraft II	T	1.00	4.00	3.00	\$120
	or					
EQSI 160	Equine Massage	T	2.00	3.00	3.00	\$80
NRM 269	Natural Resources Exposition II (Optional)	T	<u>0.00</u>	<u>1.50</u>	<u>0.50-2.00</u>	
			10.00-11.00	9.00-11.50	14.00-16.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 113	Equine Nutrition and Supplements	T	2.00	3.00	3.00	
EQSI 201	Horse Program Management	T	2.00	3.00	3.00	
EQSI 111	Equine Employment Seminar	G	2.00	0.00	2.00	\$80
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
SOCI ●●●	Social Science Elective (Required)	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			12.00	6.00	14.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EQSI 257	Horse Tack Fit and Maintenance	T	2.00	3.00	3.00	
EQSI 258	Corrective Shoeing and Gait Analysis – Capstone	T	3.00	6.00	5.00	
ACC 100	Accounting I	G	2.00	3.00	3.00	\$5
BUS 120	Personal Finance	G	3.00	0.00	3.00	
EQSI ●●●	Equine Science Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>3.00</u>	
			10.00	12.00	17.00	

Technical Credit Hours	48.00-54.50
General Credit Hours	49.00
Total Credit Hours	97.00-103.50

# Fish Management and Aquaculture

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 110	Fish Culture I	T	3.00	5.00	4.00	\$45
FMAQ 115	Hatchery Maintenance - Structure	T	2.00	3.00	3.00	\$180
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
GEOL 105	Soils	G	2.00	3.00	3.00	
NRM 110	Chainsaw Operation	G	0.00	2.00	1.00	\$85
NRM 113	Watercraft Operation and Maintenance	G	0.00	4.00	2.00	\$75
NRM 130	Recreation Area Equipment	G	<u>0.00</u>	<u>2.00</u>	<u>1.00</u>	\$65
			9.00	22.00	17.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 119	Hatchery Maintenance - Welding	T	1.00	3.00	2.00	\$180
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
EM 129	First Responder	G	1.00	3.00	2.00	\$50
	or					
EM 134	Standard First Aid	G	<u>1.00</u>	<u>0.00</u>	<u>1.00</u>	\$25
			13.00	7.00-10.00	15.00-16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 268	Ichthyology	T	2.00	3.00	3.00	
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
MATH 110	Geometry and Trigonometry	G	3.00	1.00	3.00	\$16
MICS 121	Microsoft Office	G	2.00	3.00	3.00	\$45
NRM 114	Recreation Employment Seminar	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	
			13.00	11.00	16.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 294	Fish Management & Aquaculture Coop Work Experience	T	2.00	40.00	6.00	
	or					
FMAQ 296	Fish Management & Aquaculture Practicum	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	
			1.00-2.00	7.00-40.00	2.00-6.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 210	Aquatic Plants and Control	T	2.00	3.00	3.00	\$45
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
NRM 123	Surveying and Mapping I	T	2.00	3.00	3.00	\$15
NRM 217	Aquatic Ecology	T	2.00	3.00	3.00	\$25
GEOL 101	Geology	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$25
			10.00	15.00	15.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 112	Fish Culture II	T	3.00	5.00	4.00	\$45
FMAQ 117	Hatchery Maintenance (Hydraulics)	T	2.00	3.00	3.00	\$170
FMAQ 221	Fish Management I	T	2.00	3.00	3.00	\$15
CHEM 131	Environmental Chemistry	G	3.00	3.00	4.00	\$30
WLM 156	Wildlife Investigative Techniques I	T	2.00	3.00	3.00	\$35
	or					
WLM 215	Wildlife Management I	T	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$10
			12.00	17.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 114	Fish Culture III	T	3.00	5.00	4.00	\$45
FMAQ 230	Hatchery Design and Construction	T	2.00	3.00	3.00	\$45
FMAQ 238	Fish Management II	T	2.00	6.00	4.00	\$20
FMAQ 271	Fish Pathology	T	2.00	3.00	3.00	\$25
COMM 130	Speech	G	3.00	0.00	3.00	\$10
	or					
COMM 135	Verbal Career Skills	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			12.00	17.00	17.00	

Technical Credit Hours	53.00-57.00
General Credit Hours	46.00-47.00
Total Credit Hours	99.00-104.00

**Fish Management and Aquaculture Notes:** To complete graduation requirements, students must enroll in FMAQ 296 Fish Management and Aquaculture Practicum (3 credits), or FMAQ 294 Fish Management and Aquaculture Coop Work Experience (6 credits), at the beginning of any quarter beginning with the third quarter.

# Forest Management

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 111	Forest Dendrology	T	1.00	6.00	3.00	\$20
NRM 169	Natural Resources Exposition I	T	0.00	1.50	0.50	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
EM 129	First Responder	G	1.00	3.00	2.00	\$50
FOR 100	Focus on Forestry I	G	1.00	1.00	1.00	\$10
FOR 149	Basic Wildland Firefighting	G	2.00	2.00	2.00	\$45
MATH 108N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			13.00	17.50	17.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 127	Forest Soils	T	2.00	3.00	3.00	\$15
WLM 215	Wildlife Management I	T	2.00	3.00	3.00	\$10
BIOS 106	Conservation Biology	G	4.00	2.00	5.00	
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
FOR 101	Focus on Forestry II	G	1.00	1.00	1.00	\$10
MATH 110	Geometry and Trigonometry	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			15.00	10.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 124	Forest Ecology	T	2.00	3.00	3.00	\$5
FOR 231	Forest Products Utilization	T	1.00	6.00	3.00	\$10
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
	or					
BUS 170	Fundamentals of Business I	G	3.00	2.00	3.00	\$7
SOCI ●●●	Social Science Elective (Required)	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			11.00-12.00	11.00-12.00	15.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 120	Photo Interpretation	T	1.00	6.00	3.00	\$5
FOR 123	Forest Measurements	T	2.00	6.00	4.00	\$25
FOR 150	Natural Resources Prescribed Burns	T	2.00	3.00	3.00	\$75
FOR 211	Timber Harvesting	T	1.00	6.00	3.00	\$300
FOR 226 A	Production Analysis A	T	1.00	1.50	1.50	
FOR 102	Focus on Forestry III	G	1.00	1.00	1.00	\$10
FOR 200	Focus on Forestry IV	G	1.00	1.00	1.00	\$10
NRM 269	Natural Resource Exposition II (Optional)	T	0.00	1.50	0.50-2.00	
FOR ●●●	Forestry Elective (Optional)	T	<u>0.00</u>	<u>0.00</u>	<u>0.25-3.00</u>	
			9.00	24.50-26.00	16.50-21.50	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 210	Forest Mensuration	T	2.00	6.00	4.00	\$15
FOR 226B	Production Analysis B	T	1.00	1.50	1.50	
FOR 201	Focus on Forestry V	G	1.00	1.00	1.00	\$10
FOR 220	Applied Silviculture	G	2.00	6.00	4.00	\$25
FOR 250	Forestry Applications in GIS/GPS	G	<u>1.00</u>	<u>6.00</u>	<u>3.00</u>	\$45
			7.00	20.50	13.50	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 113	Reforestation and Pesticides	T	1.00	6.00	3.00	\$40
FOR 131	Forest Entomology and Pathology	T	3.00	3.00	4.00	\$5
FOR 230	Forest Management	T	2.00	6.00	4.00	\$15
FOR 296	Forestry Practicum	T	1.00	7.00	2.00	
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
FOR 202	Focus on Forestry VI	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$10
			11.00	23.00	17.00	

Technical Credit Hours	48.50-53.50
General Credit Hours	49.00
Total Credit Hours	97.50-102.50

**Forest Management Notes:** To complete graduation requirements, students must enroll in FOR 296, Forestry Practicum/Seminar (2 credits) at the beginning of any quarter after the second quarter of the Forestry Program.

Students must complete COMM 122 (Communications II) before registering for fourth quarter technical courses.

# Natural and Historical Interpretation

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 109	Dendrology	T	2.00	3.00	3.00	\$35
INTP 100	Introduction to Interpretation	T	0.00	6.00	2.00	\$20
NRM 120	Woodshop	T	0.00	3.00	1.00	\$60
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
ENGL 151	Freshman Composition	G	5.00	0.00	5.00	\$20
MICS 121A	Microsoft Office - Word Processing	G	1.00	1.00	1.00	\$15
NRM 169	Natural Resources Exposition I (Optional)	T	0.00	1.50	0.50	\$12
INTP ●●●	Interpretive Elective (Required)	T	0.00	0.00	3.00	
			10.00	16.00-17.50	18.00-18.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
INTP 116	Interpretive Guide Seminar	T	1.00	0.00	1.00	
NRM 222	Recreation Area Maintenance	T	0.00	4.00	2.00	\$65
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
EM 129	First Responder	G	1.00	3.00	2.00	\$50
INTP 114	Interpretive Employment Seminar	G	1.00	0.00	1.00	
PSYC 115	Educational Psychology	G	3.00	0.00	3.00	\$7
			13.00	13.00	18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 118	Environmental Education Techniques	T	3.00	3.00	4.00	
NRM 113	Watercraft Operation and Maintenance	T	0.00	4.00	2.00	\$75
WLM 156	Wildlife Investigative Techniques I	T	2.00	3.00	3.00	\$35
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
BIOS 271	Ornithology	G	2.00	3.00	3.00	\$10
MATH 108N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
			12.00	17.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 294	Interpretive Cooperative Work Experience or	T	2.00	40.00	6.00	
INTP 296	Interpretive Practicum	T	1.00	7.00	2.00	
			1.00-2.00	7.00-40.00	2.00-7.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 109	Night Interpretation	T	1.00	3.00	2.00	
INTP 210	Recreation Programming	T	2.00	1.00	2.00	
INTP 215	Historical Interpretation Techniques	T	1.00	3.00	2.00	\$60
NRM 134	Environmental Issues	T	2.00	3.00	3.00	
NRM 210	Woodland Ecology	T	2.00	3.00	3.00	
FOR 222	Introduction to Forestry	T	2.00	3.00	3.00	\$50
	or					
WLM 215	Wildlife Management I	T	2.00	3.00	3.00	\$10
NRM 269	Natural Resources Exposition II (Optional)	T	0.00	1.50	0.50-2.00	
●●●	General Elective (Required)	G	3.00	0.00	3.00	
			13.00	16.00-17.50	18.00-20.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 220	Historical Perspectives	T	1.00	3.00	2.00	\$25
INTP 225	Development and Design of Outdoor Study Sites	T	2.00	3.00	3.00	\$35
INTP 254	Nature Drawing I	T	0.00	3.00	1.00	\$50
NRM 125	Map Reading and Interpretation	T	2.00	2.00	2.00	
GEOL 102	Environmental Geology	G	3.00	6.00	5.00	\$25
MICS 201	Desktop Publishing	G	2.00	2.00	2.00	\$30
●●●	General Elective (Required)	G	3.00	0.00	3.00	
			13.00	19.00	18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 230	Self Guided Interpretation and Exhibit Design	T	2.00	3.00	3.00	\$15
INTP 240	Nature Center and Museum Operations	T	1.00	4.00	2.00	\$35
COMM 130	Speech	G	3.00	0.00	3.00	\$10
MICS 121B	Microsoft Office - Database	G	1.00	1.00	1.00	\$15
BIOS 268	Ichthyology	T	2.00	3.00	3.00	
	or					
NRM 217	Aquatic Ecology	T	2.00	3.00	3.00	\$25
INTP ●●●	Interpretive Elective (Required)	T	0.00	0.00	4.00	
			9.00	11.00	16.00	

Technical Credit Hours	61.00-68.50
General Credit Hours	47.00
Total Credit Hours	108.00-115.50

**Natural and Historical Interpretation Notes:** To complete graduation requirements, students must enroll in INTP 296 , Interpretive Services Practicum (2 credits) or INTP 294, Interpretive Services Cooperative Work Experience (6 credits), the beginning of any quarter beginning with the third quarter.

# Natural Resource Management

For students entering June, 2002 through May, 2003

## First Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
BIOS 109	Dendrology	T	2.00	3.00	3.00	\$35
NRM 113	Watercraft Operation and Maintenance	T	0.00	4.00	2.00	\$75
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MICS 121A	Microsoft Office – Word Processing	G	1.00	1.00	1.00	\$15
NRM 169	Natural Resources Exposition I (Optional)	T	0.00	1.50	0.50	
NRM •••	Recreation Elective - List A (Required)	T	0.00	0.00	3.00	
			8.00		11.00-12.50	15.00-15.50

## Second Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
NRM 121	Winter Dendrology	T	2.00	3.00	3.00	\$10
WLM 156	Wildlife Investigation Techniques I	T	2.00	3.00	3.00	\$35
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
MATH 108N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
MICS 121B	Microsoft Office - Database	G	1.00	1.00	1.00	\$15
GEO 100	Introduction to GIS	T	1.00	3.00	2.00	\$55
	or					
GEO 102	Introduction to GPS	T	1.00	3.00	2.00	\$55
			14.00	14.00	18.00	

## Third Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
BIOS 268	Ichthyology	T	2.00	3.00	3.00	
NRM 110	Chainsaw Operation	T	0.00	2.00	1.00	\$85
NRM 125	Map Reading and Interpretation	T	2.00	2.00	2.00	
NRM 130	Recreation Area Equipment	T	0.00	2.00	1.00	\$65
NRM 134	Environmental Issues	T	2.00	3.00	3.00	
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
MICS 121C	Microsoft Office - Spreadsheet	G	1.00	1.00	1.00	\$15
GEO 100	Introduction to GIS	T	1.00	3.00	2.00	\$55
	or					
GEO 102	Introduction to GPS	T	1.00	3.00	2.00	\$55
NRM •••	General Recreation Elective-List A (Required)	G	0.00	0.00	2.00-3.00	
			10.00	19.00	18.00-19.00	

## Summer Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
NRM 294	Natural Resource Mgt. Cooperative Work Experience	T	2.00	40.00	2.00-6.00	
	or					
NRM 296	Natural Resource Management Practicum	T	1.00	7.00	2.00-2.00	
			1.00-2.00	7.00-40.00	2.00-7.00	

## Fourth Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
FOR 222	Introduction to Forestry	T	2.00	3.00	3.00	\$50
NRM 210	Woodland Ecology	T	2.00	3.00	3.00	
NRM 217	Aquatic Ecology	T	2.00	3.00	3.00	\$25
WLM 215	Wildlife Management I	T	2.00	3.00	3.00	\$10
GEO 105	Soils	G	2.00	3.00	3.00	
NRM 269	Natural Resources Exposition II (Optional)	T	0.00	1.50	0.50-2.00	
REC •••	Recreation Elective - List A (Required)	T	0.00	0.00	3.00	
			10.00	15.00-16.50	18.00-20.00	

## Fifth Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
GEO 101	Geology	G	2.00	3.00	3.00	\$25
NRM 114	Recreation Employment Seminar	G	1.00	1.00	1.00	
SOCI •••	Social Science Elective (Required)	G	3.00	0.00	3.00	
NRM •••	Recreation Elective - List A (Required)	T	0.00	0.00	3.00	
			11.00	7.00	16.00	

## Sixth Quarter

Course No.	Course Name	Type	Class	Lab	Credit	Course Fee
NRM 222	Recreation Area Maintenance	T	0.00	4.00	2.00	\$65
BIOS 271	Ornithology	G	2.00	3.00	3.00	\$10
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
	or					
COMM 225	Technical Writing	G	3.00	0.00	3.00	\$20
EM 129	First Responder	G	1.00	3.00	2.00	\$50
	or					
EM 134	Standard First Aid	G	1.00	0.00	1.00	\$25
FMAQ 238	Fish Management II	T	2.00	6.00	4.00	\$20
	or					
NRM 206	Conservation Management	T	2.00	6.00	4.00	
	or					
WLM 239	Wildlife Management II	T	2.00	6.00	4.00	\$50
			8.00	13.00-16.00	13.00-14.00	

Technical Credit Hours 57.00-64.50

General Credit Hours 43.00-45.00

Total Credit Hours 100.00-109.50

**Natural Resources Management Notes:** To complete graduation requirements, students must enroll in REC 296, Recreation and Wildlife Practicum and Seminar (3 credits) or NR 223, Campus Park Management (2 credits), or REC 294 Recreation and Wildlife Coop Work Experience/Seminar (6 credits), at the beginning of any quarter beginning with the third quarter. REC ••• - Students must select courses from Recreation and Wildlife Elective List A which contains courses from the following Recreation and Wildlife curriculums: Wildlife Management, Natural and Historical Interpretation, and Ranqer Services.

# Ranger Services

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NRM 110	Chainsaw Operation	T	0.00	2.00	1.00	\$85
NRM 125	Map Reading and Interpretation	T	2.00	2.00	2.00	
NRM 130	Recreation Area Equipment	T	0.00	2.00	1.00	\$65
BIOS 109	Dendrology	G	2.00	3.00	3.00	\$35
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
RNGR 100	Focus on Ranger Services	G	0.00	3.00	1.00	\$200
RNGR 107	NR Information Technology and Equipment Operation	G	2.00	3.00	3.00	
NRM 169	Natural Resources Exposition I (Optional)	T	<u>0.00</u> 12.00	<u>1.50</u> 16.00-17.50	<u>0.50</u> 17.00-17.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RNGR 103	Introduction to Resource Protection	T	2.00	2.00	3.00	
WLM 156	Wildlife Investigative Techniques I	T	2.00	3.00	3.00	\$35
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
MICS 121	Microsoft Office	G	<u>2.00</u> 14.00	<u>3.00</u> 11.00	<u>3.00</u> 18.00	\$45

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
INTP 116	Interpretive Guide Seminar	T	1.00	0.00	1.00	
NRM 222	Recreation Area Maintenance	T	0.00	4.00	2.00	\$65
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
BIOS 271	Ornithology	G	2.00	3.00	3.00	\$10
GEOL 101	Geology	G	2.00	3.00	3.00	\$25
PSYC 152	Abnormal Psychology	G	<u>3.00</u> 12.00	<u>0.00</u> 16.00	<u>3.00</u> 18.00	\$7

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RNGR 294	Ranger Services Cooperative Work Experience or	T	2.00	40.00	6.00	
RNGR 296	Ranger Services Practicum	T	<u>1.00</u> 1.00-2.00	<u>7.00</u> 7.00-40.00	<u>2.00</u> 2.00-7.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NRM 113	Watercraft Operation and Maintenance	T	0.00	4.00	2.00	\$75
NRM 210	Woodland Ecology	T	2.00	3.00	3.00	
NRM 217	Aquatic Ecology	T	2.00	3.00	3.00	\$25
RNGR 109	NR Administration and Management	T	3.00	0.00	3.00	
WLM 215	Wildlife Management I	T	2.00	3.00	3.00	\$10
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
NRM 269	Natural Resource Exposition II (Optional)	T	<u>0.00</u> 11.00	<u>1.50</u> 16.00-17.50	<u>0.50-2.00</u> 17.00-19.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 149	Basic Wildland Firefighting	T	2.00	2.00	2.00	\$45
RNGR 126	Search and Rescue Introduction	T	1.00	0.00	1.00	\$90
RNGR 238A	Ranger Academy - Theory	T	0.00	0.00	12.00	\$522
EM 129	First Responder	G	<u>1.00</u> 4.00	<u>3.00</u> 5.00	<u>2.00</u> 17.00	\$50

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
RNGR 123	Rappelling and Rope Techniques	T	0.75	2.25	1.50	\$55
RNGR 226	Vertical Rope Rescue	T	0.75	1.50	1.25	\$85
RNGR 238B	Ranger Academy - Skills	T	<u>0.00</u> 1.50	<u>0.00</u> 3.75	<u>12.00</u> 14.75	\$521

Technical Credit Hours	61.75-69.25
General Credit Hours	42.00
Total Credit Hours	103.75-111.25

**Ranger Services Notes:** To complete graduation requirements, students must enroll in RNGR 296 Ranger Services Practicum (2 credits) or RNGR 294 Ranger Services Cooperative Work Experience (6 credits) at the beginning of any quarter beginning with the third quarter.



# Reclamation

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 101	Equipment Operations I	T	2.00	12.00	6.00	\$450
ERT 107	Heavy Equipment Maintenance and Repair I	T	1.00	3.00	2.00	\$25
EM 129	First Responder	G	1.00	3.00	2.00	\$50
ERT 110	Construction Basics	G	2.00	3.00	3.00	\$25
PSYC 154	Interpersonal Relationships	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			9.00	21.00	16.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
DD 100	Blueprint Reading	T	1.00	2.00	1.00	\$10
ERT 102	Equipment Operations II	T	2.00	12.00	6.00	\$450
ERT 108	Heavy Equipment Maintenance and Repair II	T	1.00	3.00	2.00	\$25
ERT 121	Welding	T	1.00	3.00	2.00	\$65
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
MATH 108 N	Introduction to Algebra for Natural Resources	G	<u>3.00</u>	<u>1.00</u>	<u>3.00</u>	\$16
			9.00	21.00	15.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 103	Equipment Operations III	T	2.00	12.00	6.00	\$450
ERT 109	Heavy Equipment Maintenance and Repair III	T	1.00	3.00	2.00	\$25
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
MATH 110	Geometry and Trigonometry	G	3.00	1.00	3.00	\$16
MICS 121	Microsoft Office	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$45
			11.00	19.00	17.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 296	Environmental Restoration Practicum	T	<u>1.00</u>	<u>7.00</u>	<u>2.00</u>	
			1.00	7.00	2.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 175	Commercial Driver License 40 Hour	T	1.00	3.00	2.00	\$375
GEO 100	Introduction to GIS	T	1.00	3.00	2.00	\$55
GEO 102	Introduction to GPS	T	1.00	3.00	2.00	\$55
NRM 123	Surveying and Mapping I	T	2.00	3.00	3.00	\$15
RECL 222	Reclamation I	T	2.00	3.00	3.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
GEOL 101	Geology	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$25
			12.00	18.00	18.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
ERT 215	Job Appraisal and Bidding	T	1.00	6.00	3.00	\$20
ERT 219	Applied Surveying	T	2.00	3.00	3.00	\$25
GEOL 105	Soils	T	2.00	3.00	3.00	
RECL 223	Reclamation II	T	1.00	6.00	3.00	\$30
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
SOCI 165	Cross Cultural Studies	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			12.00	18.00	18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 205	Soils II	T	2.00	3.00	3.00	\$25
ERT 217	Environmental Sampling	T	1.00	6.00	3.00	\$40
BIOS 102	Ecology	G	2.00	3.00	3.00	\$20
BUS 120	Personal Finance	G	3.00	0.00	3.00	
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
COMM 225	or Technical Writing	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			14.00	12.00	18.00	

Technical Credit Hours	59.00
General Credit Hours	45.00
Total Credit Hours	104.00

# Wildlife Management

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 109	Dendrology	T	2.00	3.00	3.00	\$35
NRM 110	Chain Saw Operation	T	0.00	2.00	1.00	\$85
NRM 130	Recreation Area Equipment	T	0.00	2.00	1.00	\$65
NRM 134	Environmental Issues	T	2.00	3.00	3.00	
BIOS 120	Botany	G	2.00	3.00	3.00	\$40
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MATH 108 N	Introduction to Algebra for Natural Resources	G	3.00	1.00	3.00	\$16
MICS 121 A	Microsoft Office – Word Processing	G	1.00	1.00	1.00	\$15
NRM 169	Natural Resources Exposition I (Optional)	T	0.00	1.50	0.50	
			13.00	15.00-16.50	18.00-18.50	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NRM 120	Woodshop	T	0.00	3.00	1.00	\$60
NRM 121	Winter Dendrology	T	2.00	3.00	3.00	\$10
NRM 125	Map Reading and Interpretation	T	2.00	2.00	2.00	
WLM 156	Wildlife Investigative Techniques I	T	2.00	3.00	3.00	\$35
BIOS 170	Zoology	G	2.00	3.00	3.00	\$40
MICS 121 B	Microsoft Office (Database)	G	1.00	1.00	1.00	\$15
NRM 114	Recreation Employment Seminar	G	1.00	1.00	1.00	
SOCI ●●●	Social Science Elective (Required)	G	3.00	0.00	3.00	
			13.00	16.00	17.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
BIOS 268	Ichthyology	T	2.00	3.00	3.00	
NRM 113	Watercraft Operation and Maintenance	T	0.00	4.00	2.00	\$75
NRM 123	Surveying and Mapping I	T	2.00	3.00	3.00	\$15
WLM 245	Wildlife Investigative Techniques II	T	2.00	3.00	3.00	\$35
BIOS 132	Field Biology	G	2.00	3.00	3.00	\$25
MATH 110	Geometry and Trigonometry	G	3.00	1.00	3.00	\$16
MICS 121 C	Microsoft Office – Spreadsheet	G	1.00	1.00	1.00	\$15
			12.00	18.00	18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
WLM 294	Wildlife Management Cooperative Work Experience	T	2.00	40.00	6.00	
WLM 296	or Wildlife Management Practicum	T	1.00 1.00-2.00	7.00 7.00-40.00	2.00 2.00- 7.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
NRM 210	Woodland Ecology	T	2.00	3.00	3.00	
NRM 217	Aquatic Ecology	T	2.00	3.00	3.00	\$25
WLM 215	Wildlife Management I	T	2.00	3.00	3.00	\$10
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
GEOL 101	Geology	G	2.00	3.00	3.00	\$25
GEOL 105	Soils	G	2.00	3.00	3.00	
NRM 269	Natural Resources Exposition II (Optional)	T	0.00	1.50	0.50-2.00	
NRM ●●●	Recreation Elective (Optional)	T	0.00	0.00	0.25-3.00	
			13.00	15.00-16.50	18.00-23.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FMAQ 221	Fish Management I	T	2.00	3.00	3.00	\$15
CHEM 131	Environmental Chemistry	G	3.00	3.00	4.00	\$30
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
EM 129	First Responder	G	1.00	3.00	2.00	\$50
COMM 124	Communications IV	G	3.00	0.00	3.00	\$20
COMM 225	or Technical Writing	G	3.00	0.00	3.00	\$20
NRM ●●●	Recreation Elective (Optional)	T	0.00	0.00	0.25-3.00	
			12.00	9.00	15.00-18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FOR 222	Introduction to Forestry	T	2.00	3.00	3.00	\$50
INTP 115	Interpretive Methods	T	2.00	3.00	3.00	\$25
NRM 222	Recreation Area Maintenance	T	0.00	4.00	2.00	\$65
BIOS 271	Ornithology	G	2.00	3.00	3.00	\$10
FMAQ 238	Fish Management II	T	2.00	6.00	4.00	\$20
NRM 206	or Conservation Management	T	2.00	6.00	4.00	
WLM 239	or Wildlife Management II	T	2.00	6.00	4.00	\$50
			8.00	19.00	15.00	

Technical Credit Hours	54.00-67.50
General Credit Hours	49.00
Total Credit Hours	103.00-116.50

**Wildlife Management Notes:** To complete graduation requirements, students must enroll in REC 296, Recreation & Wildlife Practicum/Seminar (2 credits), or NR 223 Campus Park Management (2 credits), or REC 294 Recreation & Wildlife Coop Work Experience/Seminar (6 credits), at the beginning of any quarter beginning with the third quarter.

# School of Natural Resources Certificates

## Certificates of Completion

### Backpacking and Survival

Objective: To train the student in the techniques, methods, and rules of backpacking including wilderness survival skills.

Course No.	Course Name	Credits
INTP 250	Backpacking and Survival	<u>3</u>
		3

### Herbal Studies

Objective: To prepare the student for entry level work in botanical field data collection or the herbal industry (growing, sales, organic gardening, products).

Course No.	Course Name	Credits
NRM 101	Edible and Medicinal Plants	1.5
NRM 138	Art and Science of Herbalism	2
BIOS 141	Advanced Field Botany	2
WLM 162	Winter Weeds	1
NRM 163	Foraging Edible and Medicinal Plants	<u>1.5</u>
		8

### Nature Art

Objective: To prepare the student for employment in the Natural Resources field. Students will practice creating visual presentations and displays of natural subjects using various media and techniques. Art materials, photographic equipment and presentation hardware are used to provide a well-rounded experience in nature arts.

Course No.	Course Name	Credits
INTP 231	Nature Painting	1
INTP 254	Nature Drawing I	1
INTP 278	Nature Drawing II	1
INTP 279	Nature Photography	<u>1</u>
		4

### Wilderness Skills I

Objective: To develop skills necessary to: select backpacking equipment and food; develop hiking & cooking skills, & camping techniques; develop wilderness travel & emergency techniques; develop survival skills; develop and use a limited survival kit; develop survival skills for mountain, desert, arctic, tropical & ocean areas; live & travel comfortably in remote areas.

Course No.	Course Name	Credits
INTP 250	Backpacking and Survival	3
RNGR 275	Advanced Survival Techniques	<u>3</u>
		6

### Wilderness Skills II

Objective: To develop advanced wilderness skills in wilderness travel and emergency techniques, and survival skills for mountain, desert, arctic, tropical, and ocean areas.

Course No.	Course Name	Credits
RNGR 126	Search and Rescue Introduction	1
INTP 258	Winter Camping and Survival	3
RNGR 270	Land Navigation	1
RNGR 160	Survival Techniques for Wilderness Areas	3
SUPR 236	Outdoor Leadership Skills	<u>1</u>
		9

## Occupational Certificates

### Apprentice Field Operator

Objective: To prepare the student for a position as an apprentice field operator.

Course No.	Course Name	Credits
ERT 101	Equipment Operations I	6
ERT 102	Equipment Operations II	6
ERT 103	Equipment Operations III	6

ERT 204	Equipment Operations IV	6
ERT 205	Equipment Operations V	6
ERT 206	Equipment Operations VI	<u>6</u>
		36

### Apprentice Field Operator

Objective: To prepare the student for a position as an apprentice field operator with heavy equipment maintenance and repair.

Course No.	Course Name	Credits
ERT 101	Equipment Operations I	6
ERT 102	Equipment Operations II	6
ERT 103	Equipment Operations III	6
ERT 107	Heavy Equipment Maintenance and Repair I	2
ERT 108	Heavy Equipment Maintenance and Repair II	2
ERT 109	Heavy Equipment Maintenance and Repair III	2
ERT 204	Equipment Operations IV	6
ERT 205	Equipment Operations V	6
ERT 206	Equipment Operations VI	<u>6</u>
		42

### Apprentice Field Operator Reclamation

Objective: To prepare the student for a position as an apprentice field operator with reclamation.

Course No.	Course Name	Credits
ERT 101	Equipment Operations I	6
ERT 102	Equipment Operations II	6
ERT 103	Equipment Operations III	6
ERT 107	Heavy Equipment Maintenance and Repair I	2
ERT 108	Heavy Equipment Maintenance and Repair II	2
ERT 109	Heavy Equipment Maintenance and Repair III	2
ERT 204	Equipment Operations IV	6
ERT 205	Equipment Operations V	6
ERT 206	Equipment Operations VI	6
NR 175	Commercial Driver License 40 Hour	2
NR 222	Reclamation	3
NRM 123	Survey and Mapping I	3
BIOS 105	Soils	<u>3</u>
		53

### Aquaculture and Fish Hatchery Aide

Objective: To prepare the student for work as a technician on a public or private fish production facility and to prepare the student to become self-employed in the field of aquaculture and fish production.

Course No.	Course Name	Credits
FMAQ 110	Fish Culture I	4
FMAQ 112	Fish Culture II	4
FMAQ 114	Fish Culture III	4
FMAQ 115	Hatchery Maintenance (Structure)	3
FMAQ 117	Hatchery Maintenance (Hydraulics)	3
FMAQ 119	Hatchery Maintenance (Welding)	2
FMAQ 210	Aquatic Plants and Control	3
CHEM 131	Environmental Chemistry	4
BIOS 268	Ichthyology	3
NRM 217	Aquatic Ecology	3
FMAQ 221	Fish Management I	3
FMAQ 271	Fish Pathology	<u>3</u>
		39

### Archaeological Laboratory Methods

Objective: To prepare the student for volunteer work at an archaeological site.

Course No.	Course Name	Credits
ARCH 101	Principles of Archaeology	4
ARCH 102	World Prehistory	4
ARCH 103	North American Prehistory	5
ARCH 104	Archaeology Lab Methods: Lithics	2
ARCH 214	Archaeology Lab Methods: Zooarchaeology	2
ARCH 216	Archaeology Lab Methods: Prehistory	<u>2</u>
		19

**Archaeological Field Methods**

Objective: To prepare the student for volunteer work at an archaeological site.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ARCH 101	Principles of Archaeology	4
ARCH 102	World Prehistory	4
ARCH 103	North American Prehistory	5
ARCH 201	Archaeological Field Methods: Surveying	<u>12</u> 25

**Backcountry Horse I**

Objective: To provide an acceptable level of skills and competency necessary for employment in the horse industry.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
EQSI 103	Horse Care Handling	3
EQSI 110	Horseanship I: Beginning Riding	3
EQSI 115	Horseanship II: Intermediate Riding	3
EQSI 120	Horseanship III: Advanced Trail Riding	3
EQSI 200	Horse Packing	3
EQSI 210	Horseshoeing I	<u>3</u> 18

**Backcountry Horse II**

Objective: To provide an acceptable level of technical competency which will permit specialized skills for entry into the horseanship field. Prerequisite: Backcountry Horse I certificate.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
EQSI 230	Team Driving I	3
EQSI 266	Equine Sports Massage	3
EQSI 201	Horse Program Management	3
EQSI 240	Colt Training I	3
EQSI 150	Leathercraft I	3
EQSI 225	Campus Park Patrol	3
EQSI 250	Teaching Horseback Riding	3
EQSI 215	Horseshoeing II	3
EM 129	First Responder	2
EQSI 255	Advanced Packing and Wilderness Skills	<u>4</u> 30

**Fisheries Conservation Aide**

Objective: To provide an acceptable level of technical competency which will permit entry into the fisheries management field.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
CHEM 131	Environmental Chemistry	4
BIOS 268	Ichthyology	3
NRM 217	Aquatic Ecology	3
FMAQ 221	Fish Management I	3
FMAQ 238	Fish Management II	4
MATH 110 P	Geometry and Trigonometry	<u>3</u> 20

**Forester's Aide**

Objective: To provide an acceptable level of technical competency which will permit entry into the forestry field.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
FOR 111	Forest Dendrology	3
FOR 113	Reforestation and Pesticides II	3
FOR 120	Photo Interpretation	3
FOR 123	Forest Measurements	4
FOR 124	Forest Ecology	3
FOR 210	Forest Mensuration	4
FOR 211	Timber Harvesting	3
FOR 220	Applied Silviculture	4
FOR 231	Forest Products Utilization	3
BIOS 127	Forest Soils	3
FOR 131	Forest Entomology and Pathology	4
EM 134 P	Standard First Aid	1
MATH 108 P	Introduction to Algebra	3
MATH 110 P	Geometry and Trigonometry	3
MICS 121	Microsoft Office	3
FOR 149	Basic Wildland Fire Fighting	2
COMM 122 P	Communications II	<u>3</u> 52

**Geographic Information and Global Positioning Systems**

Objective: To prepare the student for entry level job placement in the Geographic Information and Global Positioning Systems field.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
GEO 100	Introduction to GIS	2
GEO 102	Introduction to GPS	2
GEO 103	Computing in GIS	1
MATH 108 P	Introduction to Algebra	3
NRM 125	Map Reading and Interpretation	2
GEO 101	Intermediate GIS	3
GEO 120	Cartography	3
NRM 123	Surveying and Mapping I	3
GEO 200	Applications in GIS	3
GEO 203	GPS Data Acquisition	3
GEOG 201	Geography	<u>3</u> 28

**Park Maintenance**

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
NRM 110	Chain Saw Operation	1
NRM 120	Woodshop	1
NRM 130	Recreation Area Equipment	1
NRM 222	Recreation Area Maintenance	2
ERT 111	Diesel, Gas, Small Engine Repair	<u>3</u> 8

**Timber Harvesting and Tree Care Level I**

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
THTC 100	Timber Harvesting and Tree Care I	6
THTC 101	Timber Harvesting and Tree Care II	6
THTC 102	Timber Harvesting and Tree Care III	<u>6</u> 18

**Timber Harvesting and Tree Care Level II**

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
FOR 103	Introduction to Timber Stand Improvement	2
FOR 104	Introduction to Tree Planting	1
THTC 100	Timber Harvesting and Tree Care I	6
THTC 101	Timber Harvesting and Tree Care II	6
THTC 102	Timber Harvesting and Tree Care III	6
FOR 109	Introduction to Forest Dendrology	<u>2</u> 23

**Water Adventure Leader**

Objective: To prepare the individual to lead water adventure travel outings.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ECO 146	Rafting	2
ECO 154	Canoeing II - Whitewater	2
ECO 155	Whitewater Rescue	1
ECO 180	Kayaking I - Fundamentals	1
ECO 181	Kayaking II - Whitewater	2
ECO 144	Canoeing I - Fundamentals	1
ECO 183	Low Impact Camping Equipment	1
ECO 283	Adventure Leadership - Flatwater Paddling	5
	or	
ECO 287	Adventure Leadership - Whitewater Paddling	<u>5</u> 15

**Wilderness Adventure Travel Leader**

Objective: To prepare the individual to lead wilderness adventure travel outings.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
RNGR 123	Rappelling and Rope Techniques	1.5
ECO 128	Basic Rock Climbing	1.5
RNGR 226	Vertical Rope Rescue	1.25
ECO 178	Ropes Course Facilitation	2
ECO 188	Camping Equipment and Backpacking	3
ECO 289	Adventure Leadership - Backpacking	<u>5</u> 14.25

**Wilderness Skills and Adventure Leadership - Water Concentration**

Objective: The student will be able to equip themselves and others for wilderness paddling trips on flat and white water; will be able to paddle a canoe, kayak, or raft in white water, up to Class III difficulty;

and will have the leadership skills to take competent paddlers into the wilderness, on sheltered lakes and whitewater, up to Class II difficulty.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ECO 144	Canoeing I - Fundamentals	1
ECO 146	Rafting	2
ECO 154	Canoeing II - Whitewater	2
ECO 155	Whitewater Rescue	1
ECO 180	Kayaking I - Fundamentals	1
ECO 181	Kayaking II - Whitewater	2
ECO 183	Low Impact Camping Equipment	1
ECO 229	Wilderness First Responder	3
ECO 283	Adventure Leadership - Flatwater Paddling	5
ECO 287	Adventure Leadership - Whitewater Paddling	<u>5</u> 18

#### Environmental Restoration

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
ERT 112	Resource Conservation	3
NRM 124	Surveying and Mapping II	3
NRM 176	Wetlands Determination	3
NRM 134	Environmental Issues	3
ACC 100	P Accounting I	3
BUS 100	P Small Business Management I	<u>3</u> 18

#### Wilderness Skills and Adventure Leadership - Land Concentration

Objective: Upon completion of this program, the student will be able to outfit themselves and others for three-season travel over varied terrain; will be capable of self sufficient travel in remote situations; and will be able to competently and confidently lead others in wilderness areas, being responsible for the participants' physical, mental, and emotional well being.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
RNGR 123	Rappelling and Rope Techniques	1.5
RNGR 226	Vertical Rope Rescue	1.25
ECO 128	Basic Rock Climbing	1.5
ECO 178	Ropes Course Facilitation	2
ECO 188	Camping Equipment and Backpacking	3
ECO 289	Adventure Leadership - Backpacking	5
ECO 229	Wilderness First Responder	<u>3</u> 17.25

#### Wildlife Conservation Aide I

Objective: To provide an acceptable level of technical competency which will permit entry into the wildlife management field.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
WLM 156	Wildlife Investigation Techniques I	3
WLM 200	Wildlife Field Research	3
WLM 215	Wildlife Management I	3
WLM 239	Wildlife Management II	4
WLM 110	Chain Saw Operation	1
WLM 130	Recreation Area Equipment	<u>1</u> 15

#### Wildlife Conservation Aide II

Objective: To provide an acceptable level of technical competency which will permit entry into the wildlife management field.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
EM 129	First Responder	2
FOR 149	Basic Wildland Fire Fighting	2
WLM 249	Western Game Animals	3
WLM 251	Ecology and Management of Waterfowl	3
RNGR 270	Land Navigation	1
NRM 120	Woodshop	1
NRM 222	Recreation Area Maintenance	2
RNGR 160	Survival Techniques for Wilderness Areas	3
GEOL 105	Soils	<u>3</u> 20

#### Wood Procurement

Objective: To provide an acceptable level of technical competency which will permit entry into the wood procurement field.

<u>Course No.</u>	<u>Course Name</u>	<u>Credits</u>
FOR 120	Photo Interpretation	3
FOR 123	Forest Measurements	4
FOR 210	Forest Mensuration	4
FOR 211	Timber Harvesting	3
FOR 226	Production Analysis	3
FOR 276	Best Management Practices	<u>1</u> 18

## Technologist Certificates

# School of Public Safety Services

## Technical Programs

Programs leading to an Associate Degree, Diploma or Technologist Certification.

- Fire and Emergency Services
- Human Services and Corrections
- Juvenile Services and Corrections
- Police Science

## Certificate Programs

Programs providing specific technical skills.

### Certificate of Completion

Awarded for successful completion of a course or series of courses (less than twelve credit hours) leading to acquisition of specific knowledge and skills.

- Dispatcher Training
- Emergency Response to Hazardous Materials
- Emergency Response to Hazardous Materials

### Occupational Certificate

Awarded for successful completion of twelve or more credit hours in which the individual acquires knowledge and skills that are directly applicable to specific entry level employment.

- Certified Ohio EMT Paramedic (5-3-002)
- Fire Fighter
- Fire Science
- Ohio Peace Officer Basic Training
- Professional Fire Fighter
- Public Safety Services Officer Level I
- Public Safety Services Officer Level II

### Technical Certificate

Awarded for successful completion of a prescribed sequence of courses within the given technology in which the certificate is offered. The total credit hours are at least 50% of the number required for the associate degree in that technology. The technical component is 27-33 quarter hours with the balance being in general courses.

- Fire Science

### Certificates of Concentration

Awarded for successful completion of a coherent set of courses which complement the associate degree and enable the learner to acquire skills in a specific area (e.g. medical office management, chemical dependency counselor).

- Adult Services Certification
- Chemical Dependency Counselor
- Juvenile Service
- Social Worker Assistant

# Fire and Emergency Services

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FS 105	Orientation to Fire Services	T	2.00	0.00	2.00	\$10
FS 110	Fire Fighter I	T	4.00	11.00	7.00	\$275
HLTH 102 Q	Health and Physical Education	G	0.00	3.00	1.00	\$10
MATH 108 H	Introduction to Algebra for Health	G	3.00	1.00	3.00	\$16
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
FS ●●●	Fire Science Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>2.00</u>	
			12.00	15.00	18.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FS 116	Fire Prevention and Investigation Techniques	T	2.00	3.00	3.00	\$20
FS 253	Fire Hydraulics	T	3.00	0.00	3.00	\$20
FS 296	Fire Science Practicum	T	1.00	7.00	2.00	\$40
EM 100	Emergency Victim Care (EMT-B)	G	5.00	7.00	7.00	\$115
EM 213	Public Administration, Relations, and Education	G	<u>2.00</u>	<u>3.00</u>	<u>3.00</u>	\$20
				13.00	20.00	18.00

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
FS 115	Fire Fighter II	T	4.00	11.00	7.00	\$300
CHEM 100	Introduction to Chemistry I	G	3.00	2.00	3.00	\$30
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
MICS 144	Introduction to Word	G	1.00	1.00	1.00	\$30
FS ●●●	Fire Science Elective (Required)	T	<u>0.00</u>	<u>0.00</u>	<u>2.00</u>	
			11.00	14.00	16.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EM 102	Defensive Driving and Emergency Vehicle Operation	T	1.00	2.00	1.00	\$150
EM 107	Introduction to Paramedic	T	2.00	9.00	5.00	\$200
BIOS 112	The Human Organism	G	3.00	2.00	3.00	\$30
SOCI 153	Social and Cultural Awareness	G	<u>4.00</u>	<u>0.00</u>	<u>4.00</u>	\$7
			10.00	13.00	13.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EM 110	EMT Paramedic I	T	6.00	12.00	10.00	\$200
BIOS 113	Anatomy and Physiology I	G	3.00	2.00	3.00	\$30
COMM 123	Communications III	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$20
			12.00	14.00	16.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EM 120	EMT Paramedic II	T	7.00	12.00	11.00	\$200
BIOS 114	Anatomy and Physiology II	G	3.00	2.00	3.00	\$30
COMM 130	Speech	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$10
			13.00	14.00	17.00	

## Seventh Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
EM 101	EMT Clinical Experience	T	2.00	16.00	6.00	\$100
EM 113	EMT Squad Experience	T	<u>2.00</u>	<u>16.00</u>	<u>6.00</u>	\$80
			4.00	32.00	12.00	

Technical Credit Hours	67.00
General Credit Hours	43.00
Total Credit Hours	110.00

**Fire and Emergency Services Notes:** Students must complete FS 110 (Fire Fighter I), and FS 115 (Fire Fighter II) to be eligible to take the certification exam for full-time, paid fire fighter (Level II).

# Human Services and Corrections

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CORR 100	Corrections Helping Professions	T	2.00	2.00	2.00	\$10
CORR 260	Interviewing Techniques	T	3.00	2.00	3.00	\$25
JUV 102	Juvenile Delinquency	T	3.00	0.00	3.00	
CJ 100	Criminal Justice Systems	G	3.00	2.00	3.00	\$10
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
COMM 150	Punctuation and Grammar	G	2.00	0.00	2.00	\$10
			16.00	6.00	16.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
CORR 122	Civil Law	G	2.00	3.00	3.00	
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
PSYC 154	Interpersonal Relationships	G	3.00	0.00	3.00	\$7
SOCI 160	Introduction to Sociology	G	3.00	0.00	3.00	\$7
OAT 180	Keyboarding (Optional)	G	1.00	1.00	1.00	\$25
			14.00-15.00	4.00-5.00	15.00-16.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CORR 235	Client Documentation and Case Records	T	2.00	3.00	3.00	\$25
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
MICS 121A	Microsoft Office - Word Processing	G	1.00	1.00	1.00	\$15
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
BIOS 100	Health Science - The Human Machine	G	3.00	0.00	3.00	
	or					
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
			15.00	4.00	16.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
	See your advisor regarding course offerings.					

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 190	Chemical Abuse and Dependency	T	3.00	2.00	3.00	\$20
CORR 261	Approaches to Correctional Counseling	T	2.00	3.00	3.00	
CORR 298	Corrections Practicum Orientation	T	1.00	2.00	1.00	
EM 129	First Responder	G	1.00	3.00	2.00	\$50
CORR 280	Corrections Current Topics (Optional)	T	0.25	0.00	0.25-5.00	
CORR •••	HCS Electives (Required)	T	0.00	0.00	9.00	
			7.00-7.25	10.00	18.00-23.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 127	Victim Awareness	T	3.00	0.00	3.00	\$10
CORR 296 A	Corrections Practicum A	T	2.00	7.00	3.00	\$25
CORR 160	Group Work Techniques	G	2.00	3.00	3.00	
CORR •••	HCS Electives (Required)	T	0.00	0.00	6.00	
			7.00	10.00	15.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CORR 265	Case Management	T	3.00	2.00	3.00	
CORR 296B	Corrections Practicum B	T	2.00	7.00	3.00	\$25
CJ 263	Crisis Recognition and Referral	G	2.00	2.00	2.00	\$10
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
PSYC 152	Abnormal Psychology	G	3.00	0.00	3.00	\$7
SUPR 235	Supervision and Leadership	G	3.00	0.00	3.00	
			14.00	11.00	15.00	

Technical Credit Hours	45.00-50.00
General Credit Hours	50.00-51.00
Total Credit Hours	95.00-101.00

**Human Services and Corrections Notes:** Additional certification is available in the following areas: Correctional Officer Training, Police Officer Basic, EMT, or Fire.

Students may elect to take CORR 292 (Corrections Field Placement) or LANG 120 (Beginning Spanish).



# Juvenile Services and Corrections

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CORR 100	Corrections Helping Professions	T	2.00	2.00	2.00	\$10
CORR 260	Interviewing Techniques	T	3.00	2.00	3.00	\$25
JUV 100	Juvenile Residential Services	T	2.00	4.00	3.00	\$20
CJ 100	Criminal Justice Systems	G	3.00	2.00	3.00	\$10
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
COMM 150	Punctuation and Grammar	G	<u>2.00</u>	<u>0.00</u>	<u>2.00</u>	\$10
			15.00	10.00	16.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 263	Crisis Recognition and Referral	G	2.00	2.00	2.00	\$10
CORR 122	Civil Law	G	2.00	3.00	3.00	
MATH 108B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
BIOS 100	Health Science - The Human Machine or	G	3.00	0.00	3.00	
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
SEPS 205	Correctional Security (Optional)	T	3.00	0.00	3.00	\$15
OAT 180	Keyboarding (Optional)	G	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	\$25
			13.00-17.00	6.00-7.00	14.00-18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CORR 235	Client Documentation and Case Record	T	2.00	3.00	3.00	\$25
JUV 110	Adolescent Cognitive Behavior	T	3.00	0.00	3.00	\$5
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
COMM 135	Verbal Career Skills	G	3.00	0.00	3.00	\$10
MICS 121A	Microsoft Office - Word Processing	G	1.00	1.00	1.00	\$15
PSYC 151	Developmental Psychology	G	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	\$7
			15.00	4.00	16.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
See your advisor regarding course offerings.						

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 190	Chemical Abuse and Dependency	T	3.00	2.00	3.00	\$20
CORR 261	Approaches to Correctional Counseling	T	2.00	3.00	3.00	
CORR 298	Corrections Practicum Orientation	T	1.00	2.00	1.00	
JUV 101	Family Dynamics	T	3.00	2.00	3.00	
JUV 102	Juvenile Delinquency	T	3.00	0.00	3.00	
EM 129	First Responder	G	1.00	3.00	2.00	\$50
SOCI 160	Introduction to Sociology	G	3.00	0.00	3.00	\$7
CORR 151	Unarmed Self-Defense (Optional)	T	<u>1.00</u>	<u>4.00</u>	<u>2.00</u>	\$25
			16.00-17.00	12.00-16.00	18.00-20.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 127	Victim Awareness	T	3.00	0.00	3.00	\$10
CORR 262	Counseling Techniques	T	2.00	4.00	3.00	\$25
CORR 296A	Corrections Practicum A	T	2.00	7.00	3.00	\$25
JUV 105	Child Abuse	T	3.00	2.00	3.00	
CORR 160	Group Work Techniques	G	2.00	3.00	3.00	
CJ 250	Criminology (Optional)	T	<u>3.00</u>	<u>0.00</u>	<u>3.00</u>	
			12.00-15.00	16.00	15.00-18.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CORR 265	Case Management	T	3.00	2.00	3.00	
CORR 296B	Corrections Practicum B	T	2.00	7.00	3.00	\$25
JUV 111	Juvenile Sexual Offender	T	3.00	0.00	3.00	\$5
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
HUM 203	Ethics, Values, and Morality	G	3.00	0.00	3.00	\$5
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
CORR 280	Corrections Current Topics (Optional)	T	<u>0.25</u>	<u>0.00</u>	<u>0.25-5.00</u>	
			15.00-15.25	9.00	16.00-21.00	

Technical Credit Hours	48.00-61.00
General Credit Hours	47.00-48.00
Total Credit Hours	95.00-109.00

**Juvenile Services Notes:** Additional certification is available in the following areas: Correctional Officer Training, Police Officer Basic, EMT, or Fire.

# Police Science

For students entering June, 2002 through May, 2003

## First Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 132	Law Enforcement Photography	T	2.00	4.00	3.00	\$100
PSCI 250 A	Law Enforcement I - OPOTA	T	3.00	5.00	4.00	\$180
CJ 121	Ohio Criminal Law	G	2.00	2.00	2.00	
COMM 122	Communications II	G	3.00	0.00	3.00	\$20
PSCI 210	Crime Prevention and Community Relations	G	1.00	4.00	2.00	
PSCI ●●●	Police Science Elective (Optional)	T	0.00	0.00	1.00-3.00	
			11.00	15.00	14.00-17.00	

## Second Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PSCI 106	Police Communication Operations	T	2.00	2.00	2.00	\$67
PSCI 250 B	Law Enforcement II - OPOTA	T	3.00	5.00	4.00	\$141
COMM 123	Communications III	G	3.00	0.00	3.00	\$20
PSYC 150	Introduction to Psychology	G	3.00	0.00	3.00	\$7
SOCI 165	Cross Cultural Studies	G	3.00	0.00	3.00	\$7
PSCI ●●●	Police Science Elective (Optional)	T	0.00	0.00	1.00-3.00	
			14.00	7.00	15.00-18.00	

## Third Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PSCI 250 C	Law Enforcement III - OPOTA	T	3.00	5.00	4.00	\$141
CJ 263	Crisis Recognition and Referral	G	2.00	2.00	2.00	\$10
COMM 130	Speech	G	3.00	0.00	3.00	\$10
MATH 108 B	Introduction to Algebra for Business	G	3.00	1.00	3.00	\$16
MICS 121 A	Microsoft Office - Word Processing	G	1.00	1.00	1.00	\$15
BIOS 101	Environmental Science	G	3.00	0.00	3.00	\$20
	or					
CHEM 100	Introduction to Chemistry I	G	3.00	2.00	3.00	\$30
PSCI ●●●	Police Science Elective (Optional)	T	0.00	0.00	1.00-2.00	
			15.00	9.00-11.00	16.00-18.00	

## Summer Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PSCI 296 A	Police Science Practicum - Communication	T	1.00	7.00	2.00	\$25
PSCI 296 B	Police Science Practicum - Patrol	T	1.00	7.00	2.00	\$25
PSCI ●●●	Police Science Elective (Optional)	T	0.00	0.00	1.00-3.00	
			2.00	14.00	4.00-7.00	

## Fourth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 150	Juvenile Delinquency and Procedures	T	2.00	0.00	2.00	\$10
PSCI 180	Criminalistics I	T	1.00	5.00	3.00	\$100
PSCI 235	Police Report Writing	T	1.00	3.00	2.00	\$30
PSCI 250 D	Law Enforcement IV - OPOTA	T	3.00	5.00	4.00	\$180
HUM 203	Ethics, Values, and Morality	G	3.00	0.00	3.00	\$5
PSCI ●●●	Police Science Elective (Optional)	T	0.00	0.00	1.00-3.00	
			10.00	13.00	14.00-17.00	

## Fifth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
CJ 222	Laws of Arrest, Search, and Seizure	T	2.00	0.00	2.00	
PSCI 250 E	Law Enforcement V - OPOTA	T	3.00	5.00	4.00	\$141
PSCI 280	Criminalistics II	T	1.00	5.00	3.00	\$50
PSCI 160	Computer Applications in Law Enforcement	G	1.00	3.00	2.00	\$40
CJ 250	Criminology	G	3.00	0.00	3.00	
PSYC 152	Abnormal Psychology	G	3.00	0.00	3.00	\$7
			13.00	13.00	17.00	

## Sixth Quarter

<u>Course No.</u>	<u>Course Name</u>	<u>Type</u>	<u>Class</u>	<u>Lab</u>	<u>Credit</u>	<u>Course Fee</u>
PSCI 240	Advanced Investigation	T	2.00	5.00	3.00	\$50
PSCI 250 F	Law Enforcement VI - OPOTA	T	3.00	5.00	4.00	\$141
PSCI 260	Interviewing and Interrogation	T	2.00	2.00	2.00	\$10
PSCI 265	Crime Scene Management	T	2.00	5.00	4.00	\$50
PSCI 270	Police Administration and Supervision	T	1.00	2.00	2.00	\$25
COMM 104	Job Search Techniques	G	1.00	0.00	1.00	\$10
PSCI ●●●	Police Science Elective (Optional)	T	0.00	0.00	1.00-3.00	
			11.00	19.00	16.00-19.00	

Technical Credit Hours 56.00-73.00  
 General Credit Hours 40.00  
 Total Credit Hours 96.00-113.00

**Police Science Notes:** To complete graduation requirements, students must enroll in and receive a satisfactory grade for PSCI 296 A Police Science Practicum (Communications), 2 credits, and PSCI 296 B Police Science Practicum (Patrol), 2 credits. PSCI 296 A is a prerequisite for PSCI 296 B. Students may enroll in practicum at the beginning of any quarter of the second year.

Additional certification is available in the following areas: Correctional Officer Training, EMT, or Fire.

# School of Public Safety Services Certificates

## Certificates of Completion

### Dispatcher Training

Objective: To train participants in the communication and technical skills necessary to function as a dispatcher and/or communications officer. This course meets the requirements for National APCO certification and 911 training.

Course No.	Course Name	Credits
PSCI 106	Police Communication Operations	2
		2

### Emergency Response to Hazardous Materials

Objective: To provide federally mandated training for first responders to hazardous materials.

Course No.	Course Name	Credits
ECO 227	Emergency Response to Hazardous Materials	2
		2

## Occupational Certificates

### Certified Ohio EMT Paramedic (5-3-002)

Objective: To prepare students for entry level employment as Emergency Medical Technician-Paramedic (Advanced Life Support).

Course No.	Course Name	Credits
BIOS 113	Anatomy and Physiology I	3
BIOS 114	Anatomy and Physiology II	3
EM 102	Defensive Driving and Emergency Vehicle Operation	1
BIOS 112	The Human Organism	3
EM 110	EMT Paramedic I	10
EM 101	EMT Clinical Experience I	6
EM 113	EMT Squad Experience	6
EM 120	EMT Paramedic II	11
EM 107	Introduction to Paramedic	5
SOCI 153	Social and Cultural Awareness	4
		52

### Fire Fighter

Course No.	Course Name	Credits
FS 110	Fire Fighter I	7
FS 115	Fire Fighter II	7
		14

### Fire Science

Objective: To prepare students for entry level employment in fire sciences.

Course No.	Course Name	Credits
FS 105	Orientation to Fire Services	2
EM 128	Rope Rescue Techniques	2
FS 253	Fire Hydraulics	3
FS 116	Fire Prevention and Investigation Techniques	3
EM 133 P	CPR for the Professional Rescuer	1
FS 110	Fire Fighter I	7
FS 115	Fire Fighter II	7
FOR 149	Basic Wildland Firefighting	2
EM 102	Defensive Driving and Emergency Vehicle Operation	1
		28

### Ohio Peace Officer Basic Training

Objective: To meet State of Ohio training requirements to serve as a law enforcement officer. Prerequisites: Must hold a valid, current commission from an authorized governmental agency and gain clearance after submitting to a background check; must be enrolled in an approved OPOB Training School; must be taken during program.

Course No.	Course Name	Credits
PSCI 255	Peace Officer Basic Theory	12
PSCI 256	Peace Officer Basic - Physical Skills	12
		24

### Professional Fire Fighter

Objective: To provide advanced fire training required for entry-level paid positions as a Professional Fire Fighter.

Course No.	Course Name	Credits
FS 110	Fire Fighter I	7
FS 115	Fire Fighter II	7
		14

### Public Safety Services Officer Level I

Objective: To prepare and train the participant for entry level positions as a Public Safety Services Officer, Level I.

Course No.	Course Name	Credits
CORR 250	Correctional Officer Training	7
EM 100	Emergency Victim Care (EMT-B)	7
FS 110	Fire Fighter I	7
PSCI 250	Peace Officer Basic Training	24
		45

### Public Safety Services Officer Level II

Objective: To prepare and train the participant for entry level positions as a Public Safety Services Officer, Level II. Prerequisite: Public Safety Services Officer, Level I.

Course No.	Course Name	Credits
CORR 250	Correctional Officer Training	7
EM 110	EMT Paramedic I	10
FS 115	Fire Fighter II	7
PSCI 250	Peace Officer Basic Training	24
EM 110	EMT Paramedic I	10
		58

## Technical Certificate

### Fire Science

Objective: To prepare the student for entry-level employment in Fire Science.

Course No.	Course Name	Credits
FS 105	Orientation to Fire Services	2
FS 110	Fire Fighter I	7
HLTH 102 Q	HPE Health and Physical Education	1
MATH 108 H	Introduction to Algebra/Health	3
PSYC 150 P	Introduction to Psychology	3
FS ●●●	Fire Science Elective	2
FS 116	Fire Prevention and Investigation Techniques	3
FS 253	Fire Hydraulics	3
FS 296	Fire Science Practicum	2
EM 100	EM Victim Care (EMT-B)	7
EM 213	Public Administration Relation Education	3
FS 115	Fire Fighter II	7
CHEM 100	Introduction to Chemistry	3
COMM 122 P	Communications II	3
MICS 144	Introduction to Word	1
FS ●●●	Fire Science Elective	2
		52

## Certificate of Concentration

### Adult Services Certification

Objective: To prepare the student for a position in private or public agencies working with adult offenders. Prerequisite: Associate in Applied Science in Human Services and Corrections.

Course No.	Course Name	Credits
CORR 105	Adult Residential Services	4
CORR 106	Probation and Parole	3
CORR 161	Reality Therapy	3
CORR 250	Correctional Officer Training	7
		17

### Chemical Dependency Counselor

Objective: To prepare the student for a position working with clientele who have been or are chemical abusers. After completing 2000 hours of practical work experience as a Chemical Dependency Counselor, the

student is eligible to apply for certification as a Certified Chemical Dependency Counselor. Prerequisite: Associate in Applied Science in Human Services and Corrections

<u>Course No.</u>		<u>Course Name</u>	<u>Credits</u>
CJ 193	P	Substance Abuse Treatment	3
CJ 286	P	Chemical Dependency Lab Orientation	2
CJ 287	P	Chemical Dependency Lab I	4
CJ 288	P	Chemical Dependency Lab II	4
CJ 289	P	Chemical Dependency Lab III	4
			17

#### Juvenile Service

Objective: To prepare the student for a position in public or private agencies working with juvenile offenders. Prerequisite: Associate in Applied Science in Human Services and Corrections.

<u>Course No.</u>		<u>Course Name</u>	<u>Credits</u>
JUV 100		Juvenile Residential Services	3
JUV 101		Family Dynamics	3
JUV 105		Child Abuse	3
JUV 110		Adolescent Cognitive Behavior	3
JUV 111		Juvenile Sexual Offender	3
			15

#### Social Worker Assistant

Objective: To prepare the student for Social Worker Assistant Certification. Prerequisite: Associate in Applied Science in Human Services and Corrections.

<u>Course No.</u>		<u>Course Name</u>	<u>Credits</u>
CJ 150		Juvenile Delinquency and Procedures	2
CORR 162		Special Needs Clients	3
CORR 262		Counseling Techniques	3
JUV 101		Family Dynamics	3
JUV 105		Child Abuse	3
			14

## Understanding the Course Description

The following information is provided to assist in understanding the course description.

**Course Number:** The two, three or four letters and three digits (for example, COMM 122) which identify the course being offered. The course number corresponds to the course description, a brief outline of the subject matter of the course, in the course of study/course description catalog and on the web at [www.hocking.edu](http://www.hocking.edu).

**PACE Courses:** PACE courses allow you to enroll in the course any time the college is in session and to proceed through the course work at your own rate of speed. The PACE labs are staffed with full-time instructors who are available to work with you on a one-on-one basis as needed to achieve the stated competencies. In most cases you may choose to complete the course in a traditional method or on PACE.

**Course Name:** Identifies the name of the course being offered.

**Credit Hours:** The credit is a standard unit of measurement for college work. The number of contact hours per credit hour is determined by the type of activities (class hours, laboratory hours or practicum experiences).

**Class Hours:** Time scheduled as part of the instructional plan of most courses utilizing any combination of instructional methods such as lecture, directed discussion, demonstration or presentation of audiovisual materials.

**Lab Hours:** Time scheduled as part of the instructional plan for the practical application of the theory presented in courses. Laboratory activities may include conducting experiments, practicing procedures or skills, or clinical or field experiences.

**Offered:** Hocking College operates on a quarter system. The quarter is the period of time in which most courses are scheduled. Quarters are generally 11 weeks in length.

**Course Fee:** Consumable supply costs are in addition to the regular course fees and will automatically be added to the student's account at the time of course registration. There are three types of course fees which will be shown on your account statement: 1) supply fee - provides for consumable materials used in the course; 2) equipment fee - provides for technical equipment, computers, and software used in the course; and, 3) program fee - provides for national and international experiences, staffing of elective courses, development of alternative modes of instruction, low student to faculty ratios to assure student safety or enhance learning, and malpractice liability insurance in appropriate programs.

## AART Appalachian Art

**AART 100**  
**Stained Glass**  
2.00 Credits      Class 1.00      Lab 2.00  
History of stained glass, color theory and techniques of design; and traditional techniques of construction of stained glass. By the end of the course, the student completes a small (beginner level) window hanging and designs and constructs a larger glass project: either a window panel that can hang independently, or a lamp shade, or a piece of glass freestanding sculpture. Course fee: \$80.

**AART 101**  
**Native American Flint-Knapping**  
2.00 Credits      Class 1.00      Lab 2.00  
The art of flint-knapping as it pertains to modern appeal to art and exploration of flint-knapping and its relationship to the evolution of the human race. Students make pre-historic style points or blades and/or other shapes (hearts, stars, animal profiles, etc.). The emphasis will be on quality not quantity. Course fee: \$95.

**AART 102**  
**Introduction to Copper Enameling**  
2.00 Credits      Class 1.00      Lab 2.00  
Course fee: \$80.

**AART 103**  
**Introduction to Ceramic Arts**  
2.00 Credits      Class 1.00      Lab 2.00  
Properties of clay and glazes; traditional techniques of pinching, coiling, building with slabs, and modeling to form functional ware and decorative sculpture; tools and materials; and basic firing methods. Course fee: \$75.

**AART 104**  
**Native American Flint-Knapping II**  
2.00 Credits      Class 0.00      Lab 6.00  
Prerequisite: AART 101. Course fee: \$60.

**AART 105**  
**Ceramic Arts I**  
2.00 Credits      Class 0.00      Lab 6.00  
Prerequisite: AART 103. Course fee: \$100.

**AART 290**  
**Appalachian Arts Special Topics**  
0.50-5.00 Credits      Class 0.50-5.00      Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.

## ACC Accounting

**ACC 100**      PACE  
**Accounting I**  
3.00 Credits      Class 2.00      Lab 3.00  
Introduction to the double-entry system of bookkeeping and the basic accounting cycle. The sole proprietorship is presented in the form of a retail establishment. Emphasizes individual effort through the use of a workbook and practice set. Offered: Summer, Fall, Winter, Spring. Course fee: \$5.

**ACC 101**      PACE  
**Accounting II**  
3.00 Credits      Class 2.00      Lab 3.00  
Basic bookkeeping and general accounting procedures. Includes accrual accounting, inventory methods and accelerated depreciation. Prerequisite: ACC 100. Offered: Summer, Fall, Winter, Spring. Course fee: \$5.

**ACC 102**      PACE  
**Accounting III**  
4.00 Credits      Class 3.00      Lab 4.00  
Introduction to accounting with an emphasis on corporate organization. Includes accounting methods for capital stock and corporate bonds and manufacturing from an accounting viewpoint. Prerequisite: ACC 101. Offered: Summer, Fall, Winter, Spring. Course fee: \$5.

**ACC 105**  
**QuickBooks for Small Business**  
2.00 Credits      Class 1.00      Lab 4.00  
The commercial software, QuickBooks, is used in accounting

applications including managing revenue, expenses, payroll and creating financial statements. Prerequisite: ACC 100. Offered: Winter. Course fee: \$35.

**ACC 110**      PACE  
**Accounting Simulation**  
1.00 Credit      Class 1.00      Lab 1.00  
A retail store work-simulation for applying concepts covered in ACC 100. Concurrent with ACC 100. Offered: Summer, Fall, Winter, Spring.

**ACC 111**      PACE  
**Advanced Accounting Simulation**  
1.00 Credit      Class 1.00      Lab 1.00  
A wholesale establishment work-simulation for applying concepts covered in ACC 101. Concurrent with ACC 101. Prerequisite: ACC 100. Offered: Summer, Fall, Winter, Spring. Course fee: \$37.

**ACC 120**      PACE  
**Payroll Accounting**  
3.00 Credits      Class 2.00      Lab 3.00  
Principles and procedures of payroll record keeping and accounting. Includes taxes, insurance programs, optional deductions and the process of calculating and recording these items. Offered: Summer, Fall, Winter, Spring. Course fee: \$12.

**ACC 130**      PACE  
**Business and Accounting Machines**  
2.00 Credits      Class 2.00      Lab 2.00  
Introduction to the use of an accounting machine and application of basic machine skills to the solution of business and accounting problems. Includes exercises to develop a proficiency on the ten-key adding machine, calculator and electronic calculator. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**ACC 140**  
**Individual Taxation**  
3.00 Credits      Class 2.00      Lab 3.00  
Study and application of federal income tax law. Emphasis on the preparation of federal income tax returns for individuals. Offered: Winter. Course fee: \$36.

**ACC 150**      PACE  
**Business Taxation**  
4.00 Credits      Class 3.00      Lab 4.00  
In-depth study of the application of general tax rules and returns for business organizations. Offered: Summer, Fall, Winter, Spring. Course fee: \$36.

**ACC 162**  
**Microcomputer Accounting**  
2.00 Credits      Class 1.00      Lab 4.00  
Introduction to software packages available for basic accounting. Application of concepts introduced in introductory accounting courses and mastery of basic microcomputer skills. Prerequisite: ACC 100. Offered: Winter, Spring. Course fee: \$30.

**ACC 200**      PACE  
**Basic Cost Accounting**  
3.00 Credits      Class 2.00      Lab 3.00  
Introduction to the bookkeeping system used in job order costing, including source of data used and internal control procedures. Prerequisite: ACC 100. Offered: Summer, Fall, Winter, Spring. Course fee: \$12.

**ACC 201**  
**Advanced Cost Accounting**  
4.00 Credits      Class 3.00      Lab 3.00  
Continuation of ACC 200. Emphasizes production data and cost flow, budgetary control and manufacturing cost standards. Prerequisite: ACC 200. Offered: Winter. Course fee: \$12.

**ACC 210**  
**Cost Accounting Simulation**  
1.00 Credit      Class 0.00      Lab 3.00  
A manufacturing work-simulation covering the job cost system. Application of concepts covered in ACC 200. Prerequisite: ACC 200. Offered: Winter. Course fee: \$36.

**ACC 220**  
**Non-Profit Accounting I**  
4.00 Credits      Class 3.00      Lab 3.00  
Fundamentals of accounting for the non-profit field. Covers all levels of local, state and federal government. Principles and practices are related to financial planning and control. Prerequisite: ACC 100. Offered: Fall. Course fee: \$5.

**ACC 221**  
**Non-Profit Accounting II**  
**4.00 Credits**      **Class 3.00**      **Lab 3.00**  
 Completes the case study started in ACC 200—the modified accrual basis of accounting for municipalities. Internal service funds, enterprise funds and fiduciary funds are emphasized. General fixed asset group of accounts and general long-term debt group of accounts complete the series. Prerequisite: ACC 100. Offered: Winter. Course fee: \$5.

**ACC 230**  
**Intermediate Accounting I**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
 Part one of a two-quarter course introducing principles and objectives of financial accounting and how they evolved. Includes practical present day application to accounts, statements and accounting theory. Prerequisite: ACC 100. Offered: Winter. Course fee: \$10.

**ACC 231**  
**Intermediate Accounting II**  
**4.00 Credits**      **Class 3.00**      **Lab 3.00**  
 Advanced financial accounting theory and principles. Emphasizes in-depth comprehension of corporate financial statements. Prerequisite: ACC 100. Offered: Spring. Course fee: \$10.

**ACC 250**  
**Auditing**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
 Introduces the advanced accounting student to the duties and scope of operations of the internal auditor. Field trips and practice audits demonstrate the practical aspects of internal control and the function of an auditor. Does not qualify the student to be internal auditors. Prerequisite: ACC 101. Offered: Spring. Course fee: \$5.

**ACC 290**  
**Accounting Special Topics**  
**1.00–5.00 Credits**      **Class 1.00–5.00**      **Lab 0.00**  
 Structured exploration of a specific topic(s) by participants in a group.

**ACC 291**  
**Accounting Individual Study**  
**1.00–5.00 Credits**      **Class 1.00–5.00**      **Lab 0.00**  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**ACC 292**  
**Accounting Field Experience**  
**1.00–3.00 Credits**      **Class 0.00**      **Lab 12.00–36.00**  
 On-the-job training in an accounting facility through special arrangements with an instructor.

**ACC 293**  
**Accounting Directed Practice**  
**2.00–8.00 Credits**      **Class 1.00**      **Lab 5.00–35.00**  
 Directed practice instruction in the performance of a particular function from an assigned instructor and observed and critiqued by the instructor in a repeat performance of that function.

**ACC 294**  
**Accounting Cooperative Work Experience**  
**2.00–5.00 Credits**      **Class 1.00**      **Lab 10.00–40.00**  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**ACC 296**  
**Accounting Practicum**  
**2.00 Credits**      **Class 1.00**      **Lab 8.00**  
 Placement in an actual working environment for a minimum amount of time to gain experience before graduation. Offered: Spring.

**ACC 297**  
**Accounting Observation Hour**  
**1.00–3.00 Credits**      **Class 0.00**      **Lab 15.00–45.00**  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**ACC 298**  
**Accounting Internship**  
**3.00–9.00 Credits**      **Class 0.00–3.00**      **Lab 20.00–40.00**  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor.

## ALH Allied Health

**ALH 103**  
**Introduction to Health Care Delivery**  
**3.00 Credits**      **Class 3.00**      **Lab 0.00**  
 Orientation to the health care delivery system including history, economics, medical/legal issues, professionalism, ethics and wellness concepts. The development of health care team skills including critical thinking and problem-solving strategies, customer relations and multicultural health care perspectives. Offered: Fall.

**ALH 104**  
**Allied Health Informatics**  
**2.00 Credits**      **Class 1.00**      **Lab 2.00**  
 Orientation to the use of technology in the health care delivery system including: hardware, software, user interfaces, telecommunications and networks, and health management information systems. Offered: Spring.

## APCO Apprenticeship–Construction

**APCO 001 A**  
**Introduction to Basic Construction**  
**5.00 Credits**      **Class 5.00**      **Lab 0.00**  
 Provides a comprehensive overview of basic construction including safety rules and precautions, selection, inspection, use and maintenance of hand and power tools, the basic components of blueprints, and rigging safety, equipment and inspection.

**APCO 001 B**  
**Basic Math**  
**1.25 Credits**      **Class 1.50**      **Lab 0.00**  
 Provides refresher practice in addition, subtraction, multiplication and division of whole, decimal and fractional numbers.

**APCO 297**  
**Basic Construction Observation**  
**1.50 Credits**      **Class 1.00**      **Lab 8.00**  
 Observation of practitioners representative of the occupational area. Students may participate at times in the actual work activity. Prerequisite: APCO 001 A.

## APCR Apprenticeship

**APCR 100**  
**Conflict Management**  
**2.00 Credits**      **Class 2.00**      **Lab 0.00**  
 Development of effective communication skills and resolution of problems in a non-confrontational manner. Includes discussion of theories and practical tips that show how to better prepare for verbal encounters and how to successfully communicate your point of view both personally and professionally, learn how to listen effectively and how to avoid common conversational disasters.

## APCS Apprenticeship–Computer

**APCS 100**  
**Computerized Maintenance Management System**  
**1.00 Credit**      **Class 1.00**      **Lab 0.00**  
 Use of Windows-based Computerized Maintenance Management System (CMMS) to maintain campus asset records, including work requests, looking for and updating records regarding an asset's history, and creating reports that assist in planning and scheduling work.

**APCS 290**  
**Apprenticeship Special Topics**  
**1.00 Credit**      **Class 1.00**      **Lab 0.00**  
 Structured exploration of a specific topic(s) by participants in a group.

## APCT Apprenticeship–Custodial

**APCT 100**  
**Custodial Technician I**  
**2.00 Credits**      **Class 2.00**      **Lab 0.00**

Basic procedures and equipment for general care of floors and carpets.

**APCT 101**  
Custodial Technician II  
2.00 Credits      Class 2.00      Lab 0.00  
Prerequisite: APCT 100.

## APEL Apprenticeship-Electrician

**APEL 100**  
Basic Electricity  
2.00 Credits      Class 2.00      Lab 1.00  
Basic electricity and electrical wiring, including wiring materials, safety, devices, splicing, outlets, switches, service requirements, lighting, and the NEC.

**APEL 261 D**  
Electrical Level I D  
4.00 Credits      Class 4.00      Lab 0.00  
Advanced electrical concepts including load calculations, feeder and services, practical applications of lighting, standby and emergency systems. Prerequisite: CMEL 261 C.

**APEL 264 A**  
Electrical Level 4 A  
4.00 Credits      Class 4.00      Lab 0.00  
Advanced electrical concepts including load calculations, feeder and services, practical applications of lighting, standby and emergency systems.

## APFL Apprenticeship-Flooring

**APFL 100**  
Basic Flooring  
3.00 Credits      Class 3.00      Lab 0.00  
The basic principles and techniques of tile, carpet, and vinyl flooring. Practical experience in selecting, installing and maintenance of floors.

## APIM Apprenticeship

**APIM 221 A**  
Electrical Applications I  
3.00 Credits      Class 3.00      Lab 1.00  
Introduction to procedures used in electrical safety, hand bending conduit, installing anchors and fasteners, and electrical theory. Includes purpose and function of NEC, OSHA electrical hazards, conduit installation, calculating bends, threaded fasteners, non-threaded fasteners, voltage, conductors, insulators, current, resistance and Ohm's Law. (NCCER 32101, 32102, 32103, 32104). Prerequisite: APCO 100.

**APIM 221 B**  
Electrical Applications II  
4.00 Credits      Class 4.00      Lab 1.00  
Introduction to procedures used in electrical theory includes series, parallel and series-parallel circuits, Kirchhoff's voltage law, measuring resistance, use of electrical test equipment, NEC, NEMA, NFPA, American Wire Gauge Standards, conductors ampacity, and conduit wire pulling. (NCCER 32105, 32016, 32107, 32108). Prerequisite: APIM 221 A.

**APIM 221 C**  
Electrical Applications III  
3.00 Credits      Class 3.00      Lab 1.00  
Introduction to electrical blueprints and oxyfuel cutting. Includes prints, drawings, symbols, schematics, wiring diagrams and oxyfuel cutting equipment and cutting techniques. (NCCER 32109, 32110). Prerequisite: APIM 221 B.

**APIM 222 A**  
AC/DC Applications  
4.00 Credits      Class 4.00      Lab 1.00  
Electrical devices and wiring techniques common to commercial and industrial maintenance. Includes switches, receptacles, wire stripping, wire splicing, alternating current theory, AC motors, DC motors, and NEC grounding requirements. (NCCER 32201, 32202, 32203, 32204). Prerequisite: APIM 221 C.

**APIM 222 B**  
Conduits, Conductors and Circuits

4.00 Credits      Class 4.00      Lab 1.00  
Installation procedures for boxes and fittings, cable trays, conductor terminations, electrical service, circuit breakers, fuses, contractors and relays. Includes outlet boxes, single and three phase electrical service, and short circuit calculation. (NCCER 32205, 32206, 32207, 32208, 32209, 32210). Prerequisite: APIM 222 A.

**APIM 222 C**  
Lubrication and Bearings  
2.00 Credits      Class 2.00      Lab 1.00  
Introduction to lubrication and bearings. Includes OSHA standards, MSDS, EPA program, lubricant selection, storage, properties, additives, oils, lubrication equipment, bearing types, materials and designations. (NCCER 32211, 32212). Prerequisite: APIM 222 B.

**APIM 222 D**  
Pipes and Fittings  
2.00 Credits      Class 2.00      Lab 1.00  
Copper piping, plastic piping, ferrous metal piping, piping systems, and SMAW equipment at setup. Includes pipe selection, bending, cutting, joining, hanger supports, insulation, color-coding, thermal expansion, and SMAW safety, set up and cleaning. (NCCER 32213, 32214, 32215, 32216). Prerequisite: APIM 222 C.

**APIM 223 A**  
Overcurrent and Distribution  
2.00 Credits      Class 2.00      Lab 1.00  
Procedures used in overcurrent protection and distribution equipment. Includes fuses, circuit breaker, motor overload, short circuit protection, voltage classifications, NEC requirements, instrument transformers, electrical prints and panel boards. (NCCER 32301, 32302). Prerequisite: APIM 222 D.

**APIM 223 B**  
Motor Controls and Maintenance  
4.00 Credits      Class 4.00      Lab 1.00  
Procedures used in wiring motor controls, maintenance of active/inactive motors, cleaning, magnetic centering and testing power factors, and running temperatures. Includes motor controllers, magnetic coils, starters, control relays, maintenance techniques, bearing maintenance, motor identification, trouble shooting and testing. (NCCER 32303, 32304, 32305). Prerequisite: APIM 223 A.

**APIM 223 C**  
Coupling, Seals and Bearings  
4.00 Credits      Class 4.00      Lab 1.00  
Installing couplings, mechanical seals and belt and chain drives, and bearings. Includes press-fit method, interference-fit method, types, and installation of seals, drive belts, ball bearings and gaskets. (NCCER 32306, 32307, 32308, 32309, 32310, 32311). Prerequisite: APIM 223 B.

**APIM 223 D**  
Pumps, Hydraulics and Pneumatics  
4.00 Credits      Class 4.00      Lab 1.00-10.00  
Introduction to pump operations, installation of hydraulic pneumatics systems, and electronic theory. Includes hydraulic principles, Pascal's Law, pneumatic safety, semiconductors, diodes, rectifiers, and transistors. (NCCER 32312, 32313, 32314, 32315). Prerequisite: APIM 223 C.

## APMS Apprenticeship-Masonry

**APMS 100**  
Basic Masonry  
2.00 Credits      Class 2.00      Lab 1.00

## APPL Apprenticeship-Plumbing

**APPL 100**  
Plumbing Basics  
2.00 Credits      Class 2.00      Lab 0.00  
Basic principles and techniques of home plumbing including practical experience in fixtures, fittings, appliance installation and emergency repairs. One class is devoted to commercial plumbing.

## APSE Apprenticeship

**APSE 100**  
Safety in the Workplace



1.00 Credit      Class 1.00      Lab 0.00  
Safety in the workplace including OSHA safety rules and regulations, lock out/tag out, ladder and lifting safety, and fire protection. 10 hour OSHA card issued upon completion.

## APUP Apprenticeship-Upholstery

APUP 100  
Upholstery Fundamentals  
2.00 Credits      Class 1.00      Lab 3.00

## ARCH Archaeology

ARCH 101  
Principles of Archaeology  
4.00 Credits      Class 4.00      Lab 0.00  
Basic concepts of modern archaeology including techniques, methods and theories. Offered: Fall.

ARCH 102  
World Prehistory  
4.00 Credits      Class 4.00      Lab 0.00  
Survey of physical and cultural evolution outside of North America, beginning with the first known hominids and the dawn of hunter-gatherer societies to the development of early civilizations. Offered: Fall.

ARCH 103  
North American Prehistory  
5.00 Credits      Class 4.00      Lab 3.00  
Human migration into the new world, cultural history of North America with an emphasis on the Ohio Valley up to 350 years before the present. Offered: Spring.

ARCH 104  
Archaeology Lab Methods - Lithics  
2.00 Credits      Class 1.00      Lab 3.00  
Methods and techniques of stone tool analysis. Emphasizes lithic artifact classification and typology, flint-knapping, cataloging, and photography and use-wear analysis. Prerequisite: ARCH 101. Offered: Spring. Course fee: \$20.

ARCH 105  
Geoarchaeology  
4.00 Credits      Class 2.00      Lab 6.00  
Scope and purpose of geoarchaeology. Practical applications of geological principles to archaeological studies. Prerequisites: GEOL 101 and ARCH 101. Offered: Spring. Course fee: \$10.

ARCH 110  
Peruvian Ethnology  
3.00 Credits      Class 2.00      Lab 3.00  
Offered: Winter. Course fee: \$414.

ARCH 201  
Archaeological Field Methods  
12.00 Credits      Class 4.00      Lab 24.00  
Current methods and techniques of Phase I, II, and III investigations. Includes research design implementation, surface and subsurface testing, land navigation, total station mapping, field cartography and how to process recovered materials. This course requires physical exertion. Prerequisite: ARCH 105. Offered: Summer. Course fee: \$100.

ARCH 202  
Photography for Archaeology  
2.00 Credit      Class 0.00      Lab 6.00  
Applications of 35 mm camera, digital camera and digital scanner for documentation of archaeological research. Prerequisite: ARCH 101. Offered: Fall. Course fee: \$150.

ARCH 210  
Archaeological Careers  
1.00 Credit      Class 1.00      Lab 0.00  
How, where and when to obtain an archaeological job. Includes the history of cultural resource management, vitae construction, job expectations, preservation law and future education options. Offered: Fall.

ARCH 212  
Archaeology Research Lab  
3.00 Credits      Class 1.00      Lab 6.00

Processes of background literature investigation for archaeological research. Involves analysis at state archives and other regulatory agencies, creation of site inventory forms and environmental inquiry. Prerequisite: ARCH 101. Offered: Fall. Course fee: \$10.

ARCH 214  
Archaeology Lab Methods - Zooarchaeology  
2.00 Credits      Class 1.00      Lab 3.00  
Laboratory methods and analytical techniques for osteological animal remains from archaeological contexts. Prerequisite: ARCH 101. Offered: Fall. Course fee: \$20.

ARCH 216  
Archaeology Lab Methods - Prehistoric Ceramics  
2.00 Credits      Class 1.00      Lab 3.00  
Methods and techniques of prehistoric ceramic analysis, including ceramic history, identification, documentation, cataloging, defitting, classification and typology. Prerequisite: ARCH 101. Offered: Winter. Course fee: \$20.

ARCH 217  
Peruvian Prehistory  
5.00 Credits      Class 3.00      Lab 6.00  
Survey of cultural evolution in South America with an emphasis on Peruvian prehistoric cultures. Prerequisite: ARCH 101. Offered: Winter. Course fee: \$690.

ARCH 220  
Historic Preservation and Environmental Law  
3.00 Credits      Class 2.00      Lab 3.00  
Federal and state legislation related to cultural resource management including the legal justification and parameters for archaeological impact studies and archaeological ethics. Lab exercises involve guest speakers with activities, visitation to CRM firms and government agencies. Prerequisite: ARCH 101. Offered: Winter.

ARCH 280  
Cultural Anthropology  
4.00 Credits      Class 4.00      Lab 0.00  
Covers basic concepts of anthropology with a primary attention on cultural anthropology. Focus will be on methodology, diversity, adaptation, kinship, gender, religion and current issues in the field. Offered: Spring.

ARCH 290  
Archaeology Special Topics  
0.25-5.00 Credits      Class 0.00      Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.

ARCH 295  
Archaeology Seminar  
0.25-3.00 Credits      Class 0.25-3.00      Lab 0.00

## AU Automotive

AU 101 P  
Technical Skills for Parts  
3.00 Credits      Class 3.00      Lab 0.00  
Basic automotive systems, terms, skills, tools and safety. Offered: Fall.

AU 102 P  
Measurement Skills for Parts  
3.00 Credits      Class 3.00      Lab 0.00  
Measuring devices such as micrometers, calipers and torque wrenches, documentation of measurements and knowledge of machining tools to bring component hardware into specification. Offered: Winter.

AU 103 P  
Electrical Systems for Parts  
5.00 Credits      Class 5.00      Lab 0.00  
Testing and diagnosis of starters, alternators, lighting systems, batteries and wiring components and introduction of ignition systems and their function. Offered: Spring.

AU 104 P  
Fuel Delivery Systems and Parts  
3.00 Credits      Class 3.00      Lab 0.00  
Engine fuels and air/fuel delivery systems, diagnosis operation, maintenance and replacement of system components. Offered: Spring.

AU 105 P  
Steering, Suspension, and Brakes  
3.00 Credits      Class 3.00      Lab 0.00

Diagnosis, part recognition and repair of problematic chassis functions. Develop basic skills in diagnosis and repair of brake systems, suspension and steering systems as well as alignment procedures and specifications. Offered: Spring.

**AU 111**  
**Service Manager Orientation**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Estimating and repair orders, shop scheduling, parts ordering and inventory control, customer management, shop business management, state and federal regulations, and how to make a profit. Offered: Fall.

**AU 115**  
**Heating, Ventilation, Air Conditioning for Parts**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Engine cooling systems and passenger compartment comfort controls. Students will be required to interpret manifold gauge readings and diagnose and repair HVAC problems including driveability controls, knowledge of auto electrical systems is required. Offered: Fall.

**AU 119**  
**ASE Certification Preparation I**  
 1.00 Credit      Class 1.00      Lab 0.00  
 All aspects of managing automotive aftermarket parts store with requirements necessary to pass ASE Parts Management Certification test. Offered: Spring.

**AU 150**  
**Introduction to Parts Management**  
 3.00 Credits      Class 3.00      Lab 0.00  
 An introduction to the industry from the viewpoint of history, social impact organizational structure, manpower needs and future growth. Offered: Fall.

**AU 151**  
**Parts Systems and Procedures**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Operations and tasks expected in a parts store or dealer operation. Jobber catalogs, use of computers, invoice handling and general parts room sales. Offered: Winter.

**AU 152**  
**Truck Parts Nomenclature**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Identify common names and functions for engine components. Electrical, fuel, cooling and emission systems. Offered: Summer.

**AU 153**  
**Painting and Refinishing**  
 6.00 Credits      Class 6.00      Lab 1.00

**AU 154**  
**Non-Structural Damage Repair**  
 4.00 Credits      Class 4.00      Lab 1.00

**AU 155**  
**Structural Damage Repair**  
 6.00 Credits      Class 6.00      Lab 1.00  
 Prerequisite: AU 219.

**AU 156**  
**Mechanical and Electrical Systems**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Prerequisite: AU 219.

**AU 200 P**  
**Powertrain Components**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Fluid couplings, torque converters, valve bodies, clutch and band operation and power flow. Principles of operation for manual transmission, clutch assemblies, automatic transaxle and other powertrain components. Offered: Summer.

**AU 210 P**  
**Recycling and Salvage Operations**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Salvage yard/automotive recycling business operation, including processes for recovering/recycling and disposing of components, solids, liquids and gasses, auctions and other sources of recycled parts, inventory management, theft control, counter operation and recovering of towing of vehicle. Offered: Spring.

**AU 219**  
**ASE Certification Preparation II**  
 1.00 Credit      Class 1.00      Lab 0.00

Information required to be an ASE certified truck part specialist. Offered: Spring.

**AU 290**  
**Automotive Management Special Topics**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**AU 291**  
**Automotive Management Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**AU 292**  
**Automotive Management Field Experience**  
 1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
 On-the-job training in an automotive facility through special arrangement with an instructor.

**AU 293**  
**Automotive Management Directed Practice**  
 2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
 Student receives instruction in the performance of a particular function from an assigned instructor, and then is observed and critiqued by the instructor in a repeat performance.

**AU 294**  
**Automotive Management Cooperative Work Experience**  
 2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
 An on- or off-campus paid work experience coordinated by a faculty member. Includes at least one on-site visit during the quarter. Student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**AU 296**  
**Automotive Management Practicum**  
 3.00 Credits      Class 2.00      Lab 7.00  
 Placement in a working environment for a minimum amount of time to gain experience before graduation. Prerequisite: First year technical courses and AU 219.

**AU 297**  
**Automotive Management Observation Hour**  
 1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**AU 298**  
**Automotive Management Internship**  
 3.00 6.00 Credits      Class 0.00      Lab 40.00  
 On-the-job training in the work place of a cooperating agency. Coordinated by an instructor.

## BC Broadcast

**BC 110**  
**Studio Production**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Exposure to studio television production through extensive hands-on, practical application of equipment in multi-camera productions. Familiarization with audio and video technology including involvement with production from script to finished product. Offered: Fall. Course fee: \$60.

**BC 200**  
**Media Portfolio Development**  
 3.00 Credits      Class 2.00      Lab 3.00  
 A course for Broadcast Engineering and Production students in which they create a media portfolio which can be presented to prospective employers. Offered: Spring. Course fee: \$60.

**BC 201**  
**Audio/Video Systems I**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Theory of operation of audio equipment found in any AM, FM or TV production facility. Practical experience in installation, alignment and repair of equipment such as cassette decks, cart machines, reel-to-reel tape recorders, audio mixing consoles and equalizing, processing and special effects devices. Prerequisite: EE 152. Offered: Fall. Course fee: \$60.

**BC 207**  
**Multitrack Audio Recording**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Professional multitrack recording including microphones and their applications, live multitrack recording, stereo mix-down techniques, digital audio mixing and recording techniques and MIDI (Musical Instrument Digital Interface) format. Offered: Spring. Course fee: \$60.

**BC 209**  
**Audio/Video Systems II**  
 4.00 Credits      Class 3.00      Lab 3.00  
 NTSC color television signal. Processes of scanning and synchronization, creation of a compatible color signal and the timing, switching, distribution and transmission of that signal. Also includes video testing and measurement. Prerequisite: BC 201. Offered: Winter. Course fee: \$60.

**BC 210**  
**Audio/Video Production I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Introduces a working knowledge of studio operations, remote video equipment, basic video editing, camera operation, lighting and audio recording. Provides an opportunity to produce television programs from script to the final edited video program. Offered: Winter. Course fee: \$60.

**BC 215**  
**Audio/Video Production II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Explores electronic field production, time code editing, multi track audio recording, and special video and audio effects. The student works as a crew member on college productions. Prerequisite: BC 210. Offered: Fall. Course fee: \$60.

**BC 230**  
**Advanced Post Production**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Extensive hands-on experience in video and audio post production. A/B roll editing, audio sweetening, video graphics and video disc mastering are some of the topics covered. Includes production of a demo videotape of skills for future job interviews. Prerequisite: BC 210. Offered: Winter. Course fee: \$60.

**BC 280**  
**Broadcast Current Topics**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Familiarization with state-of-the-art broadcasting and telecommunications equipment and technologies.

**BC 290**      PACE  
**Broadcast Special Topics**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**BC 291**  
**Broadcast Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**BC 292**  
**Broadcast Field Experience**  
 1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
 On-the-job training in a broadcasting facility through special arrangement with an instructor.

**BC 293**  
**Broadcast Directed Practice**  
 2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
 The student in directed practice receives instruction in the performance of a particular function from an assigned instructor and then is observed and critiqued by the instructor in a repeat performance of that function.

**BC 294**  
**Broadcast Cooperative Work Experience**  
 2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**BC 296**

**Broadcast Practicum**  
 3.00 Credits      Class 2.00      Lab 8.00  
 The student is placed in an actual working environment for a minimum amount of time to gain experience before graduation.

**BC 296 A**  
**Broadcast Practicum I**  
 3.00 Credits      Class 2.00      Lab 8.00  
 The student is placed in an actual working environment for a minimum amount of time to gain experience before graduation. Offered: Spring.

**BC 296 B**  
**Broadcast Practicum II**  
 3.00 Credits      Class 2.00      Lab 8.00  
 The student is placed in an actual working environment for a minimum amount of time to gain experience before graduation. Offered: Spring.

**BC 297**  
**Broadcast Observation Hour**  
 1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**BC 298**  
**Broadcast Internship**  
 3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor.

## BIOS Biological Sciences

**BIOS 100**      PACE  
**Health Science: The Human Machine**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Scientific skills are integrated into a practical approach to the study of the human body. Basic biological concepts are covered while educating the student in science to make informed choices. Offered: Summer, Fall, Winter, Spring.

**BIOS 101**  
**Environmental Science**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Introduces environmental science and demonstrates how scientific principles and methods are applied nationally and globally in managing the earth's ecosystems, emphasizing concepts and principles that apply to both natural and built environments. Offered: Fall, Winter, Spring. Course fee: \$20.

**BIOS 102**  
**Ecology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers fundamental concepts of ecology and a survey of the world's major ecosystem types. Emphasis is placed on understanding and interpreting ecosystem functions as well as applicability of ecological principles to human societies, including human impacts on ecosystem types. Offered: Spring. Course fee: \$20.

**BIOS 103**  
**General Biology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Introductory biology with an emphasis on cellular organization and reproduction, energy transformations, and on structures and functions of selected representatives of the five major kingdoms of life. Offered: Fall. Course fee: \$25.

**BIOS 104**  
**Subtropical Ecology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Sub-tropical terrestrial and marine ecosystems. Through hands-on analysis of the various biotic and abiotic factors, students gain understanding of the relationship between organisms and their roles within their respective ecosystems. Offered: Fall. Course fee: \$405.

**BIOS 106**  
**Conservation Biology**  
 5.00 Credits      Class 4.00      Lab 2.00  
 Methods by which humanity may preserve and maintain biological diversity in a rapidly developing world. Examines the roles of ecology, life history, biogeography, and genetics in the protection of species and ecosystems. Surveys the effects of humans on loss of natural habitats and species diversity, with case studies of endangered species of animals and plants. The design and roles of nature preserves, zoos, and

botanical gardens will be emphasized. Offered: Winter.

**BIOS 109**  
**Dendrology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Identification of woody plants indigenous to Ohio including identifying trees, shrubs and vines through the use of dichotomous keys, site characteristics and physical appearance. Offered: Fall. Course fee: \$35..

**BIOS 110**  
**Human Anatomy and Physiology I – Lab (COTC 4016)**  
 1.00 Credit      Class 0.00      Lab 2.00  
 See STCT 4016. Laboratory component for STCT 4016. Offered: Fall. Course fee: \$76.

**BIOS 111**  
**Human Anatomy and Physiology II – Lab (COTC 4026)**  
 1.00 Credit      Class 0.00      Lab 2.00  
 See STCT 4026. Laboratory component for STCT 4026. Prerequisites: STCT 4016 and BIOS 110. Offered: Winter. Course fee: \$76.

**BIOS 112**  
**The Human Organism**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Introductory human anatomy emphasizing understanding structural levels of the body from molecules to organ systems. The organization of each body system is covered. Terminology necessary for explanation of critical concepts including metabolism, homeostasis and inheritance. Offered: Fall, Winter. Course fee: \$30.

**BIOS 113**  
**Anatomy and Physiology I**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Reproductive, endocrine, circulatory, excretory and respiratory systems with emphasis on their normal physiology. Includes a demonstration of physiological principles, dissection of appropriate specimens and microscopic examination of tissues. Prerequisite: BIOS 112. Offered: Summer, Fall, Winter, Spring. Course fee: \$30.

**BIOS 114**  
**Anatomy and Physiology II**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Nervous, special sensory, integumentary, skeletoarticular, muscular and digestive systems with emphasis on their normal physiology. Laboratory experience offer the opportunity to further clarify learning through the use of audiovisuals and microscopic and gross exercises illustrating anatomical and physiological properties. Prerequisite: BIOS 112. Offered: Fall, Winter, Spring. Course fee: \$30.

**BIOS 115**  
**Anatomy and Physiology of the Eye**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Prerequisite: BIOS 112. Offered: Winter. Course fee: \$30.

**BIOS 120**  
**Botany**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Study of taxonomy as well as structural and functional adaptations of major phyla. Offered: Fall, Winter. Course fee: \$40.

**BIOS 125**  
**Basic Pathology**  
 2.00 Credits      Class 2.00      Lab 1.00  
 Introduction to diseases with emphasis on diseases of the blood, heart, blood vessels, excretory system, digestive system, liver, gallbladder, pancreas, respiratory system, endocrine system, reproductive system, nervous system, bones, joints, muscles and skin. Includes diseases related to hereditary disorders and neoplasia. Prerequisites: BIOS 113 and BIOS 114.

**BIOS 126**  
**Fluids and Electrolytes**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Life needs of the cell with an introduction to basic chemistry. Emphasizes assessment data, body fluids, electrolytes and acid base balance/imbalance. Prerequisites: BIOS 113 and BIOS 114.

**BIOS 127**  
**Forest Soils**  
 3.00 Credits      Class 2.00      Lab 3.00  
 The development, interpretation and mapping of forest soils. Techniques in analyzing physical and chemical properties of soil. Includes problem soils and the impact of forestry practices on soil conditions. Offered: Winter. Course fee: \$15.

**BIOS 129**  
**Herbaceous Plants**  
 3.00 Credits      Class 3.00      Lab 0.00

**BIOS 130**  
**Rainforest Ecology**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Offered: Winter. Course fee: \$414.

**BIOS 132**  
**Field Biology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Studies the identification of the spring flowering plants; life histories, habitat requirements and field identification or reptiles, aquatic insects and amphibians, including an introduction to fresh water ecology. Offered: Spring. Course fee: \$25.

**BIOS 135**  
**Basics of Health and Disease**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Emphasizes the inflammatory process, immunity, allergies, auto immune disorders, hereditary diseases, and gene markers. Fluid and electrolytes are covered including related lab values. Acid-base balance is introduced along with a review of basic chemistry and medical terminology. Prerequisite: BIOS 112. Offered: Summer, Fall, Winter.

**BIOS 140**  
**Technical Aspects Anatomy and Physiology**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Anatomy and physiology of body systems. Fluids and electrolytes are covered as well as basics of pathology. Prerequisite: Admission to Enrichment. Offered: Fall.

**BIOS 141**  
**Advanced Field Botany**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Plant systematics, morphological characteristics and floral formulas for identification of plants in the field and lab with a strong emphasis on evaluating and implementing research techniques, including literature searches, and field research into species, populations and community. Prerequisite: BIOS 120. Course fee: \$25.

**BIOS 151**  
**Massage Anatomy and Physiology I**  
 4.00 Credits      Class 4.00      Lab 0.00  
 An intensive study of the cellular and tissue levels of organization. A study of the integumentary system as well as principles of support and movement as accomplished by the skeletal, articular and muscular body systems will be included. Prerequisites: HC 100, HC 110, HC 120, HC 122, HC 123 and HC 124. Offered: Fall.

**BIOS 152**  
**Massage Anatomy and Physiology II**  
 4.00 Credits      Class 4.00      Lab 0.00  
 The study of the control systems of the body with emphasis on healthy physiology of the nervous and endocrine systems. Some pathology as pertains to those particular systems will be included as will the healing effects of massage. Prerequisite: BIOS 151. Offered: Winter.

**BIOS 153**  
**Massage Anatomy and Physiology III**  
 4.00 Credits      Class 4.00      Lab 0.00  
 A study of the maintenance of the human body including how the body maintains homeostasis on a daily basis. A study of the interrelations among the cardiovascular, lymphatic, respiratory, digestive and urinary systems will be included. Prerequisite: BIOS 152. Offered: Spring.

**BIOS 154**  
**Massage Anatomy and Physiology IV**  
 4.00 Credits      Class 4.00      Lab 0.00  
 The endocrine systems, the cardiovascular system including the heart, blood, vessels and hemodynamics, and the lymphatic system as it pertains to massage therapy. Prerequisite: BIOS 153. Offered: Summer.

**BIOS 155**  
**Massage Anatomy and Physiology V**  
 4.00 Credits      Class 4.00      Lab 0.00  
 Respiratory system, metabolism, the urinary system, fluid, electrolyte and acid-based homeostasis, the reproductive system and development and inheritance as it pertains to massage therapy. Prerequisite: BIOS 154. Offered: Fall.

**BIOS 170**  
**Zoology**  
 3.00 Credits      Class 2.00      Lab 3.00

An introductory zoology course with emphasis on taxonomy and structural and functional adaptations of major animal phyla. Offered: Fall, Winter. Course fee: \$40.

**BIOS 200**  
Pathophysiology for Nurses  
3.00 Credits      Class 3.00      Lab 1.00  
Designed for the Level II Nursing student to explore recurring pathological changes in body structure and function leading to alterations in health. Emphasis on identifying interferences in basic human needs of metabolism, immunity, tissue perfusion, cardiovascular, respiratory, renal, and neurological function. Correlation in the clinical setting with expected human responses, signs, symptoms and laboratory data. Prerequisite: BIOS 135. Offered: Winter.

**BIOS 201**  
Advanced Anatomy  
4.00 Credits      Class 3.00      Lab 3.00  
Detailed study of the anatomy of the musculoskeletal and cardiovascular systems concentrating on, but not limited to, muscle origins, insertions and innervations. The laboratory component includes the study of human cadavers. Prerequisite: Admission to PTA. Offered: Summer. Course fee: \$115.

**BIOS 202**  
Kinesiology  
4.00 Credits      Class 3.00      Lab 2.00  
An introduction to biomechanical principles of human movement with applications to physical therapy assessment and treatment. Prerequisite: Admission to PTA. Offered: Summer. Course fee: \$55.

**BIOS 235**  
Entomology  
3.00 Credits      Class 2.00      Lab 2.00  
Covers taxonomy and ecology of the common insect orders and families, including collection, preservation and display, exploration of insect environments, life histories, population dynamics and impacts on human culture. Course fee: \$85.

**BIOS 239**  
Aquatic Entomology  
3.00 Credits      Class 2.00      Lab 2.00  
Identification, ecology and collection of Ohio aquatic insect species. Includes field and laboratory identification, use of taxonomic keys, and sampling methods. Course fee: \$20.

**BIOS 257**  
Night Field Biology  
2.00 Credits      Class 2.00      Lab 1.00  
An outdoor field course introducing animals often heard, but seldom seen at night. Frogs, toads, salamanders, night birds, and aquatic insect life are some examples. Students are introduced to spring wildflowers and wild foods. This is a general introduction to Ohio's night life designed for the public, as well as the interested student. This course is not based on classification, but on meeting the plants and animals in their environment. Course fee: \$10.

**BIOS 268**  
Ichthyology  
3.00 Credits      Class 2.00      Lab 3.00  
Studies the identification, ecology and morphology of Ohio fish species, including field and laboratory identification, use of taxonomic keys, fish community sampling methods and community assessment indices. Offered: Spring.

**BIOS 271**  
Ornithology  
3.00 Credits      Class 2.00      Lab 3.00  
A study of local birds including both migrants and residents. Habitat requirements, nesting habits, general behavioral patterns and anatomical characteristics are studied. Prerequisites: NR 111, NR 121 and REC 210. Offered: Spring. Course fee: \$10.

**BIOS 272**  
Herpetology  
3.00 Credits      Class 2.00      Lab 2.00  
An introduction to reptiles and amphibians with emphasis on Ohio species. Techniques of capturing, handling and maintaining species in captivity and ecology, behavior and evolution of the major groups are discussed. Course fee: \$10.

**BIOS 290**  
Biological Sciences Special Topics  
0.25-5.00 Credits      Class 0.25-5.00      Lab 0.00

## BUS Business

**BUS 100**      PACE  
Small Business Management I  
3.00 Credits      Class 3.00      Lab 2.00  
Principles of operating a business from the standpoint of ownership. Covers small business in the U. S., starting a business, problems in starting a business, management functions applied, financing and capital, physical plant, legal considerations, licenses and government regulations. Offered: Summer, Fall, Winter, Spring. Course fee: \$5.

**BUS 101**      PACE  
Small Business Management II  
3.00 Credits      Class 3.00      Lab 2.00  
Continuation of principles of operating a business focusing on daily operations. Advertising/promotion, marketing, accounting/record keeping, cash flow, employment/payroll, insurance, contracts, purchasing/buying, security, management of time/priorities and handling problems. Offered: Summer, Fall, Winter, Spring. Course fee: \$5.

**BUS 102**      PACE  
Principles and Practices of Management I  
3.00 Credits      Class 3.00      Lab 2.00  
First in a two part series providing a comprehensive introduction to management theory and practice. Planning and organizing provide the major focus. Offered: Summer, Fall, Winter, Spring.

**BUS 103**      PACE  
Principles and Practices of Management II  
3.00 Credits      Class 3.00      Lab 2.00  
Second in a two part series continues the examination of management theory and practice with an emphasis on current trends in management. Along with leadership and motivation, the course discusses both the individual and interpersonal processes contributing to this part of management. Prerequisite: BUS 102. Offered: Summer, Fall, Winter, Spring.

**BUS 105**  
History of American Business  
3.00 Credits      Class 3.00      Lab 0.00  
Origins and development of modern American business. Emphasizes the nature of the economic, social and political environments, the manner in which such environments affect business policy and how lessons from the past relate to present business practices. Offered: Fall.

**BUS 106**  
International Business  
3.00 Credits      Class 3.00      Lab 0.00  
Understanding the functions, responsibilities, advantages, problems and operations of international corporations in a global marketplace. Prerequisite: BUS 100. Offered: Fall. Course fee: \$60.

**BUS 110**  
Marketing  
3.00 Credits      Class 3.00      Lab 2.00  
Fundamentals of modern marketing. Consumer behavior, marketing strategy, product pricing and promotion and distribution. Offered: Fall. Course fee: \$5.

**BUS 120**      PACE  
Personal Finance  
3.00 Credits      Class 3.00      Lab 0.00  
Consumer information on coping with major financial decisions in life including taxes, consumer credit, insurance and savings plans. Offered: Summer, Fall, Winter, Spring.

**BUS 125**  
Principles of Finance  
4.00 Credits      Class 3.00      Lab 3.00  
Financial operations of small, medium and large businesses and investors. Prerequisite: ACC 100. Offered: Fall.

**BUS 130**  
Sales  
3.00 Credits      Class 2.00      Lab 3.00  
Introduction to the sales function in the retail sphere of operations including the selling background such as product, customer, competition analysis and the company; the selling process covering planning, the sales presentation, handling objections and questions, and closing the sale; the differences between industrial and retail selling with emphasis on retail selling; and sales management including construction of sales forces and program planning.

**BUS 165**  
**Advertising**  
 3.00 Credits      Class 3.00      Lab 2.00  
 External advertising for retail operation covering basic advertising areas including television, radio, newspaper, magazine, direct mail and outdoor. Concentration on practical matters for budgeting, media selection, copy writing, layout and design, campaign construction and market segmentation. Offered: Fall. Course fee: \$15.

**BUS 170**  
**Fundamentals of Business I**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Introduces the basic areas involved in most modern businesses. An overview of economics, business organization, ethics and social responsibility, management, human relations, human resource management and labor relations. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**BUS 171**  
**Fundamentals of Business II**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Overview of marketing channels and promotion. Includes examination of money and banking, financial management, securities, risk management, international business and entrepreneurship. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**BUS 180**  
**Business Ethics**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Ethical problems encountered in the business world through discussion of contemporary social issues facing business. Topics include individual work habits, employee responsibilities and community involvement. Offered: Summer, Fall, Winter.

**BUS 185**  
**Retail Management**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Introduction to retail industry from a management perspective. Structure and opportunities in retailing, franchising, location and layout, organization, sales promotion, customer services, merchandise management and control, buying procedures, markup, pricing, stock turnover and analysis of current merchandising policies. Offered: Fall.

**BUS 186**  
**Retail Store Operations**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Daily operations in retail institutions. Emphasis on the role and responsibility of the manager. Offered: Winter.

**BUS 200**  
**Business Law**  
 3.00 Credits      Class 3.00      Lab 0.00  
 The legal environment within which business must operate. The study of US Civil Law, US Court Systems, alternative dispute resolution methods, the US Constitution and traditional business law topics. The above topics will be integrated with the environmental factors of ethics, social responsibilities, current legal issues, cultural diversity, international law and international issues. Offered: Summer, Winter, Spring.

**BUS 201**  
**Advanced Business Law**  
 4.00 Credits      Class 4.00      Lab 0.00  
 An introduction to the wide range of legal limitations and concerns placed upon business and the consumer by various legal systems. Areas of study are: civil law of property, insurance, wills/trusts, credit/bankruptcy, agency, business organization(s) and employment law integrated with the environmental factors of ethics, social responsibility, current legal issues, cultural diversity, international law and international issues. Prerequisite: BUS 200. Offered: Spring.

**BUS 206**  
**E-Commerce Business on the Net**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Overview of the many aspects of doing business online, including website design and maintenance, online advertising, consumer security and online buying. Course fee: \$36.

**BUS 208**  
**International Money Matters**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Designed to familiarize the student with tools used in financing and collections of international transactions. Prerequisite: BUS 106.

**BUS 210**  
**Human Resources Management**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Techniques of managing people and rules and laws regulating employment. An understanding of the principles of management prior to entering the course is helpful. Prerequisite: BUS 103. Offered: Winter.

**BUS 211**  
**Advanced Marketing**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Examines complex applications of marketing theory. Emphasizes actual cases involving many well-known names and organizations. Prerequisite: BUS 110. Course fee: \$36.

**BUS 230**  
**Labor-Management Relations**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Labor and management relations and the roles of management and unions in our society. The course is objective in its context and avoids being judgmental in presenting the parts currently played by labor and management in their struggle for progress in the work area.

**BUS 240**  
**Managerial Accounting**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Managerial control and decision making through the use of accounting methods. Emphasizes cost control, accounting for overhead, capital budgeting and inventory control. Prerequisite: ACC 100. Course fee: \$36.

**BUS 243**  
**Business Systems Control**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Operation and function of internal control in the modern business. Topics include auditing procedures, asset maintenance and special problems relating to security. Offered: Fall. Course fee: \$5.

**BUS 247**  
**Excel for Windows**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Introduction to the use of Excel for business applications. Excel's use as a spreadsheet, graphics and database tool is preceded by an introduction to the Microsoft Windows operating system, which is required for Excel. Offered: Fall, Winter, Spring. Course fee: \$36.

**BUS 248**  
**Advanced Excel**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Use of MS Excel spreadsheet program for managerial and analytical applications including payroll accounting, depreciation of fixed assets and inventory. Prerequisites: ACC 100 and BUS 247. Offered: Winter, Spring. Course fee: \$36.

**BUS 250**  
**Events Planning and Operations I**  
 1.00-2.00 Credits      Class 1.00      Lab 3.00  
 Development of public relation skills and distribute literature at information centers. Offered: Fall.

**BUS 251**  
**Events Planning and Operations II**  
 1.00-2.00 Credits      Class 1.00      Lab 3.00  
 Utilizing acquired skills while supervising, scheduling and managing a visitor information center. Offered: Fall.

**BUS 260**  
**Business Planning**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Functions necessary to develop and start a business, culminating in the submission of a business prospectus by each student. Prerequisite: BUS 101. Offered: Fall, Spring. Course fee: \$24.

**BUS 266**  
**Entrepreneurship**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Methods for starting one's own business. Includes a general understanding of products, services and markets; the business plan; capital and other assets; the marketing plan; and legal and financial considerations. Course fee: \$36.

**BUS 267**  
**Project Management**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Developing and managing projects within organizations. Includes

defining the project, goals and objectives, budgeting, scheduling, building the team, activity management, developing milestones, and evaluating outcomes. Examination of use of grants, contracts, computers and other technical assistance as components of a project. Course fee: \$25.

**BUS 290**  
**Business Management Special Topics**  
 0.50-5.00 Credits Class 0.50-5.00 Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**BUS 291**  
**Business Management Individual Study**  
 1.00-5.00 Credits Class 1.00-5.00 Lab 0.00  
 Individual study or research. Topics are arranged with instructor permission on an individual basis.

**BUS 292**  
**Business Management Field Experience**  
 1.00-4.00 Credits Class 0.00 Lab 12.00-48.00  
 On-the-job training in a business management facility through special arrangement with an instructor.

**BUS 293**  
**Business Management Directed Practice**  
 2.00-8.00 Credits Class 1.00 Lab 5.00-35.00  
 Instruction in the performance of a particular function from an assigned instructor, which is then observed and critiqued in a repeat performance of that function by the instructor.

**BUS 294**  
**Business Management Cooperative Work Experience**  
 2.00-8.00 Credits Class 1.00 Lab 10.00-70.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**BUS 296**  
**Business Management Practicum**  
 2.00 Credits Class 1.00 Lab 7.00  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Offered: Spring.

**BUS 297**  
**Business Management Observation Hour**  
 1.00-3.00 Credits Class 0.00 Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**BUS 298**  
**Business Management Internship**  
 3.00-9.00 Credits Class 0.00-3.00 Lab 20.00-40.00  
 On-the-job training in the work place of a cooperating agency. Coordinated by an instructor.

## CAGS Compressor

**CAGS 100**  
**Precision Instruments**  
 3.00 Credits Class 1.00 Lab 6.00  
 In-depth study of precision instruments. Bore calipers, vernier calipers, micrometers and other commonly used devices. Fits and tolerances are discussed as well as the use of factor manuals. Course fee: \$39.

**CAGS 100 A**  
**Precision Instruments - A**  
 1.00 Credit Class 1.00 Lab 1.00  
 In-depth study of precision instruments including history measurement as well as linear and metric scales. Offered: Fall. Course fee: \$13.

**CAGS 100 B**  
**Precision Instruments - B**  
 1.00 Credit Class 1.00 Lab 1.00  
 In-depth study of precision instruments including micrometers, vernier calipers, and telescoping gauges. Offered: Winter. Course fee: \$13.

**CAGS 100 C**  
**Precision Instruments - C**  
 1.00 Credit Class 1.00 Lab 1.00  
 In-depth study of precision instruments including small hole gauges,

dial bore gauges, and dial calipers. Offered: Spring. Course fee: \$13.

**CAGS 101**  
**Introduction to Compressed Air Systems**  
 3.00 Credits Class 3.00 Lab 0.00  
 Introduction to the compressor technology. Provides an overview of various types of compressors and conditioning equipment utilized by industry. Theory of gas compression, compression ratios and gas laws. Offered: Fall. Course fee: \$40.

**CAGS 102**  
**Compressed Air Applications**  
 3.00 Credits Class 3.00 Lab 0.00  
 Various applications for compressed air, including everything from air tools to air powered drilling equipment. Emphasizes the various requirements placed upon the air supply to meet these applications. Offered: Fall. Course fee: \$35.

**CAGS 110**  
**Reciprocating Compressors I**  
 4.00 Credits Class 2.00 Lab 6.00  
 Introduction to compressors widely used by industry. Includes instruction in tear down and reassembly of smaller types of reciprocating compressors typically found in the work place. Offered: Winter. Course fee: \$40.

**CAGS 111**  
**Lubricants, Gears, and Bearings**  
 2.00 Credits Class 2.00 Lab 0.00  
 Types of lubricating demands required by all types of equipment, lubrication qualities of various types and grades of oil including studies in viscosity, flash points and synthetic lubricants, types of gears and bearings used in industrial equipment. Offered: Winter. Course fee: \$30.

**CAGS 112**  
**Air and Gas Condition**  
 3.00 Credits Class 1.00 Lab 6.00  
 Auxiliary equipment used in a compressed air system to provide the quality of air required for specific process applications, maintenance and repair of filtering devices, refrigerative dryers, after coolers and other associated equipment. Offered: Winter. Course fee: \$45.

**CAGS 116**  
**Reciprocating Compressors II**  
 4.00 Credits Class 2.00 Lab 6.00  
 Continuation of CAGS 110 with training on large industrial and multistage compressors. Offered: Spring. Course fee: \$40.

**CAGS 117**  
**Hydraulics and Pneumatics**  
 3.00 Credits Class 2.00 Lab 3.00  
 Hydraulic and pneumatic controls utilized by compressed air systems, schematic interpretation, diagnosis and repair of equipment. Prerequisite: MATH 108. Offered: Spring. Course fee: \$40.

**CAGS 118**  
**Process Gas Compressors and Boosters**  
 3.00 Credits Class 2.00 Lab 3.00  
 Requirements placed on compressors when specialized process gases are being utilized. Seal requirements, filtration and an overview of the conditions encountered when compressing with a pressurized inlet are also examined. Offered: Spring. Course fee: \$40.

**CAGS 200**  
**Rotary Screw Compressors**  
 4.00 Credits Class 2.00 Lab 6.00  
 Maintenance and repair of rotary screw compressors, as well as tear down and reassembly of various types of rotary screw compressors. Includes staging, lubrication, filtration and cooling requirements. Offered: Fall. Course fee: \$30.

**CAGS 201**  
**Plant Equipment - Installation**  
 3.00 Credits Class 2.00 Lab 3.00  
 Requirements for equipment installation, foundation and grouting, piping, commissioning and start-up. Offered: Fall. Course fee: \$30.

**CAGS 202**  
**Controls I**  
 3.00 Credits Class 2.00 Lab 3.00  
 Electrical controls utilized by industrial equipment systems, functional control panels and interpretation of electrical ladder diagrams, volt-ohm meters, amp meters and other associated electrical test equipment. Offered: Winter. Course fee: \$40.

**CAGS 204**

**Compressed Air Systems Troubleshooting**  
3.00 Credits      Class 2.00      Lab 3.00  
Logic and skills required for effective troubleshooting. Hands-on training on a totally functional air system, which allows students to sharpen skills learned in preceding courses and to apply these skills in a logical progression to resolve a fault in the system. Offered: Winter. Course fee: \$40.

**CAGS 205**

**Controls II**  
3.00 Credits      Class 2.00      Lab 3.00  
Proficiency in electrical troubleshooting of controls, maintenance and repair of electrical motors and reinforcement of associated control circuits. Prerequisite: CAGS 202. Offered: Spring. Course fee: \$50.

**CAGS 206**

**Centrifugal Compressors**  
3.00 Credits      Class 2.00      Lab 3.00  
Knowledge and skills required to maintain and repair centrifugal compressors with competency-based, hands-on instruction in tear down and reassembly. Offered: Spring. Course fee: \$40.

**CAGS 207**

**Air System Design**  
3.00 Credits      Class 2.00      Lab 3.00  
A practical application of all knowledge obtained in the compressor technology, the student designs an air system to meet a particular application including sizing, installation, controls, safeties, auxiliary conditioning equipment and all other variables required for a trouble free system. Offered: Spring. Course fee: \$40.

**CAGS 208**

**Basic Refrigeration**  
4.00 Credits      Class 3.00      Lab 3.00  
An introduction to types of systems available in the industry, covering the topics of heat: quantity, type and intensity; gas laws and properties; system component analysis and selection; piping layout and system capacity control. Offered: Fall. Course fee: \$45.

**CAGS 209**

**NGV Fill Station Repair and Maintenance**  
2.00 Credits      Class 2.00      Lab 0.00  
Proper maintenance and troubleshooting procedures needed to operate an NGV refueling station, with special emphasis given to the topics of safety, preventive maintenance, and electrical-mechanical diagnostic procedures. Course fee: \$45.

**CAGS 210**

**Vacuum Pumps and Blowers**  
3.00 Credits      Class 2.00      Lab 3.00  
An in-depth study of vacuum pumps (liquid ring, reciprocating, etc.) and high volume, low pressure blowers as they are utilized in various industries. Special emphasis is given to maintenance and repair techniques that can be employed in servicing these specialized types of compressors. Offered: Winter. Course fee: \$40.

**CAGS 280**

**Refrigerant Technician Certification Seminar**  
0.25-1.00 Credits      Class 0.25-1.00      Lab 0.00  
Completion of this course provides certification, as required by The Clean Air Act Amendment of 1990, for technicians who service, install, and maintain air conditioning and refrigeration equipment. Course fee: \$150.

**CAGS 281**

**FPS Pneumatic Technician Certification**  
2.00 Credits      Class 2.00      Lab 0.00  
Preparation for the Pneumatic Technician certification test given by the Fluid Power Society. Course fee: \$10.

**CAGS 290**

**Compressor Special Topics**  
1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.

**CAGS 291**

**Compressor Individual Study**  
1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
Individual study or research. Topics are arranged on an individual basis with instructor permission. Course fee: \$10.

**CAGS 292**

**Compressor Field Experience**  
1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00

On-the-job training in a compressor facility through special arrangements with an instructor. Course fee: \$10.

**CAGS 293**

**Compressor Directed Practice**  
2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function. Course fee: \$10.

**CAGS 294**

**Compressor Cooperative Work Experience**  
2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**CAGS 296**

**Compressor Practicum**  
2.00 Credits      Class 1.00      Lab 7.00  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Course fee: \$10.

**CAGS 297**

**Compressor Observation Hour**  
1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity. Course fee: \$10.

**CAGS 298**

**Compressor Internship**  
3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00  
On the job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$10.

## CER Ceramic

**CER 104**

**Combustion I**  
3.00 Credits      Class 3.00      Lab 2.00  
Fundamentals of combustion including flame patterns, fuels, combustion chemistry, efficiency and fuel economics. Prerequisites: CHEM 102 and MATH 110. Offered: Spring. Course fee: \$60.

**CER 105**

**Structural Clay Products**  
3.00 Credits      Class 3.00      Lab 2.00  
Study of raw materials, compositions, manufacturing processes, properties, test methods, standards, and environmental issues related to the Structural Clay Products segment of the ceramics industry. Related areas such as masonry cements are also addressed. Offered: Fall. Course fee: \$60.

**CER 110**

**Focus on Ceramics I**  
1.00 Credits      Class 1.00      Lab 1.00  
An introduction to ceramic industries and career opportunities featuring current events and specific segments of the field. Includes common processing methods and tests to emphasize importance of technical resources and followership. Offered: Fall.

**CER 115**

**Focus on Ceramics II**  
1.00 Credit      Class 1.00      Lab 1.00  
Current events in the ceramic industries and specific segments of the field, including common processing methods and tests to practice mentoring and leadership. Prerequisite: CER 110. Offered: Fall.

**CER 120**

**Refractories**  
3.00 Credits      Class 3.00      Lab 2.00  
Study of raw materials, compositions, manufacturing processes, properties, test methods, standards, and environmental issues related to the Refractories segment of the ceramics industry. Related topics such as high temperature cements and abrasives are also addressed. Prerequisites: MATH 108 E and CHEM 100. Offered: Winter. Course fee: \$60.

**CER 130**



**Whitewares**

**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
Study of raw materials, compositions, manufacturing processes, properties, test methods, standards, and environmental issues related to the Whitewares segment of the ceramics industry. Related topics such as art ceramics are also discussed. Prerequisites: CER 120 and COMM 122. Offered: Spring. Course fee: \$60.

**CER 201**

**Combustion II**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
Examines fuel burning systems, including furnace equipment, piping, and controls; combustion analysis; heat transfer as it affects refractory and burner system designs; and the use of kilns and furnaces to manufacture products. Prerequisites: CER 104 and COMM 122. Course fee: \$60.

**CER 203**

**Statistical Quality and Process Control**  
**3.00 Credits**      **Class 2.00**      **Lab 4.00**  
The theory of quality control in manufacturing processes, profitable systems and customer satisfaction is discussed, as well as the organization of quality control and the implementation of basic quality control methods. Prerequisites: COMM 122 and MATH 108. Course fee: \$60.

**CER 205**

**Current Topics and Technology**  
**0.50-3.00 Credits**      **Class 0.50-3.00**      **Lab 0.00**  
An introduction to new developments in the field of ceramic materials.

**CER 206**

**Ceramic Industry Practice**  
**3.00 Credits**      **Class 1.00**      **Lab 6.00**  
Visits to ceramic plants and laboratories provide insight into methods, processes and procedures for producing and testing ceramic materials and products. Prerequisite: COMM 122. Offered: Winter. Course fee: \$10.

**CER 207**

**Standard in Industry**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
Refractories and other ceramic and materials industries by reviewing manufacturing processes and integrating standard terminology, testing procedures, classifications and specifications. Prerequisites: CHEM 100 and COMM 122. Offered: Spring. Course fee: \$60.

**CER 208**

**Technical Laboratory**  
**4.00 Credits**      **Class 3.00**      **Lab 3.00**  
Use of precision equipment used for analysis, investigation and determination of material properties in the ceramic and other material industries is discussed. Prerequisites: COMM 122 and MATH 112. Offered: Spring. Course fee: \$60.

**CER 209**

**Industrial Projects**  
**2.00 Credits**      **Class 1.00**      **Lab 3.00**  
Problems submitted by industrial companies are defined and solution procedures are determined by students in collaboration with the faculty and industrial technical personnel, requiring application of previously learned laboratory skills. Offered: Spring. Course fee: \$60.

**CER 210**

**Glasses, Glazes, and Enamels**  
**4.00 Credits**      **Class 3.00**      **Lab 3.00**  
Raw material composition, physical properties and manufacturing processes of glass as well as the use of glassy coatings for ceramics and metals. Includes exercises in batch calculating, application, testing and decorating techniques. Prerequisites: CHEM 102, COMM 122, and MATH 108. Offered: Fall. Course fee: \$60.

**CER 220**

**Engineering Ceramics**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
Offered: Winter.

**CER 230**

**Design of Experiments and Statistical Applications**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
Prerequisite: CER 203. Offered: Winter.

**CER 245**

**Advanced Composites**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**

**CER 290**

**Ceramic Special Topics**  
**0.50-5.00 Credits**      **Class 0.50-5.00**      **Lab 0.00**  
Structured exploration of a specific topic(s) by participants in a group. Course fee: \$15.

**CER 291**

**Ceramic Individual Study**  
**1.00-5.00 Credits**      **Class 1.00-5.00**      **Lab 0.00**  
Individual study or research. Topics are arranged on an individual basis with instructor permission.

**CER 292**

**Ceramic Field Experience**  
**1.00-4.00 Credits**      **Class 0.00**      **Lab 12.00-48.00**  
On-the-job training in a Ceramics facility through arrangements with an instructor.

**CER 293**

**Ceramic Directed Practice**  
**2.00-8.00 Credits**      **Class 1.00**      **Lab 5.00-35.00**  
Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued in a repeat performance of that function by the instructor.

**CER 294**

**Ceramic Cooperative Work Experience**  
**2.00-5.00 Credits**      **Class 1.00**      **Lab 10.00-40.00**  
An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must also be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Offered: Summer.

**CER 296**

**Ceramic Practicum**  
**2.00 Credits**      **Class 1.00**      **Lab 8.00**  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Offered: Spring.

**CER 297**

**Ceramic Observation Hour**  
**1.00-3.00 Credits**      **Class 0.00**      **Lab 15.00-45.00**  
Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**CER 298**

**Ceramic Internship**  
**3.00-9.00 Credits**      **Class 0.00-3.00**      **Lab 20.00-40.00**  
On-the-job training in the work place of a cooperating agency. Coordinated by an instructor.

**CHEM  
Chemistry****CHEM 100**

**Introduction to Chemistry I**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
Chemical principles as related to fundamental concepts as well as everyday experiences. Basic chemical concepts, structure of matter, nature of elements, bonding and naming of compounds. Prerequisite: MATH 102. Offered: Fall, Spring. Course fee: \$30.

**CHEM 102**

**Introduction to Chemistry II**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
The second introductory course in chemical principles. Topics include chemical calculations, properties of liquids, solids and gases, water solutions, chemical equilibrium and acid/base chemical reactions. Prerequisites: CHEM 100 and MATH 102. Offered: Winter. Course fee: \$30.

**CHEM 130**

**Fundamentals of Chemistry**  
**4.00 Credits**      **Class 3.00**      **Lab 3.00**  
Atomic and molecular structure, periodic table and states of matter. Prerequisite: MATH 102. Offered: Winter. Course fee: \$110.

**CHEM 131**

**Environmental Chemistry**  
**4.00 Credits**      **Class 3.00**      **Lab 3.00**  
A general course in fundamental chemical principles, including

inorganic, organic and environmental aspects. Problem solving, experimentation measurements, and application are explored. Prerequisite: MATH 108 N. Offered: Winter. Course fee: \$30.

**CHEM 290****Chemistry Special Topics**

1.00-5.00 Credits Class 1.00-5.00 Lab 0.00

Structured exploration of a specific topic(s) by participants in a group.

**CHEM 291****Chemistry Independent Study**

1.00-5.00 Credits Class 1.00-5.00 Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**CJ****Criminal Justice****CJ 100****Criminal Justice Systems**

3.00 Credits Class 3.00 Lab 2.00

Introduction to law enforcement, prosecution, courts and corrections components of the system of justice in the U.S. Considers the history, philosophy and functions of these components as well as current problems and issues. Offered: Fall. Course fee: \$10.

**CJ 105****Sign Language**

1.00 Credit Class 0.00 Lab 2.00

Introduction to communication needs of the deaf community. The student learns and practices conversational sign language skills that will facilitate the provision of services to signing clients and their families. Course fee: \$50.

**CJ 121****Ohio Criminal Law**

2.00 Credits Class 2.00 Lab 2.00

Comprehensive study of the Ohio Revised Code. Elements of offenses are identified and applied to hypothetical situations enabling the student to apply the law and determine appropriate charges. A consideration of the laws that govern the operation of Ohio's criminal justice system. Offered: Fall.

**CJ 127****Victim Awareness**

3.00 Credits Class 3.00 Lab 0.00

Impact of victimization and its relevance in the treatment of the offender. Impact of criminal behavior on the victim; how the offender convinces others that he is the victim; and how criminal thinking and rehabilitation. Role playing as a technique and its use in victim awareness programs. Offered: Winter. Course fee: \$10.

**CJ 132****Law Enforcement Photography**

3.00 Credits Class 2.00 Lab 4.00

Photographic techniques for recording evidence and presenting photographic evidence in court. Emphasizes photographing of evidence as a component of investigations. Prerequisite: CJ 130. Offered: Fall. Course fee: \$100.

**CJ 150****Juvenile Delinquency and Procedures**

2.00 Credits Class 2.00 Lab 0.00

Juvenile procedures and delinquency. Causes and prevention of delinquency and the rules governing the disposition of juveniles from intake to the final adjudication. Offered: Fall. Course fee: \$10.

**CJ 181****Aikido Self Defense**

1.00 Credit Class 0.00 Lab 3.00

Aikido based self defense study of the use of force and defensive tactics. Focuses on joint lock and joint manipulation of the wrist, elbow and shoulder. Each student should be in sound physical condition prior to participation. Course fee: \$25.

**CJ 182****ASP Tactical Baton Basic Certification**

0.50 Credit Class 0.00 Lab 1.50

Handling and proper application of the ASP Tactical Baton. ASP certification will be given for successful completion. Course fee: \$25.

**CJ 190****Chemical Abuse and Dependency**

3.00 Credits Class 3.00 Lab 2.00

Topics pertinent to drug and alcohol abuse in the U.S. Effects of stimulants, depressants and hallucinogens, identification of drugs and drug users, drug offenses, the history of drug laws, law enforcement strategies, alcoholism and treatment and prevention methods. Offered: Summer, Fall, Winter, Spring. Course fee: \$20

**CJ 193****Substance Abuse Treatment**

3.00 Credits Class 3.00 Lab 2.00

Effects of substance abuse on the biological, social and psychological development of the abuser. Review of criteria for assessing addiction and approaches to treatment of addicts and their families. Approaches include prevention, intervention, education, support services, counseling and relapse prevention. Prerequisite: CJ 190. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**CJ 211****Intermediate Defensive Pistolcraft**

1.00 Credit Class 1.00 Lab 0.00

This program begins with a brief review of the training components comprising the modern technique and progress from where the Defensive Pistolcraft course ends focusing on the defensive application of the handgun. Various drills will be conducted to begin the evaluation and further development of the individuals' skills, including live-fire steel plate precision shooting, discretionary shooting and Action Target's Mover. Emphasis is placed on low-light shooting. Mental conditioning for combat, tactics, target identification, and the principles of light shooting. Mental conditioning for combat, tactics, target identification, and the principles of personal defense will also be discussed. The goal of this course is to provide the student with the skills, knowledge and practical experience necessary to become safe, responsible and effective in the use of the handgun for self-defense. Defensive Pistolcraft is a prerequisite to this course. Attendance in this program is limited to those participants who have previously attended a training program conducted by Defense Training International. Prerequisite: RNGR 210. Course fee: \$195.

**CJ 215****Beginning Firearms**

1.00 Credit Class 1.00 Lab 1.00

Close range defensive shooting, handgun familiarization and safe handling practices. Safety, legal issues, psychological aspects of shooting and equipment selection. On the firing range the student progresses from short range single shot to rapid fire, multiple targets and low light shooting. Course fee: \$75.

**CJ 222****Laws Arrest, Search, and Seizure**

2.00 Credits Class 2.00 Lab 0.00

Offered: Winter.

**CJ 250****Criminology**

3.00 Credits Class 3.00 Lab 0.00

Introduces concerns that constitute criminology as a science. Terminology, the nature and extent of crime, the causes of crime and criminality, and the impact of crime on social change. Offered: Winter.

**CJ 263****Crisis Recognition and Referral**

2.00 Credits Class 2.00 Lab 2.00

Developed for paraprofessionals who work in helping relationships. Creates an awareness of crises that develop or occur suddenly in the lives of people and identifies helping behaviors used until professional help is obtained or referral is completed. Various community resources are identified. Offered: Winter, Spring. Course fee: \$10.

**CJ 286****Chemical Dependency Lab Orientation**

2.00 Credits Class 2.00 Lab 2.00

An overview of treatment, dependency and intervention. Orientation to Ohio's chemical dependency counselor certification process. Prerequisite: CJ 193. Offered: Summer, Fall, Winter, Spring. Course fee: \$5

**CJ 287****Chemical Dependency Lab I**

4.00 Credits Class 1.00 Lab 11.00

Work in a supervised counseling experience in the chemical dependency field meeting requirements of the board. Prerequisites: CJ 193 and CJ 286. Offered: Summer, Fall, Winter Spring. Course fee: \$75.

**CJ 288****Chemical Dependency Lab II**

4.00 Credits Class 1.00 Lab 11.00

Work in a supervised counseling experience in the chemical

dependency field meeting requirements of the board. Prerequisite: CJ 287. Offered: Summer, Fall, Winter, Spring. Course fee: \$75.

**CJ 289** PACE  
**Chemical Dependency Lab III**  
 4.00 Credits Class 1.00 Lab 11.00  
 Work in a supervised counseling experience in the chemical dependency field meeting requirements of the board. Prerequisite: CJ 288. Offered: Summer, Fall, Winter, Spring. Course fee: \$75.

**CJ 290**  
**Criminal Justice Special Topics**  
 1.00-5.00 Credits Class 1.00-5.00 Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

## CM Construction Management

**CM 100**  
**Basic Construction Skills**  
 5.00 Credits Class 5.00 Lab 1.00

**CM 102**  
**Construction Surveying**  
 3.00 Credits Class 3.00 Lab 1.00

**CM 103**  
**Construction Law**  
 3.00 Credits Class 3.00 Lab 0.00

**CM 104**  
**Construction Estimating**  
 3.00 Credits Class 3.00 Lab 1.00

**CM 105**  
**Construction Project Management**  
 3.00 Credits Class 3.00 Lab 1.00

## CMCP Construction Management - Carpentry

**CMCP 271 A**  
**Carpentry Tools and Materials**  
 3.00 Credits Class 3.00 Lab 1.00  
 Introduction to carpentry trade, wood building materials, fasteners, adhesives, hand and power tools. Includes wood and lumber terms, calculating lumber and wood product quantities, portable power tools. (NCCER 27101, 27102, 27103). Prerequisite: CM 100.

**CMCP 271 B**  
**Floors and Walls**  
 3.00 Credits Class 3.00 Lab 1.00  
 Introduction to residential floor systems and materials and general procedures used in wall and ceiling framing. Includes floor framing systems, floor systems, sills, floor joists, wood frame wall layout, exterior walls, masonry wall framing construction, metal studs, and estimating frame walls and ceiling materials. (NCCER 27104, 27105). Prerequisite: CMCP 271 A.

**CMCP 271 C**  
**Roofs, Windows, and Doors**  
 3.00 Credits Class 3.00 Lab 1.00  
 Introduction to the methods and procedures used in framing and the selection and installation of residential windows and exterior doors. Includes types of trusses, roof layout, sheeting, framing, pre-hung windows and doors, thresholds, garage door installation and installation of weather stripping and locksets. (NCCER 27106, 27107). Prerequisite: CMCP 271 B.

**CMCP 272 A**  
**Site Layout and Preparation**  
 3.00 Credits Class 3.00 Lab 1.00  
 Introduction to the principles, equipment and methods used to perform the site layout responsibilities of individuals on-site, understanding and using site plan drawings, and methods of job site communication. Includes construction drawings, site/plot drawing interpretations, measurement conversions, taping and leveling equipment, curing methods and reinforcing materials. (NCCER 27201, 27202, 27203). Prerequisite: CMCP 271 C.

**CMCP 272 B**  
**Concrete Foundations and Finishing**  
 3.00 Credits Class 3.00 Lab 1.00

Introduction to the procedures involved in the construction of concrete foundations and flatwork, concrete form, and equipment and materials used in cutting, bending, splicing and tying reinforcement steel for concrete structures. Includes footings, pier forms, edge forms, screeds and reinforcement bars. (NCCER 27204, 27205, 27206). Prerequisite: CMCP 272 A.

**CMCP 272 C**  
**Patented Forms and Wall Systems**  
 3.00 Credits Class 3.00 Lab 1.00  
 Introduction to the procedures involved in the safe handling, placement and finishing of concrete. Includes concrete equipment, concrete finishing, concrete during, patented forms, moving a flying form system, and the installation of tilt-up wall systems. (NCCER 27207, 27208, 27209). Prerequisite: CMCP 272 B.

**CMCP 273 A**  
**Exterior Finishes**  
 3.00 Credits Class 3.00 Lab 1.00  
 Siding and roofing materials used and residential and light commercial construction. Includes installation procedures for wood, metal and vinyl siding, shingles, roll roofing, tiles, roof vents, gutter down spouts and insulation. (NCCER 27301, 27302, 27303). Prerequisite: CMCP 272 C.

**CMCP 273 B**  
**Interior Finishes I**  
 3.00 Credits Class 3.00 Lab 1.00  
 Stairs, metal stud framing and drywall installation techniques. Includes finish stairs, stringers, metal studs, gypsum drywall, fire and sound rated walls, drywall patching and finishing. (NCCER 27304, 27305, 27306, 27307). Prerequisite: CMCP 273 A.

**CMCP 273 C**  
**Interior Finishes II**  
 3.00 Credits Class 3.00 Lab 1.00  
 Installation of doors, ceilings, trim and cabinets. Includes metal door frame, wooden doors, window installation baseboard, ceiling molding, paneling, flooring resilient, carpet installation, hardwood flooring, cabinet construction and installation. (NCCER 27308, 27309, 27310, 27311). Prerequisite: CMCP 273 B.

**CMCP 274 A**  
**Advanced Roof and Floor Systems**  
 3.00 Credits Class 3.00 Lab 1.00  
 Advance topic in site layout, roofing systems, flooring materials. Includes site layout tools and instruments, structures and building lines, elevation, commercial roofing, lap seams, floor system structures, floor coverings, working drawings and fireproofing methods. (NCCER 27401, 27402, 27403). Prerequisite: CMCP 273 C.

**CMCP 274 B**  
**Advanced Wall and Stair Systems**  
 3.00 Credits Class 3.00 Lab 1.00  
 Advanced wall systems and custom or advanced stair systems. Includes general construction methods, wall finishes, fireproofing, paneling, wainscoting, stair components, finishing stairs, and light construction equipment. (NCCER 27404, 27405, 27406). Prerequisite: CMCP 274 A.

**CMCP 274 C**  
**Welding for Carpenters**  
 3.00 Credits Class 3.00 Lab 1.00  
 Introduction to equipment and procedures used in oxyfuel cutting and shielded metal arc welding. Includes safety, start-up, start-restart, equipment, electrodes, electrode classification, codes and welding proficiency. (NCCER 27407, 27408, 27409). Prerequisite: CMCP 274 B.

## CMEL Construction Management - Electrical

**CMEL 261 A**  
**Electrical Hardware and Safety**  
 3.00 Credits Class 3.00 Lab 1.00  
 Safety rules and regulations for electricians includes precautions for various electrical hazards found on the job, and OSHA mandated lockout/tagout procedure. Introduction to conduit benders, cutting, reaming, and threading conduit; hardware and systems used to mount and support boxes, receptacles, and other electrical components; types of anchors and supports, their applications, and how to install them safely; electrical concepts used in Ohm's Law applied to DC series circuits; atomic theory; electromotive force; resistance; and electric power equations. Prerequisite: CM 100.

**CMEL 261 B**  
**Electrical Theory and Procedures**

**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Introduction to series, parallel and series-parallel circuits, the proper selection, inspection, use and maintenance of common electrical test equipment, types and applications of raceways, wireways and ducts. Also covers layout of NEC and types of information found within the code book. Prerequisite: CMEL 261 A.

**CMEL 261 C**  
**Wiring Applications**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Types and applications of conductors and proper wiring techniques common to commercial, industrial, and residential construction and maintenance. Includes an introduction to electrical blueprints. Prerequisite: CMEL 261 B.

**CMEL 262 A**  
**Alternating Current**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 261 C.

**CMEL 262 B**  
**Conductors and Fittings**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 262 A.

**CMEL 262 C**  
**Electric Service Installation**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 262 B.

**CMEL 263 A**  
**Load Calculations**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 262 C.

**CMEL 263 B**  
**Distribution Equipment**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 263 A.

**CMEL 263 C**  
**Motors and HVAC Systems**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 263 B.

**CMEL 264 A**  
**Lighting and Emergency Systems**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 263 C.

**CMEL 264 B**  
**Electronic and Alarm Systems**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMEL 264 A.

**CMEL 264 C**  
**Solid State Circuitry**  
**2.00 Credits**      **Class 2.00**      **Lab 1.00**  
Prerequisite: CMEL 264 B.

**CMEL 264 D**  
**High Voltage Applications**  
**1.00 Credits**      **Class 1.00**      **Lab 1.00**  
Prerequisite: CMEL 264 C.

## **CMHV** **Construction Management - HVAC**

**CMHV 031 A**  
**HVAC Fundamentals I**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Basic principles of heating, ventilating, and air conditioning. Career opportunities in HVAC, training, and apprenticeship program. How to solve problems involving the measurement of lines, area, volume, weights, angles, pressure, vacuum, and temperature. The purpose and use of tools such as wrenches, saws, hammers, drills and measuring instruments along with instruction on their safe use and maintenance. Prerequisite: CM 100.

**CMHV 031 B**  
**HVAC Fundamentals II**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Basics of heating, ventilating, and air conditioning career opportunities in HVAC, training, and apprenticeship programs will also be covered.

Prerequisite: CMHV 031 A.

**CMHV 031 C**  
**Introduction to Cooling and Heating**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Basic electricity including generation, distribution, and electrical components, DC circuits, and electrical safety. Prerequisite: CMHV 031 B.

**CMHV 032 A**  
**Heat Distribution and Mechanical Maintenance**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 031 C.

**CMHV 032 B**  
**HVAC Electronics and Controls**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 032 A.

**CMHV 032 C**  
**Compressors, Heat Pumps, and Refrigerants**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 032 B.

**CMHV 033 A**  
**Preventive Maintenance and Troubleshooting**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 032 C.

**CMHV 033 B**  
**Troubleshooting Heating Systems**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 033 A.

**CMHV 033 C**  
**Commercial Heating and Cooling**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 033 B.

**CMHV 034 A**  
**Blueprints, Air Quality, and Energy Conservation**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 033 C.

**CMHV 034 B**  
**Energy Management and System Operations**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 034 A.

**CMHV 034 C**  
**HVAC-R Properties and System Design**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMHV 034 B.

## **CMMS** **Construction Maintenance - Masonry**

**CMMS231 A**  
**Concrete Construction and Equipment**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMMS 283 C.

**CMMS231 B**  
**Concrete Placement and Finishing**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMMS 231 A.

**CMMS231 C**  
**Concrete Properties, Estimating, and Forming**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Prerequisite: CMMS 231 B.

**CMMS281 A**  
**Masonry Fundamentals**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Introduction to masonry trade and safety requirements. Includes history, products, precautions, OSHA guidelines, and personal protective equipment. (NCCER 28101, 28102). Prerequisite: CM 100.

**CMMS281 B**  
**Masonry Tools and Specifications**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
Introduction to masonry tools, equipment, math, drawings and mortar. Includes trade terms, scaffolding, tool operation, construction

specification and mortar properties ingredients and storage procedures. (NCCER 28103, 28104, 28105). Prerequisite: CMMS 281 A.

**CMMS281 C**  
**Masonry Installation Techniques**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Procedures used in masonry installation. Includes techniques for laying brick and block, using mortar and cutting brick. (NCCER 28106).  
 Prerequisite: CMMS 281 B.

**CMMS282 A**  
**Residential Masonry**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Covers construction techniques, residential planning, construction drawings. Includes material estimating, scaling, foundations, walkways, chimneys, and fireplaces. (NCCER 28201, 28202). Prerequisite: CMMS 281 C.

**CMMS282 B**  
**Reinforcement and Laying Techniques**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Masonry construction, reinforcement materials and structural components. Includes grout, reinforcing steel, plates, anchors, rods, walls, and arches. (NCCER 28203, 28204, 28205). Prerequisite: CMMS 282 A.

**CMMS282 C**  
**Masonry Construction and Inspection Techniques**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Techniques in masonry construction, inspection and quality control. Includes moisture mortar control, insulating methods, elevated work and testing methods. (NCCER 28206, 28207, 28208). Prerequisite: CMMS 282 B.

**CMMS283 A**  
**Advanced Masonry Materials and Techniques**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Masonry construction of high-rise building and specialized materials. Includes safety, logistics, stone, acid brick, glazed tile, glass block, and various weather conditions. (NCCER 28301, 28302) Prerequisite: CMMS 282 C.

**CMMS283 B**  
**Masonry Drawings and Restoration**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Prerequisite: CMMS 283 A.

**CMMS283 C**  
**Masonry Estimating and Planning**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Prerequisite: CMMS 283 B.

## COMM Communications

**COMM 050**  
**Fundamentals of Communication**  
 4.00 Credits      Class 4.00      Lab 0.00  
 Development of basic writing skills for the student with demonstrated need. Focus on paragraph writing with emphasis on sentence structure, parts of speech, punctuation, spelling, grammar and proofreading. Does not apply toward graduation requirements. Offered: Fall. Course fee: \$45.

**COMM 051**      PACE  
**Fundamentals of Reading**  
 4.00 Credits      Class 4.00      Lab 0.00  
 Review of the fundamentals of general reading. Class work is individualized. Emphasis on word attack, comprehension and vocabulary skills. Does not apply toward graduation requirements. Offered: Summer, Fall, Winter, Spring. Course fee: \$45.

**COMM 100**  
**Communications Tutor**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Individualized instruction tailored to students' needs. Skills covered correspond to those required in Communications I and Communications II. For students who have previously failed the test essay in Communications I or II. Course fee: \$45.

**COMM 101**  
**Spelling Skills**  
 1.00 Credits      Class 1.00      Lab 0.00  
 Designed to identify and correct individual spelling weaknesses.

**COMM 102**  
**Vocabulary Skills**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Improvement of vocabulary through recognition and word usage.

**COMM 104**  
**Job Search Techniques**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Provides information related to the job search. Strategies involved in identifying and defining a suitable position, designing a resume, preparing related correspondence, applying for the position and interviewing in person or by telephone. Prerequisite: COMM 121. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**COMM 105**  
**Research Skills**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Identifies types of research needed for both on-the-job and classroom research presentations including primary and secondary research skills and approaching the process through a step-by-step method. Course fee: \$20.

**COMM 110**      PACE  
**Reading Communications**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Individualized, self paced instruction in reading comprehension and vocabulary development. Students weak in reading skills, as determined by tests, are required to enroll in this course prior to enrolling in Communications I and II. Prerequisite: COMM 051 or placement. Offered: Summer, Fall, Winter, Spring. Course fee: \$45.

**COMM 111**      PACE  
**Advanced Reading**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Designed to improve reading ability. Focuses on reading comprehension and vocabulary at the college level. Students will select from a series of activities designed to facilitate achievement of personal academic goals. Prerequisite: COMM 110 or placement. Offered: Summer, Fall, Winter, Spring. Course fee: \$40.

**COMM 112**  
**Reading Skills**  
 4.00 Credits      Class 4.00      Lab 0.00  
 Designed to develop reading critically and to increase comprehension and vocabulary skills. Course work integrated with writing, study skills, math, and technical skills. Offered: Summer, Fall, Winter, Spring. Course fee: \$45.

**COMM 115**  
**Children's Literature**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Designed to familiarize students with various types of quality literature for children. Emphasis will be on selecting appropriate literature for different age groups, becoming familiar with different genres and reading or reviewing specific selections from these genres. Offered: Fall. Course fee: \$10.

**COMM 121**      PACE  
**Communications I**  
 4.00 Credits      Class 4.00      Lab 0.00  
 Paragraph development and short essay composition. Writing as a process stressed with emphasis on prewriting and revision. The student required to take Communications I must successfully complete the course before enrolling in Communications II. Prerequisite: COMM 050 and COMM 110 or placement. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 122**      PACE  
**Communications II**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Develops writing skills through medium length writing assignments, concentrating on organizing and unifying essay components, studying various methods of development for different communications purposes, supporting and defending ideas in writing and showing evidence of creative and critical thinking in writing. Emphasizes writing as a process, prewriting and revision. Prerequisite: COMM 050, COMM 110, COMM 121 or placement. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123**      PACE  
**Communications III**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Communications III/IV options are advanced composition courses designed to hone and refine the writing skills developed in Communications II. Each of these options focuses on a particular

subject or issue and requires that the student write longer essays, projects, and/or journals that deal with some aspect of the topic or subject. Each Communications III/IV option requires the student to write a short research paper dealing effectively with the ideas of others. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 A** PACE  
**Communications III – Job Communication**  
 3.00 Credits Class 3.00 Lab 0.00  
 Emphasizes skills necessary to write effectively in an office, industry, government or service. Basic principles and formats used in writing letters, memos, and informal reports. Prerequisite: COMM 122. Offered: Summer, Winter, Spring. Course fee: \$20.

**COMM 123 B** PACE  
**Communications III – Contemporary Issues**  
 3.00 Credits Class 3.00 Lab 0.00  
 Developing critical thinking skills through reading, thinking, analyzing, discussing, and writing about issues that are of current interest on local, state, national and international levels. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 C** PACE  
**Communications III – Creative Writing**  
 3.00 Credits Class 3.00 Lab 0.00  
 Introduction to writing contemporary poetry, fiction, and creative essays through reading, discussion, and practice. The emphasis of the course is on writing, pre-writing activities, brainstorming, and evaluation and analysis. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 D** PACE  
**Communications III – Community Service**  
 3.00 Credits Class 3.00 Lab 0.00  
 Explores the need for community volunteers, identification of types of community service, determining personal and professional value of volunteerism and discussing potential pitfalls. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 E** PACE  
**Communications III – Literature, An Introduction**  
 3.00 Credits Class 3.00 Lab 0.00  
 Short story as a form of written communication, focusing primarily on content, theme, and style. Through reading assignments, a variety of essays and class discussions, students develop critical thinking skills and sharpen awareness of the range and potential of written English. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 F** PACE  
**Communications III – Sports Reading**  
 3.00 Credits Class 3.00 Lab 0.00  
 Promotes the improvement of composition skills through personal narratives, journals and various analytical modes of expression. Defines sports in broad terms to distinguish between professional, amateur and recreational sports. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 G** PACE  
**Communications III – Issues in Media**  
 3.00 Credits Class 3.00 Lab 0.00  
 Explores critical media issues including effects of the mass media and how to deal with them. Development of critical thinking and writing skills. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 H** PACE  
**Communications III – Nature Readings**  
 3.00 Credits Class 3.00 Lab 0.00  
 Investigation of man's relationship with nature in the practical, spiritual, and aesthetic sense. Students are encouraged to explore, identify, and cultivate their own feelings about and perceptions of nature. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 J** PACE  
**Communications III – The American West**  
 3.00 Credits Class 3.00 Lab 0.00  
 Acquaints students with the American West. Examines a variety of topics which lead to a fuller understanding of and appreciation for the Western United States. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 123 L**

**Communications III – Science Fiction**  
 3.00 Credits Class 3.00 Lab 0.00  
 Develop writing and thinking skills in science fiction. Focuses on a chronological selection of short stories and science fiction films. Ideas and issues presented, as well as the manner of presentation, will be discussed. Prerequisite: COMM 122. Course fee: \$20.

**COMM 123 N**  
**Communications III – Writing for TV and Radio**  
 3.00 Credits Class 3.00 Lab 0.00  
 Focuses on script writing forms, principles and techniques for several types of productions including commercials, features, documentaries and educational programs. Includes the research and writing of a documentary script. Broadcasting majors will have the opportunity to use their scripts in actual production. Prerequisite: COMM 122. Offered: Winter. Course fee: \$20.

**COMM 123 P**  
**Communications III – Mystery and Detective Writing**  
 3.00 Credits Class 3.00 Lab 0.00  
 Develop writing and thinking skills in mystery and detective fiction. Focuses on chronological selection of short stories tracing the development of the detective story. The ideas and issues presented, as well as the genre itself, will be discussed. Essay writing, objective and essay tests and a research project will be required. Prerequisite: COMM 122. Course fee: \$20.

**COMM 123 Q**  
**Communications III – Death and Dying**  
 3.00 Credits Class 3.00 Lab 0.00  
 Advanced reading and writing class which explores the process of physical death and the accompanying emotional, psychological, and spiritual challenges and growth which can occur as the body dies. Students read materials on the subject, critically analyze a variety of cultural and religious perspectives on death and apply their own belief system to this analysis to create a philosophy of living this mortal life. Prerequisite: COMM 122. Course fee: \$20.

**COMM 123 R**  
**Communications III – Understanding and Appreciating Film**  
 3.00 Credits Class 3.00 Lab 0.00  
 Surveys the history of film, emphasizing watching films and writing critically about them. Includes films from various decades, representing several genres. Prerequisite: COMM 122. Course fee: \$20.

**COMM 123 S**  
**Communications III – Writing and Social Activism**  
 3.00 Credits Class 3.00 Lab 0.00  
 Explores the connection between writing and social activism. Studies social activism in history and the immediate community. Prerequisite: COMM 122. Course fee: \$20.

**COMM 123 T** PACE  
**Communications III – Appalachian Heritage**  
 3.00 Credits Class 3.00 Lab 0.00  
 Enriches understanding and appreciation of Appalachian heritage through writing about literature, music, and film. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124** PACE  
**Communications IV**  
 3.00 Credits Class 3.00 Lab 0.00  
 Communications III/IV options are advanced composition courses designed to hone and refine the writing skills developed in Communications II. Each of these options focuses on a particular subject or issue and requires that the student write longer essays, projects, and/or journals that deal with some aspect of the topic or subject. Each Communications III/IV option requires the student to write a short research paper dealing effectively with the ideas of others. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 A** PACE  
**Communications IV – Job Communication**  
 3.00 Credits Class 3.00 Lab 0.00  
 Writing effectively in an office, industry, government or service. Covers basic principles and formats used in writing letters, memos, and informal reports. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 B** PACE  
**Communications IV – Contemporary Issues**  
 3.00 Credits Class 3.00 Lab 0.00  
 Developing critical thinking skills through reading, thinking, analyzing, discussing and writing about issues that are of current interest on local,

state, national and international levels. Students keep a journal, write essays, and complete a research paper. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 C** PACE

**Communications IV – Creative Writing**  
3.00 Credits Class 3.00 Lab 0.00

Introduction to writing contemporary poetry, fiction, and creative essays through reading, discussion, and practice. The emphasis of the course is on writing, pre-writing activities, brainstorming, evaluation and analysis. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 D** PACE

**Communications IV – Community Service**  
3.00 Credits Class 3.00 Lab 0.00

Explores the need for community volunteers, identifies the types of community service determines the personal and professional value of volunteerism and potential pitfalls. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 E** PACE

**Communications IV – Literature, An Introduction**  
3.00 Credits Class 3.00 Lab 0.00

Explores the short story as a form of written communication, focusing primarily on content, theme, and style. Students develop critical thinking skills and sharpen awareness of the range and potential of written English. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 F** PACE

**Communications IV – Sports Reading**  
3.00 Credits Class 3.00 Lab 0.00

Defines sports in broad terms to distinguish between professional, amateur and recreational sports. Analysis of sports from varying perspectives of active participants, spectators, the media and detractors of athletics. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 G** PACE

**Communications IV – Issues in Media**  
3.00 Credits Class 3.00 Lab 0.00

Explores critical media issues, including effects of the mass media and how we view and deal with them. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 H** PACE

**Communications IV – Nature Readings**  
3.00 Credits Class 3.00 Lab 0.00

Investigates man's relationship with nature in the practical, spiritual and aesthetic sense. Students are encouraged to explore, identify, and cultivate their own feelings about, and perceptions, of nature. Prerequisite COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 J** PACE

**Communications IV – The American West**  
3.00 Credits Class 3.00 Lab 0.00

Examines a variety of topics which lead to a fuller understanding of, and appreciation for, the Western United States. Students have the opportunity to explore the West in diverse contexts – cultural, geographic, historic, and aesthetic. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 124 L** PACE

**Communications IV – Science Fiction**  
3.00 Credits Class 3.00 Lab 0.00

Develop writing and thinking skills in science fiction. Focuses on a chronological selection of short stories and science fiction films. Ideas and issues presented, as well as the manner of presentation, will be discussed. Prerequisite: COMM 122. Course fee: \$20.

**COMM 124 N** PACE

**Communications IV – Writing for TV and Radio**  
3.00 Credits Class 3.00 Lab 0.00

Focuses on script writing forms, principles and techniques for several types of productions, including commercials, features, documentaries and educational programs. Includes the research and writing of a documentary script. Broadcasting majors will have the opportunity to use their scripts in actual production. Prerequisite: COMM 122. Course fee: \$20.

**COMM 124 P** PACE

**Communications III – Mystery and Detective Writing**  
3.00 Credits Class 3.00 Lab 0.00

Develop writing and thinking skills in mystery and detective fiction. Focuses on chronological selection of short stories tracing the development of the detective story. The ideas and issues presented, as well as the genre itself, will be discussed. Essay writing, objective and essay tests and a research project will be required. Prerequisite: COMM 122. Course fee: \$20.

**COMM 124 Q** PACE

**Communications IV – Death and Dying**  
3.00 Credits Class 3.00 Lab 0.00

Advanced reading and writing class which explores the process of physical death and accompanying emotional, psychological and spiritual challenges and growth which can occur as the body dies. Students read materials on the subject, critically analyze a variety of cultural and religious perspectives on death and apply their own belief system to this analysis to create a philosophy of living this mortal life. Prerequisite: COMM 122. Course fee: \$20.

**COMM 124 R** PACE

**Communications IV – Understanding and Appreciating Film**  
3.00 Credits Class 3.00 Lab 0.00

Surveys the history of film, emphasizing watching films and writing critically about them. Includes films from various decades, representing several genres. Prerequisite: COMM 122 Course fee: \$20.

**COMM 124 S** PACE

**Communications IV – Writing and Social Activism**  
3.00 Credits Class 3.00 Lab 0.00

Explores the connection between writing and social activism. Studies social activism in history and the immediate community. Prerequisite: COMM 122 Course fee: \$20.

**COMM 124 T** PACE

**Communications IV – Appalachian Heritage**  
3.00 Credits Class 3.00 Lab 0.00

Enriches understanding and appreciation of Appalachian heritage through writing about literature, music, and film. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 130** PACE

**Speech**  
3.00 Credits Class 3.00 Lab 0.00

Extemporaneous speaking skills through informative, demonstrative and persuasive speeches. The student learns to analyze audiences, choose and narrow topics, develop content through library and other resources, clearly organize speech material and effectively deliver finished speech to class audience. Prerequisite: COMM 121. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**COMM 135** PACE

**Verbal Career Skills**  
3.00 Credits Class 3.00 Lab 0.00

Develops the oral communication skills used in business offices through discussion, role playing and reading about such topics as interviewing, practicing accepted office etiquette and handling various communications situations. Prerequisite: COMM 121. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**COMM 150** PACE

**Punctuation and Grammar**  
2.00 Credits Class 2.00 Lab 0.00

Covers rules governing English grammar, punctuation and mechanics, focusing on troublesome areas of grammar: pronoun usage, subject/verb agreement, verb forms and sentence fragments; punctuation: commas, semicolons, apostrophes, quotation marks, hyphens, dashes, brackets and parentheses; and mechanics: capitalization, spelling rules, the use of numerals, abbreviation rules. Offered: Fall, Winter. Course fee: \$10.

**COMM 225** PACE

**Technical Writing**  
3.00 Credits Class 3.00 Lab 0.00

Organizing and presenting written data with an emphasis on clear, precise, objective thinking and writing as demonstrated through a series of written reports. Prerequisite: COMM 122. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**COMM 290** PACE

**Communications Special Topics**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Structured exploration of a specific topic(s) by participants in a group. Course fee: \$20.

**COMM 291** PACE

**Communications Independent Study**

1.00–5.00 Credits    Class 1.00–5.00    Lab 0.00  
Individual study or research. Topics are arranged on an individualized basis with instructor permission. Course fee: \$20.

**COMM 292**

**Communications Field Experience**  
1.00–4.00 Credits    Class 0.00    Lab 12.00–48.00  
On-the-job training in a facility through special arrangement with an instructor. Course fee: \$20.

**COMM 294**

**Communications Cooperative Work Experience**  
2.00–5.00 Credits    Class 1.00    Lab 10.00–40.00  
An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**COMM 295**

**Seminar in Community Service**  
1.00–3.00 Credits    Class 2.00    Lab 0.00  
Discusses job-related concerns and assistance with practicum.

**COMM 296**

**Communications Practicum**  
1.00 Credit    Class 0.00    Lab 7.00  
Places student in a work environment for a minimum amount of time to gain experience before graduation.

**COMM 297**

**Communications Observation Hour**  
1.00–3.00 Credits    Class 0.00    Lab 15.00–45.00  
Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**CORR****Corrections****CORR 100**

**Corrections Helping Professions**  
2.00 Credits    Class 2.00    Lab 2.00  
Introduction to the field of corrections including an overview and history of both private and public, adult and juvenile corrections, community based correctional programs, probation, institutions and parole. Offered: Fall. Course fee: \$10.

**CORR 105**

**Adult Residential Services**  
4.00 Credits    Class 3.00    Lab 4.00  
Correctional institutions, their history, functions, sociology, programs and effectiveness. Emphasizes direct, practical observation and learning experiences through visitations, instructional materials and guest lectures. Course fee: \$20.

**CORR 106**

**Probation and Parole**  
3.00 Credits    Class 3.00    Lab 2.00  
Probation, parole and community based correction programs. Legal considerations, detention processes, community treatment programs, social investigations, the use of community resources, the role of the probation and parole officer in community service and the supervision of offenders. Course fee: \$10.

**CORR 122**

**Civil Law**  
3.00 Credits    Class 2.00    Lab 3.00  
Cases, statutory and constitutional law specifically applied to the field of corrections. Overview of the development of correctional law with an emphasis on general principles applied to cases in corrections. Includes study of landmark cases and their influence on correctional personnel, agencies and clientele. Prerequisite: CJ 100. Offered: Winter.

**CORR 151**

**Unarmed Self-Defense**  
2.00 Credits    Class 1.00    Lab 4.00  
Unarmed self-defense tactics are studied and practiced to prepare the student for defensive maneuvers required in correctional work. The student receives the same training as provided by the Department of Rehabilitation and Correction in-service. Offered: Fall. Course fee: \$25.

**CORR 160**

**Group Work Techniques**

3.00 Credits    Class 2.00    Lab 3.00

Use of short term group procedures pertaining to change in criminal, addictive and abhorrent behavior. Problem solving and peer pressure techniques are learned. Emphasis on the change of cognitive distortions effecting behavior. Specific methods for working with sex offenders and other mal adaptive behavior problems are learned. Prerequisite: CORR 260. Offered: Winter.

**CORR 161**

**Reality Therapy**  
3.00 Credits    Class 3.00    Lab 2.00  
Concepts of Reality Therapy, Choice Theory and the counseling environment including role play demonstrations and practice of individual counseling. Also includes clarification of wants, determining behavioral direction, seven forms of evaluation and characteristics of plans. Course fee: \$60.

**CORR 162**

**Special Needs Clients**  
3.00 Credits    Class 3.00    Lab 0.00  
Provides a sensitivity to and better understanding of special needs clients. The needs of individuals with physical disabilities, mental retardation, learning disabilities and emotional problems will be reviewed along with effective ways of interfacing with and advocating for these clients. Prerequisite: PSYC 150.

**CORR 235**

**Client Documentation and Case Record**  
3.00 Credits    Class 2.00    Lab 3.00  
Practical experience in preparing the diverse forms, reports and logs that accompany correctional work. Emphasis on intake, home studies, presentence and investigative report writing and case recording. Routine shift logs, incident reports, and risk assessment forms are also covered. Prerequisite: COMM 122. Offered: Spring. Course fee: \$25.

**CORR 250**

**Correctional Officer Training**  
7.00 Credits    Class 6.00    Lab 5.00  
Laws, policies, procedures and self-defense techniques used in a jail facility. Students will be certified upon completion of this program through the Ohio Peace Officer Training Council to work in jail facilities. Course fee: \$190.

**CORR 260**

**Interviewing Techniques**  
3.00 Credits    Class 3.00    Lab 2.00  
Techniques of interviewing hostile and uncooperative clients are emphasized. Developing good attending skills and interpreting body language is emphasized. Introduces the use of audio and video equipment as a learning tool. Offered: Fall. Course fee: \$25.

**CORR 261**

**Approaches to Correctional Counseling**  
3.00 Credits    Class 2.00    Lab 3.00  
A comparative study of counseling theories and techniques utilized in correctional and rehabilitation programs. Emphasis on the cognitive approach to behavior change. Development of eclectic personal style of dealing with the correctional client is encouraged. Prerequisite: CORR 260. Offered: Fall.

**CORR 262**

**Counseling Techniques**  
3.00 Credits    Class 2.00    Lab 4.00  
Development of an individualized approach to counseling. Fundamental counseling techniques and procedures are practiced within the framework of their approach in a variety of video lab simulations. Prerequisite: CORR 261. Offered: Winter. Course fee: \$25.

**CORR 265**

**Case Management**  
3.00 Credits    Class 3.00    Lab 2.00  
Evaluation of adjudicated persons by probation, parole agencies and correctional institutions. Emphasizes accurate and objective reporting techniques and developing treatment plans for rehabilitation. Prerequisite: CORR 262. Offered: Spring.

**CORR 280**

**Corrections Current Topics**  
0.25–5.00 Credits    Class 0.25–5.00    Lab 0.00  
Current topics and issues as well as new development in the field of corrections are reviewed, studied and discussed.

**CORR 290**

**Corrections Special Topics**  
1.00–5.00 Credits    Class 1.00–5.00    Lab 0.00



Structured exploration of a specific topic(s) by participants in a group.

**CORR 291****Corrections Individual Study**

1.00-5.00 Credits    Class 1.00-5.00    Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**CORR 292****Corrections Field Experience**

1.00-4.00 Credits    Class 0.00    Lab 12.00-48.00

On-the-job training in a corrections facility through special arrangement with an instructor. Course fee: \$25.

**CORR 294****Corrections Cooperative Work Experience**

2.00-5.00 Credits    Class 1.00    Lab 10.00-40.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**CORR 296****Corrections Practicum**

3.00-7.00 Credits    Class 2.00    Lab 7.00-35.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Course fee: \$20.

**CORR 296 A****Corrections Practicum A**

3.00 Credits    Class 2.00    Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisites: Instructor permission and CORR 298. Offered: Winter. Course fee: \$25.

**CORR 296 B****Corrections Practicum B**

3.00 Credits    Class 2.00    Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisites: Instructor permission and CORR 298. Offered: Spring. Course fee: \$25.

**CORR 297****Corrections Observation Hour**

0.50-3.00 Credits    Class 0.50-3.00    Lab 0.00

Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**CORR 298****Corrections Practicum Orientation**

1.00 Credit    Class 1.00    Lab 2.00

Preparation for practicum including practicum requirements, personalized goals and objectives and job search skills. Offered: Fall.

**CORR 299****Corrections Field Placement**

3.00-4.00 Credits    Class 2.00    Lab 0.00

An alternative to the practicum experience offered to the second year student. The student will be placed with and work in an agency at least half time (280 hours) during the quarter. The agency where the student is placed must be an agency within the student's career choice and be able to provide experience that supplements classroom experience. This is a special arrangement course offered at faculty discretion. Prerequisite: CORR 298. Course fee: \$25.

**CS****Computer Science****CS 100****Program Analysis I**

3.00 Credits    Class 3.00    Lab 2.00

Program logic using the flowchart as a tool to diagram the solution to a written problem. Includes programming terminology, hierarchy of evaluation for arithmetic assignment statements, decision making, counter and accumulator concepts, flowcharting given problems and evaluation of flowcharts. Offered: Fall.

**CS 101****Program Analysis II**

3.00 Credits    Class 3.00    Lab 2.00

Sequel to CS 100 with emphasis on program efficiency and economy. The flowchart is used as the primary tool to diagram problem

solutions. Emphasizes structured design in flowcharting the solution to problems containing counters, accumulators, control breaks and arrays. Prerequisite: CS 100. Offered: Winter.

**CS 110****Introduction to COBOL**

5.00 Credits    Class 4.00    Lab 5.00

COBOL language (American National Standard, 1985) and its implementation in the business environment. Topics include the basic structure of a COBOL program, finding and correcting syntax errors, imperative, arithmetic and conditional statements, editing and truncation rules, performs, redefines, and techniques for management of single dimension arrays. Prerequisite: CS 101. Offered: Spring. Course fee: \$35.

**CS 111****Advanced COBOL**

5.00 Credits    Class 4.00    Lab 5.00

Advanced programming techniques. Includes table searches; two and three dimensional arrays; sequential, indexed, and relative file processing; sorting techniques; subprograms; and modular design. Prerequisite: CS 110. Offered: Fall. Course fee: \$35.

**CS 120****Introduction to Data Processing**

3.00 Credits    Class 3.00    Lab 2.00

Introduction to the College's computer system. Lecture and hands-on laboratory experience covers the main operating system commands, the on-line text editor and the file copier utility. Offered: Fall. Course fee: \$35.

**CS 125****Computer Numbering Systems**

1.00 Credit    Class 1.00    Lab 0.00

Introduction to the principles of numbering systems. Includes binary, octal and hexadecimal conversions, arithmetic operations, byte organization and ASCII and EBCDIC coding schemes. Offered: Winter, Spring.

**CS 140****Job Control and Utilities**

3.00 Credits    Class 3.00    Lab 2.00

Use of current computer operating systems; includes accounting structure, the syntax and operation of system and console operator commands, and available system utility programs. Prerequisite: CS 120. Offered: Spring. Course fee: \$35.

**CS 155****Applied Statistical Packages**

3.00 Credits    Class 3.00    Lab 2.00

Computer statistical packages used to analyze classical decision theory (hypothesis testing) problems. Analysis of marketing information and questionnaire data are emphasized. Offered: Winter. Course fee: \$35.

**CS 200****Introduction to Networking**

3.00 Credits    Class 3.00    Lab 2.00

Concepts and components involved in networking computers for hardware and software resource sharing. Prerequisite: MICS 112. Offered: Winter. Course fee: \$35.

**CS 201****Advanced Networking**

4.00 Credits    Class 3.00    Lab 3.00

Network communication equipment and software, data transmission, topologies and protocols. Focuses on managerial aspects of network administration using practical application. Prerequisite: CS 200. Offered: Fall. Course fee: \$35.

**CS 210****Programming in C++**

3.00 Credits    Class 2.00    Lab 4.00

Basic elements of the C programming language. Includes program elements, program structure, variables, functions and function structure, classes, input and output operations, control statements, data types and declarations, arithmetic operators and expressions, and object oriented programming. Prerequisite: CS 101. Offered: Fall. Course fee: \$35.

**CS 211****Advanced Programming in C++**

3.00 Credits    Class 2.00    Lab 4.00

Prerequisite: CS 210. Offered: Spring. Course fee: \$35.

**CS 214**

**Applications in Information Technology****3.00 Credits**      **Class 2.00**      **Lab 4.00**

Capstone course for the computer science technology. Working individually or in small groups, students design, produce and document a complete system involving current topics or to fulfill an institutional request in the area of information technology. The project may involve aspects of networking and/or programming in 4 GL or COBOL using database and forms management. Prerequisites: CS 240 and CS 280. Offered: Spring. Course fee: \$35.

**CS 220****Programming in RPG****4.00 Credits**      **Class 3.00**      **Lab 3.00**

Principles, logic and coding formats of the RPG II (Report Program Generator II) computer programming language, writing RPG II programs using sequential and indexed sequential files, tables and arrays. Includes using the external sort utility, XSORT, to perform file maintenance and to produce a variety of reports. Prerequisite: CS 101. Offered: Winter. Course fee: \$35.

**CS 240****Database Management****2.00 Credits**      **Class 2.00**      **Lab 2.00**

Concepts of relational databases and SQL (Structured Query Language). Current topics in relational database technology are also covered. Prerequisite: MICS 142. Offered: Winter. Course fee: \$35.

**CS 250****Basic Assembler Language****3.00 Credits**      **Class 3.00**      **Lab 2.00**

Principles of programming in 360/370 ASSEMBLER language. Topics covered include machine code, instruction execution, addressing techniques and various formats of data representation. Computer programming projects are assigned to illustrate programming techniques of the machine language using an IBM 370. Prerequisite: CS 125. Offered: Spring. Course fee: \$35.

**CS 280****Mainframe Applications****4.00 Credits**      **Class 3.00**      **Lab 5.00**

Structure and use of mainframe database processing and management, and the design, implementation, and use of electronic forms for data entry and retrieval. Students create and access typical business files and databases using current HP-3000 database management software, Turbolmage, the HP-3000 form management software, VPLUS, and application programs written in COBOL. Prerequisite: CS 111. Offered: Winter. Course fee: \$35.

**CS 290****Computer Science Special Topics****1.00-5.00 Credits**      **Class 1.00-5.00**      **Lab 0.00**

Structured exploration of a specific topic(s) by participants in a group.

**CS 291****Computer Science Individual Study****1.00-5.00 Credits**      **Class 1.00-5.00**      **Lab 0.00**

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**CS 292****Computer Science Field Experience****1.00-4.00 Credits**      **Class 0.00**      **Lab 12.00-48.00**

On-the-job training in a computer science facility through special arrangement with an instructor.

**CS 294****Computer Science Cooperative Work Experience****2.00-5.00 Credits**      **Class 1.00**      **Lab 10.00-40.00**

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must also be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**CS 296****Computer Science Practicum****2.00 Credits**      **Class 1.00**      **Lab 7.00**

The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**CS 297****Computer Science Observation Hour****1.00-3.00 Credits**      **Class 0.00**      **Lab 15.00-45.00**

Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at

times in the actual work activity.

**CS 298****Computer Science Internship****3.00-9.00 Credits**      **Class 0.00-3.00**      **Lab 20.00-40.00**

On-the-job training in the work place of a cooperating agency. Coordinated by an instructor.

**CULA****Culinary Arts****CULA 100****Overview of Culinary Arts in Institutions****3.00 Credits**      **Class 3.00**      **Lab 0.00**

Overview of the field of culinary arts. Topics include history of food service, safety and sanitation, equipment identification and usage, cooking methods, recipes, menus and presentation of food products. Offered: Fall.

**CULA 101****Introduction to Culinary Arts****2.00 Credits**      **Class 2.00**      **Lab 1.00**

Introduction to the field of culinary arts includes study of culinary history, the role of the chef, kitchen organization, tools and equipment, cooking methods, and basic knife handling and sharpening skills. Offered: Fall. Course fee: \$125.

**CULA 105****Pastries and Desserts****3.00 Credits**      **Class 1.00**      **Lab 4.00**

Preparation of Danish pastries, croissants, puff pastry, choux paste and tortes. Includes introduction to marzipan, gum paste, chocolate molding and pulled sugar. Prerequisite: CULA 115. Offered: Winter, Spring. Course fee: \$125.

**CULA 106****Meat, Poultry, and Seafood Processing****3.00 Credits**      **Class 2.00**      **Lab 3.00**

Meats, poultry and seafood used by the food service industry. Includes identification, grading, yield and portion control. The student participates in cutting various products. Prerequisites: CULA 101, CULA 111 and CULA 112. Offered: Spring. Course fee: \$175.

**CULA 107****Basic Garde Manger****3.00 Credits**      **Class 1.00**      **Lab 4.00**

Creation of buffet table arrangements and displays using cold food materials with emphasis on the use of tools, ice, vegetables, butter and fruit in the preparation. Prerequisite: CULA 112. Offered: Fall, Winter. Course fee: \$150.

**CULA 107 A****Hors d'Oeuvres****1.00 Credit**      **Class 1.00**      **Lab 0.00**

Theory and practical application of this diverse area of culinary arts. Students will experience hands on learning, lecture and research. Course fee: \$125.

**CULA 108****Advanced Garde Manger****3.00 Credits**      **Class 2.00**      **Lab 3.00**

This course presents the creation of the buffet table with emphasis on the art of decoration. Topics include the use of meats, poultry, seafood, fruits and vegetables in developing show platters. The class plans and executes a "Grand Buffet." Prerequisite: CULA 107. Course fee: \$190.

**CULA 109****Safety and Sanitation****2.00 Credits**      **Class 2.00**      **Lab 1.00**

Introductory principles of sanitation and safety in the food service industry. Students develop a comprehensive sanitation and safety program that can be implemented in a food service establishment. Upon successfully passing a standard examination, students are certified by the Educational Foundation of the National Restaurant Association. Offered: Fall.

**CULA 110****Outdoor Cookery and Indigenous Foods****3.00 Credits**      **Class 2.00**      **Lab 3.00**

Introduction to outdoor cookery including environmentally correct camp cookery practices. Indigenous regional foods are researched and discussed. Offered: Spring. Course fee: \$120.

**CULA 111**

**Stocks, Sauces, and Soups****3.00 Credits Class 2.00 Lab 3.00**

Preparation of foods utilized in commercial kitchens including stocks, soups, sauces, vegetables and farinaceous products. Offered: Fall. Course fee: \$100.

**CULA 112****Salads, Sandwiches, and Eggs****3.00 Credits Class 2.00 Lab 3.00**

Introduction to pantry and breakfast cookery including salads, salad dressings, sandwiches and breakfast preparations. Offered: Winter. Course fee: \$100.

**CULA 113****a la Carte Cookery****3.00 Credits Class 1.00 Lab 4.00**

Fundamentals of meat, poultry and seafood cookery. Preparation of entrees cooked to order, accompaniments, garnishing, plate appearance and time management. Prerequisite: CULA 112. Offered: Spring. Course fee: \$150.

**CULA 115****Breads and Baking Basics****3.00 Credits Class 2.00 Lab 3.00**

Bakery products, tools and equipment, weights and measures and the baking process. Preparation of yeast dough products and quick breads. The role of the pastry chef and bake shop management is reviewed. Offered: Winter. Course fee: \$100.

**CULA 116****Hospitality Menu Planning****2.00 Credits Class 2.00 Lab 1.00**

Planning, utilization, pricing and integrating a menu into a commercial food service establishment. The menu concept as it relates to the entire operation is analyzed. Prerequisite: HCTR 110. Offered: Winter, Spring. Course fee: \$50.

**CULA 125****Basic Table Service****3.00 Credits Class 2.00 Lab 3.00**

Training in the art of table service. American, French and Russian service will be presented and practiced. Includes training in the areas of wine and beverage service. Offered: Spring. Course fee: \$25.

**CULA 130****Introduction to Baking Industry****2.00 Credits Class 2.00 Lab 0.00**

Baking history, terminology and organization. Includes study of heat transfer, baking procedures, tools and equipment. Baking careers and professional organizations are also presented. Course fee: \$120.

**CULA 131****Baking Technology****3.00 Credits Class 2.00 Lab 3.00**

The science of baking with a concentration on food nutrition and food chemistry. Develops a basic understanding of baking concepts such as gluten development and the use of leavening agents. Prerequisites: CULA 115 and CULA 130. Course fee: \$140.

**CULA 132****Baking Lab I****5.00 Credits Class 1.00 Lab 12.00**

Introduction to the commercial bakeshop and provides hands-on experience for the beginning baker. Each student is required to complete 132 hours of production in the Ramada Inn kitchen. Prerequisites: CULA 130 and CULA 115. Course fee: \$105.

**CULA 133****Baking Lab II****5.00 Credits Class 1.00 Lab 12.00**

Supervision, production, organization, and advanced baking techniques. Students will log a total of 132 hours in a baking facility and one hour weekly with the instructor for orientation. Prerequisite: CULA 132. Course fee: \$105.

**CULA 134****Baking Lab III****5.00 Credits Class 1.00 Lab 12.00**

Students will log a total of 132 hours of high volume production baking in a baking facility. Students will meet weekly with instructor for one hour of orientation. Prerequisite: CULA 133. Course fee: \$105.

**CULA 136****Yeast Dough Production****3.00 Credits Class 2.00 Lab 3.00**

Concentration on yeast fermentation, retarding and gluten development. The student will produce a wide variety of yeast dough and yeast products. Course fee: \$155.

**CULA 137****Cake Production****3.00 Credits Class 2.00 Lab 3.00**

Baking and decorating various types of cakes and tortes. Provides hands-on baking and advanced decorating techniques for all occasions. Course fee: \$135.

**CULA 138****Classical Pastries****3.00 Credits Class 2.00 Lab 3.00**

Introduction to classical pastries and sugarwork including puff pastry products, choux paste products and classical desserts, advanced decorating techniques and edible display pieces. Prerequisites: CULA 115 and CULA 130. Course fee: \$185.

**CULA 139****Cookie Development****3.00 Credits Class 2.00 Lab 3.00**

Techniques of producing a variety of cookies stressing ingredients and their functions. Hands-on experience baking and decorating cookies. Course fee: \$170.

**CULA 145****Food Products Identification and Purchasing****3.00 Credits Class 3.00 Lab 0.00**

Identification and utilization of various food products used in commercial cooking. Purchasing, receiving, storing and issuing products are reviewed. Offered: Winter. Course fee: \$25.

**CULA 150****Nutrition in Community Food Service Operations****3.00 Credits Class 3.00 Lab 0.00**

Elements of hospitality menu design incorporating current nutritional guidelines. Offered: Fall, Winter.

**CULA 201****Culinary Arts Lab I****6.00 Credits Class 1.00 Lab 15.00**

Introduction to the kitchen environment through on-the-job training in various kitchen positions at the Ramada Inn. Hours include weekends, evenings, days and holidays. Offered: Winter. Course fee: \$50.

**CULA 212****Culinary Arts Lab II****6.00 Credits Class 1.00 Lab 15.00**

Assignment of specific work duties at the Ramada Inn for an average of 20 hours per week. During the quarter, students are instructed in and will perform basic tasks associated with kitchen and dining room operations. Work days include morning, afternoons, evenings, weekends and holidays. Prerequisite: CULA 201. Course fee: \$50.

**CULA 217****Classical and International Cuisine****3.00 Credits Class 2.00 Lab 3.00**

An opportunity for the student skilled in cookery to expand knowledge of food preparation into the area of world respected traditional dishes. Includes conventional methods of preparation for gourmet recipes and convenience foods. Prerequisites: CULA 106 and CULA 218. Offered: Winter, Spring. Course fee: \$150.

**CULA 217 A****Italian Cookery****1.00 Credit Class 1.00 Lab 1.00**

Expand your knowledge and learn world respected traditional dishes prepared in gourmet fashion. Savor the flavor of Italian cookery. Course fee: \$115.

**CULA 217 B****Greek Cookery****1.00 Credit Class 1.00 Lab 1.00**

Expand your knowledge and learn world respected traditional dishes prepared in gourmet fashion. Savor the flavor of Greek cookery. Course fee: \$115.

**CULA 217 C****French Cookery****1.00 Credit Class 1.00 Lab 1.00**

Expand your knowledge and learn world respected traditional dishes prepared in gourmet fashion. Savor the flavor of French cookery. Course fee: \$115.

**CULA 217 D**  
**Oriental Cooking**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Students will explore the methods and theory of sime which dates back thousands of years. This hands-on cooking class will provide students with theory and practice of cooking methods, presentation, and the Oriental art of bringing out the natural flavor of the food. Course fee: \$115.

**CULA 218**  
**American Regional Cuisine**  
 3.00 Credits      Class 1.00      Lab 4.00  
 Introduction to American cuisines with an emphasis on volume food production of American regional cuisines through plating, garnishing and time management. Cuisines are studied, and menus are planned, prepared and served. Prerequisites: CULA 111, CULA 112 and CULA 101. Offered: Winter, Spring. Course fee: \$150.

**CULA 229**  
**Culinary Arts Salon**  
 1.00 Credit      Class 0.00      Lab 2.00  
 Preparation for the challenges of hot and cold culinary salons. Show pieces, buffet setup, materials and equipment flow, and team organization. Course fee: \$105.

**CULA 240**  
**Festival Catering Production**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Special challenges in preparing food for large volume festival food service. Offered: Fall.

**CULA 241**  
**Festival Catering Management**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Special challenges in preparing food for large volume festival food service.

**CULA 250**  
**Culinary Capstone Experience**  
 3.00 Credits      Class 1.00      Lab 4.00  
 A final synthesis and evaluation course for the culinary student. Students practice and prepare for the culinary program's final examination through designed exercises. These preparations culminate in a written and final practical cooking examination designed by the American Culinary Federation and intended to determine the student's ability to enter the hospitality industry in culinary arts. Prerequisites: CULA 105, CULA 106, CULA 107, CULA 218, CULA 294. Offered: Spring. Course fee: \$125.

**CULA 262**  
**Candy and Confections**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Candy making techniques with an emphasis on chocolate molding, dipping and enrobing, hard candies, marzipan work and specialty desserts. Course fee: \$160.

**CULA 263**  
**Bakeshop Operations**  
 2.00 Credits      Class 2.00      Lab 0.00  
 Development, management and organization of wholesale, retail and in-house bake and pastry shops. Course fee: \$140.

**CULA 270**  
**Catering**  
 3.00 Credits      Class 1.00      Lab 4.00  
 Review and discussion of special equipment and laws regarding the movement and serving of food. Includes planning an off premise catering function and determining the profitability of the function. Offered: Fall, Spring. Course fee: \$80.

**CULA 275**  
**Food and Beverage Manager**  
 5.00 Credits      Class 3.00      Lab 8.00  
 A managerial overview of food and beverage operations including: management organization, menu planning, material control, recipes and costing analysis, personnel methodology, equipment, facilities, and food production methods. Course fee: \$80.

**CULA 281**  
**Food Lab I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 The student, assigned to specific work groups in an institutional setting of Hocking College, practices basic techniques of food preparation, sanitation and dining room operation. The development of behaviors which demonstrate cooperative work habits are emphasized. Offered:

Winter.

**CULA 282**  
**Food Lab II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 The student, assigned to specific work groups in an institutional setting of Hocking College, practices techniques of food preparation, sanitation, plate and multiple course presentation and dining room operation. Emphasis is placed on the behavior which demonstrates cooperative work habits and food production techniques. Offered: Fall.

**CULA 283**  
**Food Lab III**  
 3.00 Credits      Class 2.00      Lab 3.00  
 The student, assigned to specific work groups in an institutional setting of Hocking College, practices advanced food preparation skills, kitchen and dining room management skills, advanced table service, sanitation and critical analysis of operation efficiency. Offered: Spring.

**CULA 290**  
**Culinary Arts Special Topics**  
 1.00-5.00 Credits      Class 1.00- 5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**CULA 291**  
**Culinary Arts Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged with instructor permission on an individual basis.

**CULA 292**  
**Culinary Arts Field Experience**  
 1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
 On-the-job training in a culinary arts facility through special arrangement with an instructor. Course fee: \$25.

**CULA 293**  
**Culinary Arts Directed Practice**  
 2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
 Directed practice hour is one during which a student receives individual instruction in the performance of a particular function from the teacher assigned, and then is observed and critiqued in the repeat performance of that function by the teacher. Course fee: \$25.

**CULA 294**  
**Culinary Arts Cooperative Work Experience**  
 6.00 Credits      Class 2.00      Lab 40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. Prerequisites: CULA 109, CULA 113, CULA 125, CULA 106, CULA 150, CULA 201. Course fee: \$25.

**CULA 296**  
**Culinary Arts Practicum**  
 2.00-7.00 Credits      Class 1.00      Lab 7.00-42.00  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Course fee: \$25.

**CULA 297**  
**Culinary Arts Observation Hour**  
 1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity. Course fee: \$25.

**CULA 298**  
**Culinary Arts Internship**  
 3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor. Prerequisites: CULA 101, CULA 201, CULA 111, CULA 1112, CULA 115, CULA 109. Course fee: \$25.

## **DD** **Drafting and Design**

**DD 100**  
**Blueprint Reading**  
 1.00 Credit      Class 1.00      Lab 2.00  
 Reading and comprehension of blueprints ranging from simple to complex machine parts and/or simple to complex architectural structures. Exploration of careers within the field of drafting including salaries and geographic locations of major employers. Offered: Winter. Course fee: \$10.

<b>DD 101</b> <b>Engineering Drawing I</b> 3.00 Credits      Class 1.00      Lab 5.00 Provides a basic understanding and interpretation of the language of drawing for the beginning engineering student. Includes an introduction to the language of drawing, use and care of drafting instruments, lettering, geometric construction, sketching, multiview drawing and dimensioning. Offered: Summer, Fall, Winter, Spring. Course fee: \$15.	PACE		
<b>DD 102</b> <b>Engineering Drawing II</b> 3.00 Credits      Class 1.00      Lab 5.00 Intermediate drafting concepts including sectioning, auxiliary views, parallel line pictorial drawings, working drawings and piping drawings. Prerequisite: DD 101. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 103</b> <b>Engineering Drawing III</b> 3.00 Credits      Class 1.00      Lab 5.00 Specialized mechanical drafting concepts and detailing. Includes sheet metal layouts, gearing, cam calculations and specification, threads, fasteners, springs, introductory geometric tolerancing and true positioning, and presentation graphics. Prerequisite: DD 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 104</b> <b>Introduction to AutoCAD</b> 1.00 Credit      Class 1.00      Lab 1.00 Introduction to personal computer based drafting. Explanation of computer drawing and computer drawing applications. Includes an overview of MS-DOS, highlighting the common features used in AutoCAD. Concurrent with DD 105. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.	PACE		
<b>DD 105</b> <b>AutoCAD Applications</b> 2.00 Credits      Class 1.00      Lab 3.00 Utilization of drafting software including commands and techniques necessary to complete orthographic mechanical drawings. Prerequisite: DD 101. Offered: Summer, Fall, Winter, Spring. Course fee: \$40.	PACE		
<b>DD 106</b> <b>AutoCAD for Geographic Information Systems</b> 3.00 Credits      Class 2.00      Lab 3.00 Introductory course in AutoCAD tailored specifically for skills needed in GIS operations. Course fee: \$60.			
<b>DD 110</b> <b>Discover Drafting</b> 1.00 Credit      Class 1.00      Lab 0.00 Exploration of careers within the field of drafting, salaries and geographic locations of major employers. Offered: Fall. Course fee: \$15.			
<b>DD 112</b> <b>AutoCAD and Drawing</b> 3.00 Credit      Class 1.00      Lab 6.00 Offered: Spring.			
<b>DD 115</b> <b>AutoCAD Concepts I</b> 2.00 Credits      Class 1.00      Lab 3.00 A computer based orthographic drawing course. Includes standard procedures for layout, design and execution of industrial design drawings while learning basic and intermediate skills necessary to manipulate the personal computer based drafting program, AutoCAD. Prerequisites: DD 101 and DD 203. Offered: Winter. Course fee: \$60.			
<b>DD 200</b> <b>Architecture I – Detailing</b> 3.00 Credits      Class 1.00      Lab 7.00 Terms, symbols and details of an architectural set of working drawings as applied to the design of residential buildings. Prerequisite: DD 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 201</b> <b>Architecture II – Residential</b> 3.00 Credits      Class 1.00      Lab 5.00 Terms, symbols, details and codes of an architectural set of working drawings as applied to the design of commercial buildings. Prerequisite: DD 200. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 202</b> <b>Advanced Drafting/CAD</b>	PACE		
<b>3.00 Credits</b>	<b>Class 2.00</b>	<b>Lab 4.00</b>	Technical drafting representation as applied to industrial products and process. Computer aided and traditional drafting used in the study of advanced dimensioning practices, tolerancing, design drawings, working drawings and welding drawings. Prerequisite: DD 103. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.
<b>DD 203</b> <b>Electrical Drawing</b> 4.00 Credits      Class 2.00      Lab 5.00 Electrical drawing standards, graphic symbols, diagram layouts and part identification through construction of schematic drawings, block diagrams and printed circuit board layout. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 204</b> <b>Descriptive Geometry</b> 3.00 Credits      Class 2.00      Lab 4.00 Graphic solutions to problems relating to points, lines, planes and solids. Includes space measurements and visualization, first auxiliary views and measurements, line definition and description, second auxiliary views, plane definition and description, perpendiculars, skew lines and solids. Prerequisite: DD 103. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 205</b> <b>Die Design</b> 3.00 Credits      Class 2.00      Lab 4.00 Introduction to the design and detailing of typical industrial die sets. Topics include die calculation, blanking dies, piercing dies and bending dies. Prerequisite: DD 202. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 207</b> <b>Electronic Drawing</b> 3.00 Credits      Class 2.00      Lab 4.00 Non-major course introducing drafting concepts and procedures as related to the production of various types of drawings used in electronic technologies. Topics include electrical drawing standards, electronic symbology, diagram layouts and parts identification. Offered: Summer, Fall, Winter, Spring. Course fee: \$60.	PACE		
<b>DD 210</b> <b>Geometric Tolerancing and Dimensioning</b> 2.00 Credits      Class 2.00      Lab 0.00 Methods of indicating geometric tolerances by means of geometric characteristic symbols are discussed and applied to specific situations. Prerequisites: DD 103 and DD 203. Offered: Fall. Course fee: \$60.			
<b>DD 215</b> <b>AutoCAD Concepts III</b> 3.00 Credits      Class 2.00      Lab 4.00 Methods and procedures for automating repetitive CAD functions and manipulating the personal computer based drafting program, AutoCAD, to increase productivity. Prerequisite: DD 115. Offered: Fall. Course fee: \$70.			
<b>DD 290</b> <b>Drafting and Design Special Topics</b> 0.50–5.00 Credits      Class 1.00–5.00      Lab 0.00 Structured exploration of a specific topic(s) by participants in a group.	PACE		
<b>DD 291</b> <b>Drafting and Design Individual Study</b> 1.00–5.00 Credits      Class 1.00–5.00      Lab 0.00 Individual study or research. Topics are arranged with instructor permission on an individual basis.			
<b>DD 292</b> <b>Drafting and Design Field Experience</b> 1.00–4.00 Credits      Class 0.00      Lab 12.00–48.00 On-the-job training in a drafting and design facility through special arrangement with an instructor.			
<b>DD 294</b> <b>Drafting and Design Cooperative Work Experience</b> 2.00–5.00 Credits      Class 1.00      Lab 10.00–40.00 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.			
<b>DD 296</b> <b>Drafting and Design Practicum</b>			

**2.00-7.00 Credits Class 1.00 Lab 7.00-42.00**  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**DD 297**

**Drafting and Design Observation Hour**  
**1.00-3.00 Credits Class 0.00 Lab 15.00-45.00**  
Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**DD 298**

**Drafting and Design Internship**  
**3.00-9.00 Credits Class 0.00-3.00 Lab 20.00-40.00**  
On the job training in the work place of a cooperating agency. Coordinated by an instructor.

## **DT Dietetic**

**DT 100 PACE**

**Survey of Dietetics**  
**2.00 Credits Class 2.00 Lab 0.00**  
A survey of the profession of dietetics, the objectives of a dietetic department, and the responsibilities of assistants, technicians, and dietitians in a variety of health care facilities. Dietetic personnel are defined as nutritionists, supervisors, and educators. Topics covered include definition of the profession, types of dietetic services, level of training in dietetics, policies and procedures, management responsibilities in dietetics and some federal regulations that affect nursing homes. Offered: Summer, Fall, Winter, Spring.

**DT 101**

**Dietetic Directed Practice I**  
**2.00 Credits Class 1.00 Lab 7.00**  
Provides opportunities for the student to practice material taught in course work offered during the first quarter. Concurrent with DT 102, HRCA 110, MATH 201 and COMM 122. Prerequisite: OAT 180. Offered: Fall. Course fee: \$30.

**DT 102**

**Basic Nutrition**  
**5.00 Credits Class 5.00 Lab 0.00**  
Effect of nutritional status on health, detailing specific nutrient requirements of adults to maintain good health. Topics include nutrient sources and functions, energy needs, digestion and metabolism, food guide pyramid, dietary guidelines, provision of good nutrition to low income families, food and nutrition misconceptions and food labeling laws. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**DT 103**

**Food Preparation Principles**  
**3.00 Credits Class 2.00 Lab 4.00**  
Principles of food preparation of eggs and dairy products, breads, fruits, vegetables, soups and sauces, meat, poultry and fish. Emphasis on proper techniques to prepare palatable foods while retaining nutritional value. Offered: Winter. Course fee: \$30.

**DT 104**

**Food Preparation Principles for Children**  
**2.00 Credits Class 1.00 Lab 3.00**  
Food preparation principles appropriate for infants and children. Topics include food safety, food sanitation, food borne illness, applications of menu planning and food preparation techniques. Offered: Spring. Course fee: \$20.

**DT 106**

**Food Production Management**  
**3.00 Credits Class 3.00 Lab 0.00**  
Planning, organizing, controlling and evaluating a food service operation in a health care institution. Topics include recipe standardization, portion control, inventory control, production scheduling, equipment use and maintenance, food service methods and quality assurance. Offered: Winter.

**DT 109**

**Infant and Early Child Nutrition**  
**1.00 Credit Class 1.00 Lab 0.00**  
Basic nutrition, breast and bottle-feeding, nutrition for infants and young children. Offered: Winter.

**DT 110**

**Applied Nutrition**  
**3.00 Credits Class 3.00 Lab 0.00**

Description of the particular nutritional concerns of people throughout the lifespan: pregnancy, childhood, adolescence, maturity, dental health, physical exercise, weight maintenance and the interpretation of nutrition information and diet fads. Prerequisite: DT 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**DT 110 A PACE**

**Maternal and Infant Nutrition**  
**1.00 Credits Class 1.00 Lab 0.00**  
Nutritional needs during growth such as pregnancy, lactation, infancy and childhood. Includes menu planning for such individuals as well as special needs of each population groups. Prerequisite: DT 102 or NT 103. Offered: Summer, Fall, Winter, Spring.

**DT 111**

**Dietetic Directed Practice II**  
**2.00 Credits Class 1.00 Lab 7.00**  
Practice of material taught in course work offered during the second quarter. Assignment to a hospital or long term care facility one day per week and meets with an instructor once a week. Assignments include diet histories, food production and office procedures. Prerequisites: DT 101, DT 102 and HTR 110. Offered: Winter. Course fee: \$35.

**DT 119**

**Food Purchasing for Health Care Institutions**  
**3.00 Credits Class 3.00 Lab 0.00**  
Food purchasing function of a health care institution. Government regulations and controls, development and use of forms to aid in the purchasing operation, writing specifications to insure standards in food commodities, exploring the varieties and purchase forms of major food categories and determining amounts of food to purchase for number and size of portions. Prerequisite: DT 106. Offered: Spring.

**DT 120 PACE**

**Normal and Modified Menu Planning**  
**3.00 Credits Class 3.00 Lab 0.00**  
Individual and institutional menu planning. Practice in using the diet manual to plan basic modified diets for persons in health care facilities including modifications of sodium, diabetic, fiber, bland, protein, fat and liquid diets. Prerequisite: DT 102. Offered: Summer, Fall, Winter, Spring.

**DT 121**

**Dietetic Directed Practice III**  
**2.00 Credits Class 1.00 Lab 7.00**  
An opportunity to practice material taught in the course work offered during the third quarter. Prerequisite: DT 111. Offered: Spring. Course fee: \$35.

**DT 122 PACE**

**Supervision in Dietetics**  
**3.00 Credits Class 3.00 Lab 0.00**  
Leadership and supervision characteristics of people who supervise employees in a dietary department. Employee needs, leadership characteristics and styles, motivation, direction and control, dealing with personnel problems, interviewing, training, counseling and evaluation employees and effective communications at work. Offered: Spring.

**DT 200**

**Diet Therapy I**  
**3.00 Credits Class 3.00 Lab 0.00**  
Nutritional intervention used in diseases of the endocrine, cardiovascular and renal systems. Concurrent with HC 110. Prerequisites: DT 110 and DT 120. Offered: Summer, Fall, Winter, Spring.

**DT 202**

**Nutrition Care Process**  
**3.00 Credits Class 3.00 Lab 0.00**  
Assessment, planning, implementation, evaluation and documentation responsibilities of the dietetic technician. Nutrition care process is reviewed including charting, nutrition care plans, diet histories and the clinical, biochemical and anthropometric indices of nutritional status. Prerequisite: DT 110. Offered: Summer, Fall, Winter, Spring.

**DT 205**

**Dietetic Directed Practice IV**  
**2.00 Credits Class 1.00 Lab 7.00**  
Practice of nutrition care procedures and food service management principles in health care settings. Work with patients who require therapeutic management of endocrine, cardiovascular or renal disease through diet modification. Includes purchasing, tray line supervision, cleaning and sanitizing procedures, quality assurance and developing a product information file. Prerequisite: DT 121. Offered: Fall. Course fee: \$30.

- DT 210**  
Diet Therapy II  
3.00 Credits      Class 3.00      Lab 0.00  
Nutritional intervention used in febrile illness, diseases of the gastrointestinal, musculoskeletal and biliary systems, surgical and stressed patients, neoplastic diseases, allergies, food medication interactions and childhood illnesses. Prerequisite: DT 200. Offered: Summer, Fall, Winter, Spring.
- DT 212**  
Nutrition Education Methods  
2.00 Credits      Class 2.00      Lab 0.00  
Development of skills in the teaching/learning process in nutrition education with individuals and groups. The student develops and uses lesson plans, teaching materials and audiovisual aids in nutrition education. Prerequisites: DT 110 and DT 200. Offered: Summer, Fall, Winter, Spring.
- DT 215**  
Dietetic Directed Practice V  
2.00 Credits      Class 1.00      Lab 7.00  
Practice of nutrition care procedures and food service management in a health care setting. The student works with patients who require dietary management of gastrointestinal, biliary, and neoplastic diseases, with surgical patients, and with patients who are physically stressed and require nutrition supplementation. Assignments also include employee training and evaluation, safety engineering and training, and planning production schedules. Prerequisite: DT 205. Offered: Winter. Course fee: \$35.
- DT 220**  
Current Topics in Dietetics  
0.25-2.00 Credits      Class 0.25-2.00      Lab 0.00  
An opportunity to explore topics of professional interest in greater depth and to present nutrition literature findings. Prerequisites: DT 200 and DT 210. Offered: Spring. Course fee: \$10.
- DT 225**  
Dietetic Directed Practice VI  
3.00 Credits      Class 1.00      Lab 10.00  
Practice of nutrition care in the hospital dietary department, community nutrition education program, school food service and in long term care facilities. The student assesses dietary habits and nutritional needs, writes care plans, performs dietary department activities, evaluates modified recipes and instructs patients as assigned. Prerequisite: DT 215. Offered: Spring. Course fee: \$35.
- DT 230**  
Management of Quantity Food Systems  
3.00 Credits      Class 3.00      Lab 0.00  
Overview of institutional food services. Management organization, menu planning, material control, personnel methods, equipment and facilities are discussed from an institutional perspective. Prerequisites: DT 120 and DT 122. Offered: Winter.
- DT 290**  
Dietetic Special Topics  
0.50-5.00 Credits      Class 0.50-5.00      Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.
- DT 291**  
Dietetic Individual Study  
1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
Individual study or research. Topics are arranged on an individual basis with instructor permission.
- DT 292**  
Dietetic Field Experience  
1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
On-the-job training in a dietetics facility through special arrangement with an instructor. Course fee: \$25.
- DT 293**  
Dietetic Directed Practice  
2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function. Course fee: \$25.
- DT 294**  
Dietetic Cooperative Work Experience  
2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
An on- or off-campus paid work experience coordinated by a faculty

member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Course fee: \$25.

- DT 296**  
Dietetic Practicum  
2.00-7.00 Credits      Class 1.00      Lab 7.00-42.00  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Course fee: \$25.

- DT 297**  
Dietetic Observation Hour  
1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

- DT 298**  
Dietetic Internship  
3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00  
On the job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$25.

## EC E-Commerce

- EC 100**  
Internet Webmaster I  
4.00 Credits      Class 4.00      Lab 0.00  
Basic knowledge of E-Commerce including terms, internet infrastructure, client software, HTML tags, search engines, network topologies, network hardware devices, network protocols and collecting customer information. Offered: Fall. Course fee: \$200.

- EC 101**  
Business Needs Analysis  
3.00 Credits      Class 3.00      Lab 0.00  
Explores and applies emerging business needs analysis models focusing on what companies must be doing today if they are to be competitive in the future. Includes SWOT (strengths, weaknesses, opportunities, threats) Analysis, BPM (Business Process Management) Analysis, JAD (Joint Application Development), MBM (Market Based Management) Analysis, TOC (Theory of Constraints) Analysis and Competency Based Analysis. Offered: Winter.

- EC 102**  
The Internet as a Business Platform  
3.00 Credits      Class 3.00      Lab 0.00  
Introduces the tools of e-commerce on the Internet utilizing search engine techniques, installing plug-ins, networking fundamentals, TCP/IP and electronic servers. Offered: Fall. Course fee: \$25.

- EC 110**  
Marketing on the Internet  
4.00 Credits      Class 4.00      Lab 0.00  
Basic knowledge of the internet as a marketing tool, digital technologies, networks, consumer online behavior, web business models, customer relationship support, new product development, online community building, internet pricing models and e-marketing plans. Offered: Winter. Course fee: \$35.

- EC 115**  
E-Commerce Law, Legal Issues, and Ethics  
3.00 Credits      Class 3.00      Lab 0.00  
Basic knowledge of legal issues surrounding information security, online transactions, rights in electronic commerce, regulating information content and regulating online content. Offered: Winter. Course fee: \$35.

- EC 130**  
Web Market Research  
3.00 Credits      Class 2.00      Lab 3.00  
Basic knowledge of e-marketing, internet users and behaviors, product and pricing, e-marketing communication, the internet as a distribution channel, customer relationship management, leveraging technologies and e-marketing planning. Offered: Spring. Course fee: \$35.

- EC 150**  
Advanced Internet Networking and Security  
3.00 Credits      Class 3.00      Lab 0.00  
Prerequisite: EC 100. Offered: Spring. Course fee: \$35.

- EC 200**

**Internet Webmaster II**

4.00 Credits Class 3.00 Lab 2.00

Creation and management of web sites with tools such as Macromedia Dreamweaver 3.0 and Flas 4.0, FrontPage 2000, Dynamic HTML, and various multimedia and CSS standards. Students also develop third-generation web sites, evaluate design tools, discuss future technology standards, and explore the incompatibility issues surrounding current browsers. The course focuses on theory, design and web construction, along with information architecture concepts, web project management, scenario development and performance evaluations. Prerequisite: EC 100. Offered: Winter. Course fee: \$200.

**EC 201****Internet Webmaster III**

4.00 Credits Class 3.00 Lab 2.00

How to conduct business online and the technological issues associated with constructing an electronic-commerce site. Students implement a genuine transaction-enabled business-to-consumer site, examine strategies and products available for building electronic-commerce sites, examine how such sites are managed, and explore how they can complement an existing business infrastructure. Includes hands-on experience implementing the technology to engage cardholders, merchants, issuers, payment gateways and other parties in electronic transactions. Prerequisite: EC 200. Offered: Spring. Course fee: \$200.

**EC 202****Advanced Internet Systems Management**

4.00 Credits Class 4.00 Lab 0.00

A comprehensive course on implementing mission-critical services on the Windows NT 4.0 and LINUX 6.1 platforms. Offered: Summer, Fall, Winter, Spring. Course fee: \$1300.

**EC 203****Internet Working Professional**

4.00 Credits Class 4.00 Lab 0.00

A comprehensive course on TCP/IP concepts which enable the network professional to effectively plan, deploy and manage a TCP/IP enterprise network. Prerequisite: EC 202 Offered: Summer, Fall, Winter, Spring.

**EC 204****Network Security Professional**

4.00 Credits Class 4.00 Lab 0.00

A comprehensive course on performing phases of a security audit, including discovery and penetration, and how to defeat unauthorized users from controlling company networks. Prerequisites: EC 202 and EC 203. Offered: Summer, Fall, Winter, Spring.

**EC 205****E-Commerce Banking and Finance**

3.00 Credits Class 2.00 Lab 3.00

Hardware and software platforms to perform financial transactions over the internet, secure protocols, authentication methods, certificate servers, SET transactions, automated clearing houses, electronic fund transfers and legal issues. Offered: Fall. Course fee: \$35.

**EC 210****Supply Chain Management**

3.00 Credits Class 3.00 Lab 0.00

Use of technologies to manage e-commerce supply chains over the internet, customer value chains, supply chain software applications, EDI transactions, vendor and supplier value chains. Offered: Winter. Course fee: \$35.

**EC 212****E-Commerce Brand Management**

3.00 Credits Class 3.00 Lab 0.00

Use of traditional and internet marketing strategies to build brand awareness of products. Includes analyzing successful internet companies such as Yahoo, Dell, Amazon and Cisco and their branding strategies, banner ads, e-mail campaigns and community building. Offered: Winter. Course fee: \$35.

**EC 250****E-Commerce Regulation**

3.00 Credits Class 3.00 Lab 0.00

International and US laws and regulations surrounding e-commerce transactions, including tariffs, taxes, cyberspace laws, governing organizations, data privacy, shipping regulations and digital conflict resolution. Offered: Spring. Course fee: \$35.

**EC 280****E-Commerce Current Topics**

0.25-3.00 Credits Class 0.25-3.00 Lab 0.00

Current issues involving e-commerce, including regulations, e-commerce software, business models and laws. Offered: Spring. Course

fee: \$35.

**EC 290****E-Commerce Special Topics**

0.25-3.00 Credits Class 0.25-3.00 Lab 0.00

**EC 296****E-Commerce Practicum**

2.00-3.00 Credits Class 1.00 Lab 8.00-16.00

Placement with an e-commerce employer. Offered: Spring.

**ECO****Ecotourism****ECO 100****Introduction to Ecotourism**

4.00 Credits Class 2.00 Lab 6.00

An overview of ecotourism. The meaning(s) of environmentally responsible travel and visitation, as well as the complexities of meshing tourists with protected cultural and natural resources areas, are studied. Details components such as visitors, resource conservation, interpretive services, impacts on local communities, sustainable development, hospitality and eco-ethics. Weekly field trips to local ecotourism sites are used to illustrate the academic material. Offered: Fall. Course fee: \$60.

**ECO 101****Island Resource Planning and Management**

3.00 Credits Class 2.00 Lab 3.00

Basic theories and principles of sustainable development and ecosystem management as they apply to a small island/developing nation's natural resources. Includes planning, development, and implementation of an effective management plan and the role of ecotourism enterprises in these processes. Offered: Fall. Course fee: \$396.

**ECO 108****Sustainable Development**

2.00 Credits Class 1.00 Lab 3.00

Study in developing ventures that are environmentally, economically and socially sustainable. The focus is on environmental impact, economic feasibility and maintaining regional cultural integrity. Ecotourism, tourism paying for conservation, local economic development, education and business development regionally are addressed. Offered: Winter. Course fee: \$35.

**ECO 115****Ecotour Packaging and Marketing**

4.00 Credits Class 3.00 Lab 3.00

Programming, staffing, scheduling, budgeting, travel, food and evaluating equitours. Offered: Winter. Course fee: \$35.

**ECO 117****Ecotourism Business**

3.00 Credits Class 3.00 Lab 1.00

Examination of steps taken to build a private business in ecotourism and adventure travel. Skills include developing a business plan, financial management, accounting, customer service, human resource management, analysis of business risk and meeting industry standards. Offered: Winter.

**ECO 128****Basic Rock Climbing**

1.50 Credits Class 0.75 Lab 2.25

Serves to introduce the participant to the various methods, equipment and techniques that are being used currently in the sport of rock climbing. These subjects will include but not be limited to rock climbing equipment, selection and use, climbing methods, movement on the rock, route grading, belaying the climber, top roping and the basic fundamentals of lead climbing. Proper use, storage and care of the equipment will be stressed. Safety procedures and practices shall be the ultimate rule in this class. It should be noted that this class requires a great deal of physical stamina and agility. Prerequisites: RNGR 123. Course fee: \$75.

**ECO 131****Ecotourism Lodge and Field Station Management**

3.00 Credits Class 1.00 Lab 6.00

Field station operation including day to day hospitality aspects for guests such as food and beverage service, rooms and accommodations, safety and security, and emergency response. Operation and maintenance of the facilities, vehicles, and watercraft is addressed. The lab portion of this course involves hands-on problem solving and planning exercises for each of the topics under study. Offered: Fall.



Course fee: \$348.

**ECO 144****Canoeing I – Fundamentals**

1.00 Credit      Class 0.00      Lab 2.00

Fundamentals of canoeing as prescribed by the American Red Cross including choice of canoes for particular activities, strokes necessary for flatwater paddling and simple rescue techniques. Offered: Spring. Course fee: \$70.

**ECO 145****Self and Wind Propelled Watercraft**

3.00 Credits      Class 0.00      Lab 7.00

Covers basic navigational skills, terminology and safety issues related to motorized watercraft, including deep-water sailing (may include wind surfing, sea kayaking, and dinghy operation). Emphasis is placed on supervision of these activities in an educational or recreational setting, as well as maintenance of the associated equipment. Offered: Fall. Course fee: \$408.

**ECO 146****Rafting**

2.00 Credits      Class 0.00      Lab 4.00

Covers basic rafting skills, safety, visitor involvement, and operation. Offered: Spring. Course fee: \$150.

**ECO 154****Canoeing II – Whitewater**

2.00 Credits      Class 0.00      Lab 4.00

An introduction to river paddling in canoes. Includes river reading, strokes and techniques specific to fast moving water. Safety is stressed throughout the course. Prerequisite: NRM 113 and ECO 144. Offered: Spring. Course fee: \$150.

**ECO 155****Whitewater Rescue**

1.00 Credit      Class 0.00      Lab 2.00

Designed for recreational paddlers or those teaching recreational paddlers, each student practices skills on mock river accidents such as pinning and entrapment, concentration on self rescue, proper use of throw bags, stabilization, snag line techniques and two drag systems on moving water. Prerequisites: ECO 144 and ECO 180. Offered: Spring. Course fee: \$70.

**ECO 177****Open Water SCUBA Diver (PDIC)**

3.00 Credits      Class 2.00      Lab 3.00

This SCUBA course meets or exceeds the standards set by the Recreational Scuba Training Council (RSTC), Professional Diving Instructors Corporation (PDIC), and the National Park Service (NPS) for Open Water dive certification and NPS-4 Diver In Training (DIT) status. The course consists of, but is not limited to: a minimum of 15 hours of lecture concerning diver physics, equipment usage, safety rules and procedures, first aid as related to the diver and the aquatic environment. A minimum of 15 hours of pool sessions is also included which details the water skills necessary to using Self-Contained Underwater Breathing Apparatus (SCUBA) safely and effectively. After the required classroom, pool hours and competencies have been met two days of open water diving will be conducted. The participant will conduct two dives on each of those two days for certification and evaluation purposes. Course fee: \$235.

**ECO 178****Ropes Course Facilitation**

2.00 Credits      Class 1.00      Lab 3.00

Provides experience to act as a high ropes course instructor assistant and as a primary instructor for low ropes and initiatives. Successful participants will need to work with the lead instructor for at least 20 contact hours before final certification. Facilitation skills will be practiced and evaluated for successful completion of the course. Course fee: \$250.

**ECO 180****Kayaking I – Fundamentals**

1.00 Credit      Class 0.00      Lab 2.00

American Red Cross certification course which teaches the strokes necessary to control a whitewater kayak in flat and moving water and several rescue techniques including the eskimo roll. Offered: Spring. Course fee: \$70.

**ECO 181****Kayaking II – Whitewater**

2.00 Credits      Class 0.00      Lab 4.00

An American Red Cross certification course which teaches techniques specific to fast moving water. River reading skills are developed and

safety is stressed throughout the course. Prerequisite: ECO 180. Offered: Spring. Course fee: \$150.

**ECO 183****Low Impact Camping Equipment**

1.00 Credit      Class 1.00      Lab 1.00

Camping equipment and how to use it properly to avoid damage to the often fragile environment that is encountered in "wilderness" travel. The emphasis is on choice and fitting of equipment and specific techniques for low impact travel and camping. Offered: Spring. Course fee: \$35.

**ECO 185****Resource Area Management**

3.00 Credits      Class 2.00      Lab 3.00

This course involves the process of master planning for natural/cultural resource management areas. Areas of study include land acquisition, boundaries, resource inventories, planning of access ways, days use facilities, concessions, interpretive systems and resource maintenance and management strategies. The lab portion of this course consists of planning exercises in the field at a resource management area, completion of a master management plan for the assigned resource area is required. Offered: Winter.

**ECO 188****Camping Equipment and Backpacking**

3.00 Credits      Class 1.00      Lab 6.00

A survey of equipment and techniques necessary for low impact camping. Includes a three-day backpacking trip. Course fee: \$75.

**ECO 199****Open Water SCUBA Diver (PADI)**

3.00 Credits      Class 2.00      Lab 3.00

Skin diving and SCUBA diving, leading to PADI (Professional Association of Dive Instructors) Open Water Diver and PADI Advanced Open Water Diver certifications. Offered: Fall. Course fee: \$678.

**ECO 217****Wilderness EMT**

3.00 Credits      Class 2.00      Lab 3.00

Special problems associated with prolonged patient care, severe environments, and limited equipment will be addressed. This is the definitive medical training course for all rural EMSD providers and wilderness rescue team members. Includes emergency rescue simulations. Course fee: \$230.

**ECO 229****Wilderness First Responder**

3.00 Credits      Class 1.00      Lab 6.00

Immediate care for an injured or suddenly ill person in remote areas is covered. Offered: Winter, Spring. Course fee: \$450.

**ECO 230****Northwoods Ecolodge Management**

3.00 Credits      Class 1.00      Lab 6.00

Following successful completion of the first quarter, eco-tour lab in the form of a field trip will be taken each quarter. These are experiential courses which help to illustrate the quarter's academic and lab experiences. These trips are taken to eco-tour or eco-resort sites which are considered as providing eco/environmental experiences. A critiqued case study format is employed in these programs. Offered: Fall. Course fee: \$300.

**ECO 283****Adventure Leadership – Flatwater Paddling**

5.00 Credits      Class 2.00      Lab 9.00

Develops adventure leadership skills using an extended flatwater paddling trip and the wilderness educators. Prerequisites: REC 113 and NR 144. Offered: Spring. Course fee: \$350.

**ECO 287****Adventure Leadership – Whitewater Paddling**

5.00 Credits      Class 2.00      Lab 9.00

Covers all phases of expedition management from conception to completion of trip and includes an expedition of at least seven days. Prerequisite: ECO 154. Offered: Spring. Course fee: \$450.

**ECO 289****Adventure Leadership – Backpacking**

5.00 Credits      Class 2.00      Lab 9.00

This class develops the student's ability to manage a backpacking expedition, focusing on experiential training through vehicle of an extended trip in the wilderness. Prerequisite: INTP 250 and INTP 258. Course fee: \$450.

**ECO 290**  
**Ecotourism Special Topics**  
 0.25-5.00 Credits    Class 0.25-5.00    Lab 0.00  
 A structured exploration of a specific topic(s) by participants in a group.

**ECO 292**  
**Ecotourism Field Experience**  
 3.00 Credits    Class 0.00    Lab 36.00  
 This required course allows the participants to select the area of concentration (natural resources, ecotourism, hotel/restaurant management) for field of study. This course usually occurs in the summer and is taken regionally or internationally. As with the eco-tour lab it is intended to provide an in depth focus of an eco-tour site. Prerequisite: first year technical courses.

**ECO 294**  
**Ecotourism Cooperative Work Experience**  
 6.00 Credits    Class 2.00    Lab 40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**ECO 296**  
**Ecotourism Practicum**  
 2.00 Credits    Class 1.00    Lab 7.00  
 A practicum in the ecotourism field to provide an opportunity to apply previously learned concepts and practices in a work situation. Additionally the student becomes familiar with the cooperating agency and its operation.

**ECO 298**  
**Ecotourism Internship**  
 6.00-9.00 Credits    Class 3.00    Lab 20.00

## ECON Economics

**ECON 140**  
**Principles of Microeconomics**  
 4.00 Credits    Class 4.00    Lab 0.00  
 Introduction to major principles and issues of American economics measuring the economy, income distribution, unemployment, inflation, profit, taxes and current economic issues and trends affecting the student's technical field. Offered: Spring.

**ECON 240**  
**Principles of Macroeconomics**  
 4.00 Credits    Class 4.00    Lab 0.00  
 Study of economics in terms of whole systems and the interrelationship among sectors of the economy.

**ECON 290**  
**Economics Special Topics**  
 1.00-5.00 Credits    Class 1.00-5.00    Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**ECON 291**  
**Economics Independent Study**  
 1.00-5.00 Credits    Class 1.00-5.00    Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

## EDEC

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**EDEC 100**  
**Fundamentals of Child Care**  
 3.00 Credits    Class 3.00    Lab 1.00  
 Fundamentals of child care. Includes assessment of children's mental and physical development; planning to meet safety, rest, nutritional, play, hygiene and educational needs. Addresses the prevention, recognition, and management of common childhood diseases. Co- or prerequisite: HC 162. Prerequisites: HC 100, DT 102 and HC 160. Offered: Fall. Course fee: \$20.

**EDEC 110**  
**Child Care Practicum I**  
 2.00 Credits    Class 1.00    Lab 7.00  
 Provides the opportunity to interact with and plan activities for children in day care settings, head start programs and early childhood

classes. Prerequisite: Admission to Nanny program. Offered: Fall. Course fee: \$30.

**EDEC 111**  
**Child Care Practicum II**  
 2.00 Credits    Class 1.00    Lab 7.00  
 This course is designed to give students the opportunity to work actively with children and staff in the childcare profession. During the practicum seminar, students will discuss practicum experiences and explore employment possibilities. Offered: Winter. Course fee: \$55.

**EDEC 112**  
**Child Care Practicum III**  
 2.00 Credits    Class 1.00    Lab 7.00  
 Provides an opportunity to utilize principles of activity therapy, fundamentals and dynamics of child care, food preparation, physiological, social, and psychological sciences and communication techniques to plan and implement care for children in a private home setting. Prerequisites: EDEC 100 and EDEC 111. Offered: Spring. Course fee: \$55.

**EDEC 115**  
**Dynamics of Child Care**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Communication skills and technical and legal aspects of providing child care. Topics include confidentiality, parental authority, respect for parent's philosophy of child rearing, legal implications, child abuse symptoms and professional attitudes and appearance. Prerequisite: Admission to Nanny program or instructor permission. Offered: Spring.

**EDEC 120**  
**Creative Activity for Children**  
 4.00 Credits    Class 4.00    Lab 1.00  
 Planning and implementing developmentally appropriate activities for young children. Stresses the selection, evaluation and presentation of music, art, books, materials and activities that are developmentally appropriate. Prerequisite: Admission to Nanny program or instructor permission. Offered: Winter. Course fee: \$30.

## EE Electronics

**EE 101**  
**D.C. Circuits**  
 4.00 Credits    Class 3.00    Lab 3.00  
 The study of electronic fundamentals. Begins with an introduction to direct current circuits and the three fundamental quantities of electronics (current, voltage and resistance). Ohm's and Watt's laws will be applied to series, parallel and series-parallel circuits. Students will learn to test and troubleshoot components and circuits. Labs emphasize practical application of the DC circuit theory. Offered: Fall. Course fee: \$35.

**EE 102**  
**A.C. Circuits**  
 4.00 Credits    Class 3.00    Lab 3.00  
 A continuation of EE 101, this course covers Ohm's and Watt's laws as applied to alternating current circuits. The characteristics of inductors, transformers, capacitors and the circuits they comprise will be examined. Labs emphasize practical application of the AC circuit theory. Prerequisite: EE 101. Offered: Winter. Course fee: \$35.

**EE 109**  
**Semiconductor Devices I**  
 4.00 Credits    Class 3.00    Lab 3.00  
 A study of electronic fundamentals, covering series and parallel resonant circuits, low pass, high pass, band pass, band stop filters, diode rectification, power supply filtering, transistor fundamentals, power amplifiers and common amplifier configurations. Prerequisites: EE 102 and EE 101. Offered: Spring. Course fee: \$35.

**EE 115**  
**Semiconductor Devices II**  
 4.00 Credits    Class 3.00    Lab 3.00  
 Operation and application of field effect transistors and thyristors, amplifier operation and configurations, oscillators and wave shaping circuits, and schematic interpretation including DC biasing and signal flow. Lab will utilize equipment in addition to circuit construction with individual components. Prerequisite: EE 109. Offered: Fall. Course fee: \$35.

**EE 119**  
**Electronic Communication I**  
 3.00 Credits    Class 2.00    Lab 3.00

An introduction to electronic communications, including basic operation of the telephone, a central office, private branched exchanges, mobile communications and cellular telephones, transmission line theory, radio and television systems and an introduction to audio and video tape recorders, color television cameras and monitors. Laboratory exercises will use Lab Volt Digicomm equipment. Prerequisite: EE 102. Offered: Fall. Course fee: \$35.

**EE 120**  
**Electronic Communication II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Digital communication systems and techniques, including analog and digital pulse modulation procedures, frequency and time division multiplexing and data communications to the public telephone network. Laboratory exercises use the digital Lab Volt and Digicomm modulation trainer equipment. Prerequisite: EE 119. Offered: Winter. Course fee: \$35.

**EE 123**  
**Electronic Applications I**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Fabrication of electronic devices/equipment. New skills such as soldering and layout design are included. Prerequisite: EE 109. Offered: Fall. Course fee: \$35.

**EE 124**  
**Electronic Applications II**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Advanced, complex projects are manufactured to further hone fabrication and assembly skills. Prerequisite: EE 123. Offered: Winter. Course fee: \$35.

**EE 126**      PACE  
**Introduction to Electricity**  
 3.00 Credits      Class 2.00      Lab 4.00  
 Fundamentals of electricity and the function and operation of electrical test equipment. Includes multimeters, oscilloscopes, and AC and DC signal generators. The function of basic electrical components is studied and used in the analysis of AC and DC series and parallel circuits. Voltage, current, resistance and power are analyzed mathematically and through practical application in the laboratory. Prerequisite: MATH 108. Offered: Summer, Fall, Winter, Spring. Course fee: \$30.

**EE 150**  
**Technical Basis of Broadcasting I**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Electronics for Broadcast Engineering and Production students. Includes the concepts of AC and DC electronics, Ohm's Law, series and parallel circuit combinations, inductors and transformers, capacitors and an introduction to semiconductors and amplifiers. Offered: Fall. Course fee: \$35.

**EE 151**  
**Technical Basis of Broadcasting II**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Electronics for Broadcast Engineering and Production students. Includes radio frequency principles, antennas, vacuum tube devices, sound and acoustic transducers, basic audio equipment, analog tape recording machines, radio transmitters and modulation processes, and receiver designs. Prerequisite: EE 150. Offered: Winter. Course fee: \$35.

**EE 152**  
**Technical Basis of Broadcasting III**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Electronics for Broadcast Engineering and Production students. Includes television standards, color cameras, video monitoring and processing, video tape recorders, video editing equipment, TV transmission systems, digital technology and cable TV and satellite communications. Prerequisite: EE 151. Offered: Spring. Course fee: \$35.

**EE 160**  
**Electronic Equipment Maintenance I**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Design, installation, documentation and maintenance of complete broadcast and production facilities. Studio design, electrical distribution, grounding, shielding, air and power conditioning are all covered. Prerequisite: EE 109. Offered: Winter. Course fee: \$60.

**EE 161**  
**Electronic Equipment Maintenance II**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Systematic electronic troubleshooting methods prepare the student to perform electronic and electromechanical troubleshooting and maintenance. Includes the use of different sections of a service manual

and test and measurement equipment to repair electronic devices. Topics range from printed circuit board substitution to component level troubleshooting and maintenance to repairing profound failures. Prerequisite: EE 160. Offered: Spring. Course fee: \$60.

**EE 225**  
**Industrial Electronics I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Computerized control equipment used by industry for machine control, including the Allen Bradley programmable logic controller (PLC). Students build, test, and troubleshoot projects using the PLC, computers, relays, motors and pneumatic controls. Prerequisite: EE 115. Offered: Winter. Course fee: \$35.

**EE 226**  
**Electronic Certification**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Preparation for the Certified Electronics Technician test from ISCEET. Includes a review of fundamental electronic principles, math, AC and DC circuits, transistors, troubleshooting and repair techniques. The student is not required to take the CET exam at the end of the course. Prerequisite: EE 115. Offered: Spring.

**EE 227**  
**Current Topics and Technology**  
 0.50-5.00 Credits      Class 0.50-5.00      Lab 0.00  
 Concepts relevant to the field of electronics through the exposure to state-of-the-art electronic equipment and technology. Offered: Spring.

**EE 228**  
**Industrial Electronics II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Electronic equipment, circuits, and technology used by industry for machine control. Students build, test, and troubleshoot industrial control circuits using sensors, motors, and relays. Prerequisite: EE 225. Offered: Spring. Course fee: \$35.

**EE 230**  
**Linear IC's**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Application of operational amplifiers, comparators, phase locked loops, voltage regulators and other linear integrated circuits. Linear and switching power supplies are also discussed. Prerequisite: EE 115. Offered: Winter. Course fee: \$35.

**EE 240**  
**Computers for Electronic Technicians I**  
 4.00 Credits      Class 3.00      Lab 3.00  
 The personal computer including operating systems, major subsystems, application software and basic troubleshooting. Offered: Spring. Course fee: \$60.

**EE 241**  
**Computers for Electronic Technicians II**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Hard drives, monitors, power supplies, CD-ROMs, MODEMs, motherboards and troubleshooting hardware systems. The student builds a PC. Prerequisite: EE 240. Offered: Fall. Course fee: \$60.

**EE 261**  
**Digital Logic I**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Fundamentals of digital logic including classification of analog and digital signals, fundamental logic gates, Boolean algebra, combinational logic, latches and flip-flops. The student will learn and apply the principles of digital logic by building and troubleshooting digital circuits in the laboratory. Offered: Fall. Course fee: \$35.

**EE 262**  
**Digital Logic II**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Flip-flops, one shots, asynchronous counters, synchronous counters, IC up/down counters and troubleshooting techniques. The student builds digital circuits using both digital IC's and a digital logic trainer. Prerequisite: EE 261. Offered: Winter. Course fee: \$35.

**EE 290**      PACE  
**Electronic Special Topics**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**EE 291**  
**Electronic Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis

with instructor permission.

**EE 292**  
**Electronic Field Experience**  
 1.00–4.00 Credits Class 0.00 Lab 12.00–48.00  
 On-the-job training in an electronics facility through special arrangement with an instructor.

**EE 294**  
**Electronic Cooperative Work Experience**  
 2.00–5.00 Credits Class 1.00 Lab 10.00–40.00  
 An on- and off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must also be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**EE 296**  
**Electronic Practicum**  
 3.00 Credits Class 2.00 Lab 8.00  
 Practical technical experience in a electronic industrial setting. Seminar includes discussion of work site job duties and learning experiences. Prerequisite: Must be a second year electronic student. Prerequisite: EE 115. Offered: Spring.

**EE 297**  
**Electronic Observation Hour**  
 1.00–3.00 Credits Class 0.00 Lab 15.00–45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**EE 298**  
**Electronic Internship**  
 3.00–9.00 Credits Class 0.00–3.00 Lab 20.00–40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor.

## EM Emergency Medical

**EM 100**  
**Emergency Victim Care (EMT-B)**  
 7.00 Credits Class 5.00 Lab 7.00  
 Medical injuries and illness encountered in emergency situations. The student learns to recognize symptoms and apply treatment for stabilizing the patient at the emergency scene, while moving a victim to or from the emergency vehicle and while enroute to definitive care. Includes hospital clinical experience. Meets the requirements for certification of emergency medical technician-ambulance (EMT-B), according to Section 4731.84 of the Ohio Revised Code. Prerequisite: HEM 133. Offered: Fall, Winter. Course fee: \$115.

**EM 101**  
**EMT Clinical Experience**  
 6.00 Credits Class 2.00 Lab 16.00  
 Introduction to the hospital environment, medical procedures and the complex interrelationship of total patient care. Includes observation time for learning the functions of the members of the patient care team. Experience with rescue squads arranged on an individual basis. Prerequisite: See instructor. Offered: Summer. Course fee: \$100.

**EM 102**  
**Defensive Driving and Emergency Vehicle Operation**  
 1.00 Credit Class 1.00 Lab 2.00  
 Intended to teach the skills necessary to prepare a new driver or refresh and junior or senior driver in emergency vehicle driving techniques. Offered: Fall. Course fee: \$150.

**EM 105**  
**Pediatric Advanced Life Support**  
 1.00 Credit Class 1.00 Lab 1.00  
 Emergency assessment and treatment for pediatric patients in trauma and cardiac situations. Prerequisite: EM 202. Course fee: \$150.

**EM 107**  
**Introduction to Paramedic**  
 5.00 Credits Class 2.00 Lab 9.00  
 Introduction to the Paramedic National Standard Curriculum including shadowing experiences, hands-on technical lab experiences and physical skills assessment and development. Prerequisite: EM 100. Offered: Fall. Course fee: \$200.

**EM 108** PACE

**Cardiopulmonary Resuscitation**  
 1.00 Credit Class 1.00 Lab 0.00  
 Practical course for lay persons in recognition and emergency care procedures for victims of cardiac arrest and respiratory emergencies. Card issued upon completion. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**EM 109**  
**EMT-B Refresher (Bridge)**  
 1.00 Credit Class 1.00 Lab 2.00  
 U.S. Department of Transportation approved refresher course for the student who has completed the basic Emergency Victim Care course. Meets the requirements for recertification of EMT-B's, according to Section 4731.86 of the Ohio Revised Code. Prerequisite: EM 100. Course fee: \$25.

**EM 110**  
**EMT Paramedic I**  
 10.00 Credits Class 6.00 Lab 12.00  
 Continuing study of the Paramedic National Standards Curriculum including the study of pathophysiology, symptoms and treatment of select medical/surgical conditions. Major emphasis of the course is placed on pharmacology, cardiology, and trauma. Pertinent medical terminology is integrated into all aspects of the course. The laboratory component includes procedures necessary for the care of patients requiring drug therapy, ECG interpretation and defibrillation. Prerequisite: EM 100. Offered: Winter. Course fee: \$200.

**EM 113**  
**EMT Squad Experience**  
 6.00 Credits Class 2.00 Lab 16.00  
 Practical vehicle-clinical observation and experience including assisting with procedures within the scope of the paramedic under the direct supervision of a squad paramedic preceptor. Prerequisite: EM 102. Offered: Summer. Course fee: \$80.

**EM 118**  
**Advanced EMT-B Clinical**  
 1.00 Credits Class 0.00 Lab 5.00  
 Practical hospital experience in a variety of patient care areas. Emphasizes intravenous therapy, drawing blood and subcutaneous injections of epinephrine. Prerequisite: EM 100. Course fee: \$45.

**EM 119**  
**Advanced EMT-B**  
 4.00 Credits Class 3.00 Lab 3.00  
 Begins the study of the Department of Transportation (DOT) National Standards Curriculum. Includes the study of pathophysiology, symptomatology and treatment of select medical/surgical conditions. Emphasizes transition from EMT to EMT-Advanced and includes patient body systems, patient assessment, recognition of acute medical emergencies and single or multiple traumas. The laboratory component includes procedures necessary for the care of patients requiring invasive therapy techniques, esophageal obturator airway, and use of MAST anti-shock trousers. Prerequisite: EM 100. Course fee: \$200.

**EM 120**  
**EMT Paramedic II**  
 11.00 Credits Class 7.00 Lab 12.00  
 Study of the Paramedic National Standards Curriculum including the study of pathophysiology, symptomatology, and treatment of select medical/surgical conditions. Major emphasis of the course is on neonatology, pediatrics, geriatrics, abuse and neglect and ambulance operation. Pertinent medical terminology is integrated into all aspects of the course. The laboratory component includes procedures necessary for the care of patients requiring drug therapy, ECG interpretation and defibrillation. Prerequisite: EM 110. Offered: Spring. Course fee: \$200.

**EM 127**  
**Basic Trauma Life Support (BTLS)**  
 1.00 Credit Class 1.00 Lab 1.00  
 Designed for paramedics established by the American College of Emergency Physicians in the latest technology of rapid trauma assessment, treatment and transport. Prerequisite: EM 100. Course fee: \$60.

**EM 128**  
**Rope Rescue Techniques**  
 2.00 Credits Class 1.00 Lab 3.00  
 Rappelling plus securing and stabilizing the patient for extrication. Course fee: \$50.

**EM 129**  
**First Responder**  
 2.00 Credits Class 1.00 Lab 3.00  
 Training in emergency medical care for those who are apt to be the

first person responding to an accident. Offered: Fall, Winter, Spring.  
Course fee: \$50.

**EM 133** PACE  
**CPR for the Professional Rescuer**  
1.00 Credit Class 1.00 Lab 0.00  
Practical course for health professionals in recognition and emergency care procedures for victims of cardiac arrest and respiratory emergencies. Card issued upon completion. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**EM 134** PACE  
**Standard First Aid**  
1.00 Credit Class 1.00 Lab 0.00  
Prepares the student to meet the needs of most situations when emergency first aid care is needed and medical assistance is not excessively delayed. Increases knowledge of personal safety and accident prevention. Prerequisite: See instructor. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**EM 134 A** PACE  
**First Aid**  
0.25-0.50 Credit Class 0.25-0.50 Lab 0.00  
Prepares the student to meet the needs of most situations when emergency first aid care is needed and medical assistance is not excessively delayed. Increases knowledge of personal safety and accident prevention. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**EM 134 B** PACE  
**Cardiopulmonary Resuscitation**  
0.50 Credit Class 0.50 Lab 0.00  
Prepares the participant to respond to respiratory and cardiac emergencies of the adult patient. Skills and techniques learned will help the student stay calm and make decisions appropriate to keep a victim alive. Offered: Summer, Fall, Winter, Spring. Course fee: \$15.

**EM 135** PACE  
**First Aid Recertification Course**  
0.50 Credit Class 0.50-5.00 Lab 1.00  
Reviews the standard first aid skills a person needs to act as the first link in the emergency medical services system. Prepares participants to respond correctly in emergencies. Skills and techniques learned will help the student stay calm and make decisions appropriate to keep a victim alive and injuries from becoming worse until the EMS system arrives. Course consists of adult CPR skills and first aid skills for injuries as well as medical emergencies. Prerequisite: Current adult CPR and First Aid course. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**EM 136** PACE  
**CPR Recertification Course**  
0.25-0.50 Credit Class 0.50 Lab 1.00  
Review of adult, infant and child CPR and community CPR courses. Information includes dealing with respiratory emergencies that could lead to cardiac arrest and providing first aid for cardiac emergencies. Prerequisite: Current CPR card. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**EM 137**  
**Cardiopulmonary Resuscitation Instructor**  
0.25-1.00 Credit Class 0.25-1.00 Lab 0.25-1.00  
Instructor course in cardiopulmonary resuscitation leading to instructor certification through the American Heart Association or American Red Cross. Basic instruction techniques, background information on heart attacks and rationale for application of CPR. Course fee: \$15.

**EM 138**  
**Standard First Aid Instructor**  
1.00 Credit Class 1.00 Lab 0.00  
American Red Cross Standard First Aid and Adult CPR Instructor Course. Application of varying teaching methods used by the American Red Cross to provide the public with knowledge and skills necessary in an emergency. Upon successful completion of this course the participant will be certified as an American Red Cross Standard First Aid Instructor. (All American Red Cross requirements must be met before student may teach classes.) Course fee: \$15.

**EM 150**  
**EMT Paramedic Refresher**  
2.00 Credits Class 2.00 Lab 2.00  
Covers all DOT modules with emphasis on practical skills. Course fee: \$50.

**EM 202**  
**Advanced Cardiac Life Support**

1.00 Credit Class 1.00 Lab 1.00  
Designed to meet the needs of practicing coronary care nurses, paramedics or doctors who wish to advance or assess their skills in cardiac life support. Taught by American Heart Association instructors and approved by the Central Ohio Heart Chapter. Prerequisite: Instructor permission. Course fee: \$150.

**EM 203**  
**Emergency Rescue Operations**  
4.00 Credits Class 3.00 Lab 4.00  
Emergency rescue operations including the heavy rescue unit. Includes the use of special extrication tools and study and practice of rescue operations on water, highways and industrial locations. Course fee: \$50.

**EM 213**  
**Public Administration Relations and Education**  
3.00 Credits Class 2.00 Lab 3.00  
Provides the emergency medical service and fire command officer with a better understanding of fire and EMS safety problems and accepted administrative methods. Management problems are approached from the point of view of the fire or EMS chief, fire command officer and the chief administrator. Offered: Winter. Course fee: \$20.

**EM 282**  
**Emergency Medical Current Topics**  
0.25-5.00 Credits Class 0.25-5.00 Lab 0.00  
Current topics and issues as well as new developments in the field of emergency medical services are reviewed, studied and discussed.

**EM 290**  
**Emergency Medical Special Topics**  
1.00-5.00 Credits Class 1.00-5.00 Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.

**EM 291**  
**Emergency Medical Individual Study**  
1.00-5.00 Credits Class 1.00-5.00 Lab 0.00  
Individual study or research. Topics are arranged on an individual basis with instructor permission.

**EM 292**  
**Emergency Medical Field Experience**  
1.00-4.00 Credits Class 0.00 Lab 12.00-48.00  
On-the-job training in an emergency medical facility through special arrangement with an instructor.

**EM 293**  
**Emergency Medical Directed Practice**  
2.00-9.00 Credits Class 1.00 Lab 5.00-40.00  
Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function.

**EM 294**  
**Emergency Medical Cooperative Work Experience**  
2.00-5.00 Credits Class 1.00 Lab 10.00-40.00  
An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**EM 296**  
**Emergency Medical Practicum**  
2.00-7.00 Credits Class 1.00 Lab 7.00-42.00  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**EM 297**  
**Emergency Medical Observation Hour**  
1.00-3.00 Credits Class 0.00 Lab 15.00-45.00  
Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**EM 298**  
**Emergency Medical Internship**  
3.00-9.00 Credits Class 0.00-3.00 Lab 20.00-40.00  
On the job training in the work place of a cooperating agency. Coordinated by an instructor.

**ENGL**  
**English**

**ENGL 151**  
**Freshman Composition**  
 5.00 Credits      Class 5.00      Lab 0.00  
 Students strengthen writing skills by practicing composing and revising strategies to develop essays which are well organized, coherent, error-free and suited to their purpose and audience. Essays may draw from personal experience, include critical response to readings or require research. Prerequisites: COMM 110 and COMM 121 Offered: Fall. Course fee: \$20.

**ENGL 152**  
**Advanced Essay Skills**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Continues essay-writing practice begun in ENGL 151 with emphasis on persuasion. Prerequisite: ENGL 151. Course fee: \$10.

## **EQSI** **Equine Science**

**EQSI 103**  
**Horse Care Handling**  
 3.00 Credits      Class 2.00      Lab 5.00  
 Introduces the basics of stable management including feeding, grooming, leading and handling of horses as well as the identification and care of tack and related equipment. In conjunction with NR 114. Offered: Fall.

**EQSI 104**  
**Primitive Tools**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Proper care, maintenance, and safe operation of non-power tools used in the backcountry. Offered: Fall.

**EQSI 110**  
**Horsemanship I – Beginning Riding**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Basics of proper horse care and horsemanship, how to safely handle the horse and properly feed, groom, saddle and bridle the working trail horse. Riding instruction focuses on proper mounting and safe riding skills in a trail situation. Offered: Fall. Course fee: \$200.

**EQSI 111**  
**Equine Employment Seminar**  
 2.00 Credits      Class 2.00      Lab 0.00  
 Unique employment opportunities in the equine industry including education requirements, job opportunities, and job search techniques. Offered: Winter. Course fee: \$80.

**EQSI 112**  
**Equine Health Care I**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Basic health care for horses including preventative health care. Offered: Fall. Course fee: \$155.

**EQSI 113**  
**Equine Nutrition and Supplements**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Feeds and feeding of the equine at all ages and levels of performance. Offered: Winter.

**EQSI 115**  
**Horsemanship II – Intermediate Riding**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Development of confidence and skills needed to handle and care for the working trail horse. Prerequisites: EQSI 103 and EQSI 110. Offered: Winter. Course fee: \$200.

**EQSI 116**  
**Equine Anatomy and Physiology I**  
 5.00 Credits      Class 3.00      Lab 6.00  
 Covers the structure and function of the anatomical systems of the horse. Offered: Winter. Course fee: \$25.

**EQSI 117**  
**Equine Anatomy and Physiology II**  
 5.00 Credits      Class 3.00      Lab 6.00  
 More in-depth studies of the skeletal system, muscular system, respiratory system, cardiovascular system and blood, digestive system, urinary system, nervous system, endocrine system, and reproductive systems are studied and cross reference to each other to determine soundness, conformation, and motion. Prerequisite: EQSI 116. Offered: Winter. Course fee: \$25.

**EQSI 119**  
**Equine Business Management**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Introduction to the equine industry and skills and techniques utilized to start and run a horse related business successfully. Offered: Fall.

**EQSI 120**  
**Horsemanship III – Advanced Trail Riding**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Practice in the full complement of skills needed to handle and ride the working back country trail horse. Lab hours polish riding skills needed to safely handle the horse in the most difficult trail situations in this region. Major aspects of handling trail horses are covered including loading, hauling and caring for horses during transport. Prerequisite: EQSI 115. Offered: Spring. Course fee: \$200.

**EQSI 123**  
**Equine Health Care II**  
 5.00 Credits      Class 3.00      Lab 6.00  
 Advanced studies in horse related diseases, parasite identification methods, vaccination, treatment, medications, and record keeping are covered. Prerequisite: EQSI 112. Offered: Fall. Course fee: \$155.

**EQSI 124**  
**Equine Acupressure I**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Offered: Fall. Course fee: \$210.

**EQSI 126**  
**Animal Acupressure – The Animal Meridian System**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Animal acupressure is based on Traditional Chinese Medicine's Meridian Theory. This introduction to meridian theory focuses on the twelve major meridians and two of the extraordinary vessels. Meridians will be discussed in the context of their location, function, indications, origins, and termination and physiological connection with other meridians. How the meridian system functions and the inter-relatedness of the meridian system are key concepts of this course. Offered: Winter

**EQSI 127**  
**Animal Acupressure – Acupoints**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Acupoints along the meridian pathways are used to balance energy throughout the animal's body during the Point Work segment of an acupressure treatment. This course focuses on meridian theory, point classification, the functions and locations of major animal acupoints. Acupoints located along the 12 major meridians and 2 extraordinary vessels will be considered in this course. The anatomical location, category, and function of specific acupoints will be addressed. Indications and contra-indications of point use will also be covered. Offered: Winter.

**EQSI 128**  
**Animal Acupressure – The Five Elements**  
 1.00 Credit      Class 1.00      Lab 0.00  
 The 5-Element Theory is one of the cornerstones of Traditional Chinese Medicine. It is an essential conceptual framework for the practice of animal acupressure. This course is an introduction to the theory of the 5-Elements. The characteristics of each element including their relationship with the body organs, physiological significance and assessment indicators will be covered. The cycles of creation and control will be addressed along with specific point selection based on one theory of the 5-Elements will be included in this course. Offered: Winter.

**EQSI 129**  
**Animal Acupressure – Traditional Chinese Method**  
 1.00 Credit      Class 1.00      Lab 0.00  
 This course presents an overview of theoretical foundations of Traditional Chinese Medicine (TCM). This course covers the fundamental components of TCM including Yin and Yang, Chi energy, Blood and Body Fluids Shen, Essences, and the Zang Fu organs. This course establishes the philosophical and operational underpinnings of Traditional Chinese Medicine and how it specifically relates to animal pressure. Offered: Winter.

**EQSI 130**  
**Farm Equipment Operation and Maintenance**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Offered: Spring.

**EQSI 132**  
**Equine Acupressure II**  
 3.00 Credits      Class 2.00      Lab 3.00

Prerequisite: EQSI 124. Offered: Spring. Course Fee: \$ 210.

**EQSI 135**  
**Forging I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Offered: Spring.

**EQSI 136**  
**Forging II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Prerequisite: EQSI 135. Offered: Fall.

**EQSI 139**  
**Saddle Making I**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Prerequisite: EQSI 150. Course Fee: \$ 500.

**EQSI 140**  
**Saddle Making II**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Prerequisites: EQSI 139 and EQSI 150.

**EQSI 143**  
**Equine Marketing and Brochure Development**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Effective marketing techniques used and applied in the equine industry, such as news releases and brochures. Offered: Spring.

**EQSI 150**  
**Leathercraft I**  
 3.00 Credits      Class 2.00      Lab 4.00  
 Covers leathercraft and leather repair related to horse tack, including tool in repairing and constructing tack items such as bridles, halters and related equipment. Offered: Fall. Course fee: \$160.

**EQSI 151**  
**Leathercraft II**  
 3.00 Credits      Class 1.00      Lab 4.00  
 Free hand leather projects that utilize tooling and sewing for the completion of assignments. Prerequisites: EQSI 150. Offered: Fall. Course fee: \$120.

**EQSI 160**  
**Equine Massage**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Prerequisites: EQSI 115 and EQSI 103. Offered: Fall, Spring. Course fee: \$80.

**EQSI 161**  
**Advanced Equine Massage**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Prerequisite: EQSI 160. Offered: Fall. Course fee: \$80.

**EQSI 200**  
**Horse Packing**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Basic skills in packing horses and mules. Prerequisites: EQSI 110 and EQSI 103. Offered: Fall. Course fee: \$75.

**EQSI 201**  
**Horse Program Management**  
 3.00 Credits      Class 2.00      Lab 3.00  
 An introduction to the management of horse programs. Operation of training programs and management of recreational riding facilities. Prerequisites: EQSI 103 and EQSI 110. Offered: Winter.

**EQSI 210**  
**Horseshoeing I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Skills necessary to replace a lost shoe on the back country trail. Lecture covers basic horse leg anatomy, horseshoes, nails and lameness problems. Laboratory practice in shaping horseshoes cold and shoeing horses. Prerequisites: EQSI 103 and EQSI 110. Offered: Fall, Winter. Course fee: \$100.

**EQSI 212**  
**Mounted Police Certification**  
 3.00 Credits      Class 2.00      Lab 2.00

**EQSI 215**  
**Horseshoeing II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Studies cold keg-shoeing techniques, including financial and record keeping aspects of operating a shoeing business. Prerequisite: EQSI 210. Offered: Winter. Course fee: \$100.

**EQSI 220**  
**Trail Maintenance**  
 3.00 Credits      Class 2.00      Lab 3.00  
 This course is designed to teach the basic skills needed to develop and maintain multiple-use trails. New forest service guidelines will be used to cover design, construction and maintenance of high-use, low-impact trail systems. Prerequisites: EQSI 200 and NRM 110. Offered: Spring. Course fee: \$125.

**EQSI 225**  
**Campus Park Patrol – Capstone**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Studies exposure to situations faced as front country mounted ranger and emphasizes safely handling horses in traffic, around crowds and children. Prerequisites: EQSI 210, EQSI 200, EQSI 120. Offered: Spring. Course fee: \$200.

**EQSI 230**  
**Team Driving I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Introduces the basics of using horses and mules in harness, singularly and as a team. Training, handling and hitching of horses are included. Prerequisite: EQSI 120. Offered: Spring. Course fee: \$75.

**EQSI 235**  
**Team Driving II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 This course is designed to take the student beyond basics of driving both single and draft teams. Students will have numerous opportunities to hitch and drive teams on various types of equipment and wagons. Prerequisites: EQSI 230 and EQSI 115.

**EQSI 240**  
**Colt Training I**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Methods used to train trail and pack horses. The student starts with young, green horses and cover from halter breaking to round pen training. The student teaches horses how to load into trailers, how to accept bits and saddles and how to perform as mountain trail horses. Prerequisites: EQSI 200, EQSI 210, EQSI 120. Offered: Spring. Course fee: \$75.

**EQSI 245**  
**Colt Training II**  
 3.00 Credits      Class 1.00      Lab 6.00  
 For the student who has successfully completed NR 118 and wishes to continue the 90 to 180 day training program with colts. Emphasis is placed on completing training for a started colt and working with a problem horse. Prerequisites: EQSI 120, EQSI 210, EQSI 103.

**EQSI 250**  
**Teaching Horseback Riding**  
 3.00 Credits      Class 1.00      Lab 7.00  
 The major objective of the course is safety. Good horse management, effective programming, and creative teaching methods, which are appropriate for wilderness riding as well as ring work, are stressed without sacrificing safety, skills or fun. Prerequisites: EQSI 210, EQSI 200, EQSI 120. Offered: Winter, Spring. Course fee: \$50.

**EQSI 255**  
**Advanced Packing and Wilderness Skill**  
 4.00 Credits      Class 0.00      Lab 12.00  
 Nine days of intensive training as a wilderness trail maintenance crew member for the U.S. Forest Service. Students transport their horse and pack mules to a western wilderness area and spend six days packing into the wilderness where, they practice skills required of wilderness rangers. The course is designed as a cooperative practicum with the National Park Service and the U.S. Forest Service. Prerequisites: EQSI 210, EQSI 200, EQSI 115. Offered: Summer. Course fee: \$380.

**EQSI 256**  
**Advanced Packing II**  
 4.00 Credits      Class 0.00      Lab 12.00  
 Students function as work crew supervisors and lead packers during a seven day extended working pack trip into a western wilderness area. Students will be responsible for the care of horses in travel and at the trail head. Prerequisite: EQSI 255. Course fee: \$380.

**EQSI 257**  
**Horse Tack Fit and Maintenance**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Offered: Spring.

**EQSI 258**

**Corrective Shoeing and Gait Analysis – Capstone**  
 5.00 Credits      Class 3.00      Lab 6.00  
 Offered: Spring.

**EQSI 260**  
**Equine Health Care and Complimentary Therapies**  
 5.00 Credits      Class 3.00      Lab 6.00  
 Equine health care with special emphasis on dealing with large groups of horses in remote wilderness/ranch settings. Prerequisite: EQSI 120. Offered: Fall. Course fee: \$155.

**EQSI 261**  
**Equine Nutrition**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Feeds and feeding of the equine at all ages and levels of performance. Prerequisite: EQSI 115. Offered: Fall.

**EQSI 262**  
**Equine Conformation**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers equine conformation relative to function and soundness. Prerequisite: EQSI 115. Offered: Fall, Spring.

**EQSI 263**  
**Broodmare and Foal Care**  
 3.00 Credits      Class 2.00      Lab 3.00  
 This clinic is designed to give lecture information as well as hands-on experience with the broodmare before, during and after the birth of the foal. Prerequisite: EQSI 120. Offered: Fall, Winter.

**EQSI 264**  
**Equine Anatomy and Physiology**  
 5.00 Credits      Class 4.00      Lab 4.00  
 Cover the structure and function of the anatomical systems of the horse. Prerequisite: EQSI 120. Offered: Fall. Course fee: \$25.

**EQSI 266**  
**Equine Sports Massage**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Physiology of equine muscles and the benefits of equine sports massage. Prerequisites: EQSI 110, EQSI 115, EQSI 103 Offered: Fall. Course fee: \$80.

**EQSI 267**  
**Equine Reproduction and Breeding – Capstone**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers the breeding soundness exam through early pregnancy, including stallion management, collection and evaluation of semen, and artificial insemination. Prerequisite: EQSI 120. Offered: Fall, Spring. Course fee: \$25.

**EQSI 290**  
**Equine Science Special Topics**  
 0.50–5.00 Credits      Class 0.50–5.00      Lab 0.00  
 A structured exploration of a specific topic(s) by participants in a group.

**EQSI 294**  
**Equine Science Cooperative Work Experience**  
 6.00 Credits      Class 2.00      Lab 40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Offered: Summer.

**EQSI 296**  
**Equine Science Practicum**  
 2.00 Credits      Class 1.00      Lab 7.00  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Offered: Summer.

**EQSI 298**  
**Equine Science Internship**  
 3.00–9.00 Credits      Class 0.00–2.00      Lab 20.00–40.00  
 On-the-job training in the workplace of a cooperating agency. Coordinated by an instructor. Offered: Summer.

## ERT Environmental Restoration

**ERT 101**  
**Equipment Operations I**  
 6.00 Credits      Class 2.00      Lab 12.00

Knowledge, skills, and safe working techniques related to heavy equipment operation. Maintenance and service of each type of equipment is practiced. Offered: Fall. Course fee: \$450.

**ERT 102**  
**Equipment Operations II**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Proper equipment operation including maintenance procedures, dozing techniques, straight dozing, slot dozing, side cutting, ripping procedures, proper dozing efficiencies, undercarriage wear and guidelines, warning labels and safe operating procedures. Prerequisite: ERT 101. Offered: Winter. Course fee: \$450.

**ERT 103**  
**Equipment Operations III**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Advanced techniques and safe work practices involved in equipment operation. Provides "hands-on" experience in service, maintenance, operation, and safety. Prerequisite: ERT 102. Offered: Spring. Course fee: \$450.

**ERT 107**  
**Heavy Equipment Maintenance and Repair I**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Basic knowledge of preventive maintenance and minor repair procedures for heavy equipment. Provides hands-on experience in performing equipment repair in the field including how to troubleshoot problems systematically. Inspection of cooling and fuel systems. Offered: Fall. Course fee: \$25.

**ERT 108**  
**Heavy Equipment Maintenance and Repair II**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Intermediate procedures for troubleshooting heavy equipment problems in the field. Changing and disposal of fluids and filters. Identification and diagnosis of electrical components and use of wiring diagrams. Inspection of lubrication systems. Prerequisite: ERT 107. Offered: Winter. Course fee: \$25.

**ERT 109**  
**Heavy Equipment Maintenance and Repair III**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Advanced use of heavy equipment field and shop tools and diagnostic equipment. Inspection of drive train components and brake systems. Replacement of hydraulic hoses and lines. Prerequisite: ERT 108. Offered: Spring. Course fee: \$25.

**ERT 110**  
**Construction Basics**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Formulas and calculations needed most when working on site construction, including calculations associated with moving equipment such as figuring grades, slopes, resistance and material weights. Offered: Fall. Course fee: \$25.

**ERT 111**  
**Diesel, Gas, and Small Engine Repair**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers routine maintenance and light repair of two- and four-cycle internal combustion engines. Course fee: \$50.

**ERT 112**  
**Resource Conservation**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Physical, economic, social and political considerations that relate to environmental restoration, reclamation and construction. Course fee: \$25.

**ERT 120**  
**Hydraulic and Mechanical System Maintenance and Repair**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Discusses the theory, design and function of hydraulic systems and drive chain components of forest harvesting machinery. Course fee: \$45.

**ERT 121**  
**Welding**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Covers general methods of welding, oxyacetylene, brazing, soldering, ARC, TIG, MIG and Heliarc. Typical operations such as butt, lap, filler and vee welds are demonstrated. Offered: Winter. Course fee: \$65.

**ERT 124**  
**Advanced Welding**  
 2.00 Credits      Class 1.00      Lab 3.00



Designed for maintenance trades and kindred workers who are familiar with the basics of welding and fabrication, advanced techniques of welding utilizing MIG, electric arc and oxyacetylene equipment are taught. Shop setup and applicable safety procedures are also included. Prerequisite: ERT 121.

**ERT 175**  
**Commercial Driver License 40 Hour**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Prepares the student to sit for both the written and in-vehicle portions of the State of Ohio Commercial Drivers License examination. Teaches various techniques and safe driving practices for commercial vehicles and includes hands-on experience in proper service, maintenance, operation and safety of a commercial vehicle. Offered: Fall. Course fee: \$375.

**ERT 176**  
**Commercial Driver License 160 Hour**  
 5.00 Credits      Class 0.00      Lab 16.00  
 Prepares the student to sit for both the written and in vehicle portions of the State of Ohio Commercial Driver's License examination. Teaches various techniques and safe driving practices for commercial vehicles. Includes hands-on experience in proper service, maintenance, operation and safety of a commercial vehicle. Course fee: \$2400.

**ERT 177**  
**Commercial Driver License 200 Hour**  
 6.00 Credits      Class 0.00      Lab 20.00  
 Prepares the student to sit for both the written and in vehicle portions of the commercial drivers license examination. Teaches various techniques and safe driving practices for commercial vehicles. Includes "hands-on" experience in proper service, maintenance, operation and safety of a commercial vehicle. Course fee: 3000.

**ERT 204**  
**Equipment Operations IV**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Safe work practices involved in equipment operation, general site management and planning along with cost efficiencies and contracts, particular attention focused on trackhoe operation Prerequisite: ERT 103. Offered: Fall. Course fee: \$450.

**ERT 205**  
**Equipment Operations V**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Safe work practices involved in equipment operation. Each student advances to a higher skill level on all equipment and learns about the different types of lubricants and fluids required for operation of the equipment. Additional attention is focused on off-highway trucks. Prerequisite: ERT 204. Offered: Winter. Course fee: \$450.

**ERT 206**  
**Equipment Operations VI**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Safe work practices involved in equipment operation. This course has established standards of performance supported by a carefully structured learning process which brings operators to a measurable proficiency. Such training is unique to the industry. The resulting higher skills will improve productivity and machine performance, reduce operating costs, and enhance safety. Prerequisite: ERT 205. Offered: Spring. Course fee: \$450.

**ERT 215**  
**Job Appraisal and Bidding**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Site analysis to determine job costs, work with code enforcement officials and retailers to determine material prices, and preparation of bids which will generate a profit on the project. Offered: Winter. Course fee: \$20.

**ERT 217**  
**Environmental Sampling**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Environmental sampling used by private and government agencies in enforcing state and federal laws and regulations. Includes calibration of equipment in order to attain accurate results. Offered: Spring. Course fee: \$40.

**ERT 219**  
**Applied Surveying**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Applies skills learned in Surveying and Mapping I to perform a small site survey analysis. Includes presenting results in a professional manner. Prerequisite: NRM 123. Offered: Winter. Course fee: \$25.

**ERT 294**  
**Equipment Operations Coop/Apprenticeship**  
 6.00 Credits      Class 2.00      Lab 40.00  
 An on- or off-campus paid work experience.

**ERT 294 A**  
**Equipment Operations Coop/Apprenticeship A**  
 6.00 Credits      Class 2.00      Lab 40.00  
 Prerequisite: ERT 103. Offered: Fall.

**ERT 294 B**  
**Equipment Operations Coop/Apprenticeship B**  
 6.00 Credits      Class 2.00      Lab 40.00  
 Prerequisite: ERT 294 A. Offered: Winter.

**ERT 294 C**  
**Equipment Operations Coop/Apprenticeship C**  
 6.00 Credits      Class 2.00      Lab 40.00  
 Prerequisite: ERT 294 B. Offered: Spring.

**ERT 296**  
**Environmental Restoration Practicum**  
 2.00 Credits      Class 1.00      Lab 7.00  
 An on- or off campus work experience. Offered: Summer.

**ERT 298**  
**Equipment Operations Internship**  
 6.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00

## ES English Support

**ES 051**  
**English Support Conversation – Fundamentals**  
 3.00 Credits      Class 3.00      Lab 2.00  
 Introductory course for the student for whom English is a second language. Emphasizes survival oral/aural communication skills through the study and practice of common and emergency vocabulary, conversation, and pronunciation of spoken American English. Course fee: \$35.

**ES 052**  
**English Support Reading – Fundamentals**  
 5.00 Credits      Class 5.00      Lab 0.00  
 Introductory course for the student for whom English is a second language. Strongly emphasizes survival recognition and understanding of textual material by study and practice of common and emergency vocabulary through the use of selected reading materials. Course fee: \$35.

**ES 053**  
**English Support Writing and Grammar – Fundamentals**  
 5.00 Credits      Class 5.00      Lab 0.00  
 Introductory course for the student for whom English is a second language. Strongly emphasizes basic writing and grammar skills through use and practice. Course fee: \$35.

**ES 054**  
**English Support Integrated Skills – Fundamentals**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Introductory course for the student for whom English is a second language. Integrates and extends conversation, reading, and writing skills through supervised practice in specific labs. Course fee: \$35.

**ES 058**  
**English Support Fundamental Special Topics**  
 1.00-8.00 Credits      Class 1.00-8.00      Lab 0.00  
 Introductory course for the student for whom English is a second language.

**ES 061**  
**English Support Conversion – Beginning I**  
 1.00-4.00 Credits      Class 1.00-3.00      Lab 1.00-2.00  
 Beginning course for the student for whom English is a second language. Strongly emphasizes the strengthening of oral/aural conversation abilities and listening comprehension through the study and practice of common vocabulary, conversational forms and the pronunciation of spoken American English. Course fee: \$35.

**ES 062**  
**English Support Reading – Beginning I**  
 5.00 Credits      Class 5.00      Lab 0.00  
 Beginning course for the student for whom English is a second language. Strongly emphasizes the development and strengthening of

reading comprehension through the use of selected basic reading materials. Course Fee: \$35.

**ES 063**

**English Support Writing and Grammar – Beginning I**  
8.00 Credits Class 8.00 Lab 0.00

Beginning course for the student for whom English is a second language. Strongly emphasizes the development and strengthening of writing skills through use and practice. Course fee: \$35.

**ES 064**

**English Support Integrated Skills – Beginning I**  
3.00 Credits Class 2.00 Lab 3.00

Beginning course for the student for whom English is a second language. Integrates and extends conversation, reading and writing skills through supervised practice in specific labs. Course fee: \$35.

**ES 068**

**English Support Beginning I Special Topics**  
1.00–8.00 Credits Class 1.00–8.00 Lab 0.00

Beginning I course for the student for whom English is a second language.

**ES 071**

**English Support Conversation – Beginning II**  
1.00–3.00 Credits Class 1.00–3.00 Lab 1.00–2.00

Continuing course for the student whom English is a second language. Strongly emphasizes the strengthening of oral/aural conversation abilities and listening comprehension through the study and practice of common vocabulary, conversational forms and the pronunciation of spoken American English. Course fee: \$35.

**ES 072**

**English Support Reading – Beginning II**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Continuing beginning course for the student for whom English is a second language. Strongly emphasizes the development and strengthening of reading comprehension through the use of selected basic reading materials. Course fee: \$35.

**ES 073**

**English Support Writing and Grammar – Beginning II**  
1.00–8.00 Credits Class 1.00–8.00 Lab 0.00

Continuing beginning course for the student for whom English is a second language. Strongly emphasizes the development and strengthening of writing skills through the use and practice of basic English grammatical structures derived from selected texts. Course fee: \$35.

**ES 074**

**English Support Integrated Skills – Beginning II**  
1.00–4.00 Credits Class 1.00–4.00 Lab 0.00

Continuing beginning course for the student for whom English is a second language. Integrates and extends conversation, reading and writing skills through supervised practice in specific labs. Course fee: \$35.

**ES 078**

**English Support Beginning II Special Topics**  
1.00–8.00 Credits Class 1.00–8.00 Lab 0.00

Beginning II course for the student for whom English is a second language.

**ES 081**

**English Support Conversation – Intermediate I**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Developmental course on the beginning intermediate level for the student for whom English is a second language. Strongly emphasizes the strengthening of oral/aural conversational abilities and listening comprehension through the study and practice of common vocabulary, conversational forms, and the pronunciation of spoken American English. Course fee: \$35.

**ES 082**

**English Support Reading – Intermediate I**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Developmental course on the beginning intermediate level for the student for whom English is a second language. Strongly emphasizes the strengthening of reading comprehension through the use of selected basic reading texts. Course fee: \$35.

**ES 083**

**English Support Writing and Grammar – Intermediate I**  
1.00–8.00 Credits Class 1.00–8.00 Lab 0.00

Developmental course on the beginning intermediate level for the

student for whom English is a second language. Strongly emphasizes the development and strengthening of writing skills through the use and practice of basic English grammatical structures derived from selected texts. Course fee: \$35.

**ES 084**

**English Support Integrated Skills – Intermediate I**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Developmental course on the beginning intermediate level for the student for whom English is a second language. Integrates and extends conversation, reading, and writing skills through supervised practice in specific labs. Course fee: \$35.

**ES 088**

**English Support Intermediate I Special Topics**  
1.00–8.00 Credits Class 1.00–8.00 Lab 0.00

Developmental course on the beginning intermediate level for the student for whom English is a second language.

**ES 091**

**English Support Conversation – Intermediate II**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Continuing developmental course on the upper intermediate level for the student for whom English is a second language. Strongly emphasizes the strengthening of oral/aural conversational abilities and listening comprehension through the study and practice of common vocabulary, conversational forms and the pronunciation of spoken American English. Includes an increasing focus on academic types of listening/speaking tasks and note taking. Course fee: \$35.

**ES 092**

**English Support Reading – Intermediate II**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Continuing developmental course on the upper intermediate level for the student for whom English is a second language. Strongly emphasizes the strengthening of reading comprehension and critical analysis through the use of selected reading texts. Includes an increasing focus on academic types of reading. Course fee: \$35.

**ES 093**

**English Support Writing and Grammar – Intermediate II**  
1.00–8.00 Credits Class 1.00–8.00 Lab 0.00

Continuing developmental course on the upper intermediate level for the student for whom English is a second language. Strongly emphasizes the expansion and strengthening of writing and grammar skills through the use and practice of English grammatical structures using selected texts. Includes an increasing focus on academic types of writing as well as emphasis on preparation for the Communications sequence. Course fee: \$35.

**ES 094**

**English Support Integrated Skills – Intermediate II**  
1.00–3.00 Credits Class 1.00–3.00 Lab 0.00

Continuing developmental course on the upper intermediate level for the student for whom English is a second language. Integrates and extends conversation, reading and writing skills through supervised practice in specific labs. Course fee: \$35.

**ES 098**

**English Support Intensive Academic English I**  
1.00–12.00 Credits Class 1.00–12.00 Lab 0.00

A mid-intermediate course for the student for whom English is a second language. Emphasis is on preparing the mid-level English Support student for the challenges of the Intermediate II level. Course fee: \$35.

**ES 099**

**English Support Intensive Academic English**  
1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

A high intermediate course for the student for whom English is a second language. The emphasis is on preparing the high intermediate English Support student for the challenges of public speaking, composition and reading as required by the Communications sequence. Course fee: \$35.

**ES 290**

**English Support Special Topics**  
1.00–6.00 Credits Class 1.00–6.00 Lab 0.00

This is a fundamentals to high/intermediate course for the student for whom English is a second language. The emphasis is on providing continuing support in English Support classes for the student with special topic needs. Course fee: \$35.

**FMAQ**

## Fish Management and Aquaculture

### FMAQ 110

#### Fish Culture I

4.00 Credits      Class 3.00      Lab 5.00

Basic extensive and intensive production requirements for fish in ponds, tanks, cages, raceways and recirculating systems; fish handling procedures; feeding and inventory practices; water quality parameters, record keeping and applied math. Offered: Fall. Course fee: \$45.

### FMAQ 112

#### Fish Culture II

4.00 Credits      Class 3.00      Lab 5.00

Basic requirements for limnological and water quality and testing for aquaculture, gonadal development, artificial propagation and spawning techniques egg-taking and hatchery, methods of larval and fry rearing, prophylactic measures and pond preparation. Prerequisite: FMAQ 110. Offered: Winter. Course fee: \$45.

### FMAQ 114

#### Fish Culture III

4.00 Credits      Class 3.00      Lab 5.00

Freshwater fish species production methods with special emphasis on species currently being reared commercially in Ohio and the Midwest. Prerequisite: FMAQ 112. Offered: Spring. Course fee: \$45.

### FMAQ 115

#### Hatchery Maintenance – Structure

3.00 Credits      Class 2.00      Lab 3.00

Basic concepts of surface maintenance, carpentry, electricity and masonry as it applies to fisheries and aquaculture; including use of wood tools, saws, drills, hand tools and portable power tools. Knowledge of voltage amperage, current and resistance, series and parallel circuits and basic wiring. Knowledge of block and brick laying, mixing and pouring concrete. Offered: Fall. Course fee: \$180.

### FMAQ 116

#### Fish Cage Culture

2.00 Credits      Class 1.00      Lab 3.00

Basic extensive and intensive production requirements of fish in cage systems including fish holding procedures, feeding, inventory, cage construction, quality monitoring and record keeping procedures. Course fee: \$50.

### FMAQ 117

#### Hatchery Maintenance – Hydraulics

3.00 Credits      Class 2.00      Lab 3.00

Fundamentals of plumbing, hydraulics, and small engine repair as it applies to fish hatchery maintenance. Principles and calculations dealing with the hydraulics of water systems; including mass, density, flow, pressure, pipe sizing, friction loss, flow measurements, pipe laying and plumbing. Knowledge of fuel, oil, and ignition systems maintenance on small engine driven equipment. Offered: Winter. Course fee: \$170.

### FMAQ 119

#### Hatchery Maintenance – Welding

2.00 Credits      Class 1.00      Lab 3.00

Principles and calculations and basic concepts of electric arc and gas welding, brazing and soldering. Offered: Winter. Course fee: \$180.

### FMAQ 210

#### Aquatic Plants and Control

3.00 Credits      Class 2.00      Lab 3.00

Identification of aquatic plants and algae through the use of taxonomic keys and the role of aquatic plants in aquaculture. The proper and accepted methods of controls sufficient to obtain a state pesticide applicators license. Offered: Fall. Course fee: \$45.

### FMAQ 221

#### Fish Management I

3.00 Credits      Class 2.00      Lab 3.00

Covers physical, chemical, biological and sociological factors which influence fisheries and their management. Techniques of monitoring and influencing the factors are practiced in laboratory. Prerequisite: BIOS 268 and NRM 217. Offered: Winter. Course fee: \$15.

### FMAQ 230

#### Hatchery Design and Construction

3.00 Credits      Class 2.00      Lab 3.00

Principles used in hatchery design; including water supply requirement, pond construction, tank design, aeration requirements, facility layout and support equipment. Offered: Spring. Course fee: \$45.

### FMAQ 238

### Fish Management II

4.00 Credits      Class 2.00      Lab 6.00

Discusses methods and techniques used in sampling fish populations and aquatic environments, evaluation and application of fish management techniques. Prerequisite: FMAQ 221. Offered: Spring. Course fee: \$20.

### FMAQ 241

#### Fish Hatchery Management

4.00 Credits      Class 2.00      Lab 6.00

Aspects of fish culture including warm water, cool water and cold water species are studied, emphasizing nutrition, disease and water quality. Prerequisites: NR 131 and REC 221. Offered: Spring

### FMAQ 271

#### Fish Pathology

3.00 Credits      Class 2.00      Lab 3.00

Fish disease and pathology, including the most common parasitic, bacterial, viral and environmental fish diseases in hatcheries and the etiology, epidemiology and therapeutics are discussed. Prerequisites: REC 217, REC 161 and FMAQ 201. Offered: Spring. Course fee: \$25.

### FMAQ 294

#### Fish Management and Aquaculture Cooperative Work Experience

6.00 Credits      Class 2.00      Lab 40.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

### FMAQ 296

#### Fish Management and Aquaculture Practicum

2.00 Credits      Class 1.00      Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

## FOR

### Forestry

#### FOR 100

##### Focus on Forestry I

1.00 Credit      Class 1.00      Lab 1.00

An introduction to forestry and natural resource choices, focusing on methods to improve student success including use of library resources and enhancement of student habits. Offered: Fall. Course fee: \$10.

#### FOR 101

##### Focus on Forestry II

1.00 Credit      Class 1.00      Lab 1.00

Writing the resume and searching for summer employment in forestry. Offered: Winter. Course fee: \$10.

#### FOR 102

##### Focus on Forestry III

1.00 Credit      Class 1.00      Lab 1.00

Forestry technical skills enhancement in tree identification, silvics, use of map and compass and basic tree measurements. Offered: Fall. Course fee: \$10.

#### FOR 103

##### Introduction to Timber Stand Improvement

2.00 Credits      Class 1.00      Lab 3.00

Offered: Fall.

#### FOR 104

##### Introduction to Tree Planting

1.00 Credit      Class 0.00      Lab 3.00

Offered: Fall.

#### FOR 109

##### Introduction to Forest Dendrology

2.00 Credits      Class 1.00      Lab 3.00

Basic tree identification stressing major area species using common names only. Focuses on site characteristics and strategies for identification. Offered: Fall. Course fee: \$20

#### FOR 111

##### Forest Dendrology

3.00 Credits      Class 1.00      Lab 6.00

Identification of woody plants found in the Central Hardwoods region using bark, leaves, twigs, fruit, site and growth form. Use of dichotomous keys. Silvical characteristics, distribution, soil and site requirements, economic uses and other benefits to man. Major forest

types and species from other regions of the U.S. are investigated. Offered: Fall. Course fee: \$20.

**FOR 113**  
**Reforestation and Pesticides**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Study, planning, and application of practices used in artificial regeneration and establishment of woody vegetation on disturbed lands and practices used in controlling pests. Offered: Spring. Course fee: \$40.

**FOR 120**  
**Photo Interpretation**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Tools used in the planning and management of natural resources. Prerequisite: MATH 108 N. Offered: Winter. Course fee: \$5.

**FOR 123**  
**Forest Measurements**  
 4.00 Credits      Class 2.00      Lab 6.00  
 Accurate quantification of forest resources utilizing tools, mathematical equations and sampling techniques. Prerequisite: MATH 108 N. Offered: Fall. Course fee: \$25.

**FOR 124**  
**Forest Ecology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers forest community relationships, synecology and antecology which can be applied to the technical aspects of forestry such as silviculture, mensuration, forest management and timber harvesting. Offered: Spring. Course fee: \$5.

**FOR 131**  
**Forest Entomology and Pathology**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Insects, diseases and their economic impact on forest, ornamental and street trees, stressing identification and potential control. Offered: Spring. Course fee: \$5.

**FOR 149**  
**Basic Wildland Fire Fighting**  
 2.00 Credits      Class 2.00      Lab 2.00  
 Includes the Basic Fire Fighter S-130 course and the introduction to Fire Behavior S-190 course that has been developed by the National Wildfire Coordinating Group. The successful participant is eligible for the National Interagency Qualifications System Red Card. Course S-130 offers the required training for all fire line workers. Covers basic skills required by wildfire fighters; fire organization, use of safety equipment, size up, line construction, use and maintenance of tools and basic woodsmen skills. Course S-190 is a prerequisite for all wildfire fighters. Offered: Fall, Winter. Course fee; \$45.

**FOR 150**  
**Natural Resources Prescribed Burns**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Prescribed burning as a tool in natural resources to achieve the following forest management objectives: natural regeneration, competition control, hazard reduction and habitat manipulation. Prerequisite: FOR 149. Offered: Fall. Course fee: \$75.

**FOR 163**  
**Wildland Fire - Standards for Survival**  
 0.25 Credits      Class 0.50      Lab 0.00  
 Designed by an interagency work group sponsored by the National Wildfire Coordinating Group, this course reviews fire-related fatalities and fire fighter safety training materials. Emphasis is placed on avoiding situations and conditions which have resulted in fire shelter deployments, serious injuries and fatalities. Prerequisite: FOR 149. Course fee: \$15.

**FOR 200**  
**Focus on Forestry IV**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Covers the career opportunities in forestry including state and federal government forest industry and consulting opportunities. Offered: Fall. Course fee: \$10.

**FOR 201**  
**Focus on Forestry V**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Employment skills development including researching potential employers, writing cover letters and resumes and participating in mock interviews are covered. Offered: Winter. Course fee: \$10.

**FOR 202**

**Focus on Forestry VI**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Forestry technical skills enhancement in tree identification, silvics, use of map and compass, silviculture prescription and measurement principles. Offered: Spring. Course fee: \$10.

**FOR 210**  
**Forest Mensuration**  
 4.00 Credits      Class 2.00      Lab 6.00  
 Study of techniques and equipment used in determining quality, quantity, val stocking of hardwood timber. Prerequisites: FOR 120, FOR 123 and MATH 110. Offered: Winter. Course fee: \$15.

**FOR 211**  
**Timber Harvesting**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Aspects of conventional hardwood logging operations. Safety, work procedures, care and maintenance of equipment and harvesting techniques and skills are covered. Offered: Fall. Course fee: \$300.

**FOR 220**  
**Applied Silviculture**  
 4.00 Credits      Class 2.00      Lab 6.00  
 Cultural techniques applied to growing, harvesting and regenerating forest crops in North America. Prerequisites: FOR 111, FOR 123, FOR 124 and COMM 122. Offered: Winter. Course fee: \$25.

**FOR 222**  
**Introduction to Forestry**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Introduction to the field of forestry including the historical, social and economic factors involved with the management of public and private forest lands in the United States. Offered: Fall, Spring. Course fee: \$50.

**FOR 226**  
**Production Analysis**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Time study and costs analysis techniques in timber harvesting.

**FOR 226 A**  
**Production Analysis A**  
 1.50 Credits      Class 1.00      Lab 1.50  
 Basic time study and costs analysis techniques using a variety of forestry operations. Prerequisite: MATH 108. Offered: Fall.

**FOR 226 B**  
**Production Analysis B**  
 1.50 Credits      Class 1.00      Lab 1.50  
 Advanced time study and costs analysis techniques using a variety of forestry operations. Prerequisite: FOR 226 A. Offered: Winter.

**FOR 230**  
**Forest Management**  
 4.00 Credits      Class 2.00      Lab 6.00  
 This course focuses on the management of upland central and Appalachian hardwood forests. Forest regulation problems are applied to various properties under different economic, social, and biological circumstances. Prerequisites: FOR 220 and FOR 210. Offered: Spring. Course fee: \$15.

**FOR 231**  
**Forest Products Utilization**  
 3.00 Credits      Class 1.00      Lab 6.00  
 The utilization of products and services of the central hardwood region is covered including, traditional and noninvolved flow of goods and services for final product. Emphasizes the conversion of hardwood sawlogs and pulpwood into finished goods while minimizing waste. Offered: Spring. Course fee: \$10.

**FOR 250**  
**Forestry Applications in GIS/GPS**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Applications of geographic information systems (GIS) and global positioning systems (GPS) in forest resource mapping, analysis and management. Offered: Winter. Course fee: \$45.

**FOR 276**  
**Best Management Practices**  
 0.25-1.00 Credits      Class 1.00      Lab 0.00  
 Studies how to plan, build and maintain forest access roads to meet state and federal water quality standards in forested ecosystems. Includes forest hydrology, planning road systems, protecting streamside management zones and road maintenance. Course fee: \$10.

**FOR 282**

**Safety Training and Planning – Logging and Sawmill**  
**0.25 Credits      Class 0.25      Lab 0.00**  
 Writing and OSHA required safety plan and developing safety training programs for a logging or sawmill business. A safety training course is offered as a demonstration of appropriate planning and training.

**FOR 290**  
**Forestry Special Topics**  
**0.25–5.00 Credits      Class 1.00–5.00      Lab 0.00**  
 Structured exploration of a specific topic(s) by participants in a group.

**FOR 291**  
**Forestry Individual Study**  
**1.00–5.00 Credits      Class 1.00–5.00      Lab 0.00**  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**FOR 292**  
**Forestry Field Experience**  
**1.00–3.00 Credits      Class 0.00      Lab 36.00**  
 On-the-job training in a forestry facility through special arrangement with an instructor.

**FOR 294**  
**Forestry Cooperative Work Experience**  
**2.00–5.00 Credits      Class 1.00      Lab 10.00–40.00**  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum often clock hours of work experience scheduled during a standard work week.

**FOR 296**  
**Forestry Practicum**  
**2.00 Credits      Class 1.00      Lab 7.00**  
 This course consists of a directed practicum in a natural resources field, in order to provide students an avenue to apply previously learned concepts and practices in a work situation. It also allows the participant to acquire on-the-job training. Additionally, the student will become familiar with the cooperating agency and its operation. The student will perform duties commensurate with the interests of the cooperating agency and Hocking College. These duties will be educationally appropriate to the student's chosen field of study. These same duties will mesh with the agency's daily routine and overall mission. The seminar aspect will allow the student to discuss natural resources experiences with emphasis on public relations, management styles, personal and professional growth, expectations, job performance, and site analysis.

**FOR 297**  
**Forestry Observation Hour**  
**1.00–3.00 Credits      Class 0.00      Lab 15.00–45.00**  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**FOR 298**  
**Forestry Internship**  
**6.00–9.00 Credits      Class 3.00      Lab 20.00–40.00**

**FS**  
**Fire Science**

**FS 105**  
**Orientation to Fire Services**  
**2.00 Credits      Class 2.00      Lab 0.00**  
 Introduction to duties, responsibilities and concerns of the fire services. Topics include fire equipment and apparatus, communications, records and reports, insurance rating systems and the law as it relates to the fire department operations and the responsibilities of various fire service ranks. Fire fighter safety as well as the causes of death and injury are discussed. Offered: Fall. Course fee: \$10.

**FS 110**  
**Fire Fighter I**  
**7.00 Credits      Class 4.00      Lab 11.00**  
 Provides first phase of training for the individual who will work under direct supervision in the fire fighting profession. Includes use of tools and equipment, chemistry of fire, extinguishment and rescue techniques. Following successful completion of the course the student is eligible to test for fire fighting certification through the Ohio Department of Public Safety. This course meets National Fire Protection Association, Inc. (NFPA- 1001) standards for fire fighting I and Ohio Standards for part time fire fighters. Prerequisite: FS 100. Offered: Fall.

Course fee: \$275.

**FS 115**  
**Fire Fighter II**  
**7.00 Credits      Class 4.00      Lab 11.00**  
 Completes the training for the individual to work under minimum direct supervision in the fire fighting profession. Includes advanced skills in arson detection, investigation, hydrants, stand pipes, sprinkler systems and inspections. Meets National Fire Protection Association, Inc. (NFPA-1001) standards (Fire Fighter II). Following successful completion of the course the student is eligible for Fire Fighter II certification through the Ohio Department of Public Safety. Prerequisite: FS 110. Offered: Fall, Spring. Course fee: \$300.

**FS 116**  
**Fire Prevention and Investigation Techniques**  
**3.00 Credits      Class 2.00      Lab 3.00**  
 Fundamentals necessary to conduct basic fire and life safety inspections and to recognize basic fire and life safety hazards associated with various occupancies. Meets selected objectives of NFPA Standard 1031, (Professional Qualifications Standard for Fire Inspector, Level 1). Does not replace the Public Safety Services Training Inspector 1. Includes an overview of the fire fighter's responsibilities for determining cause of fire and fire scene procedures. Offered: Winter. Course fee: \$20.

**FS 128**  
**Cold Water Near Drowning**  
**0.25 Credits      Class 1.00      Lab 0.00**  
 Introduction to cold water, medical aspects of hypothermia, hazards of getting to the victim, the rescue trailer and equipment. Workshops in cold water diving equipment and training, water safety for the surface rescuer, interviewing witnesses and victim care and handling. Approved by the Ohio Department of Natural Resources Division of Watercraft. Course fee: \$20.

**FS 131**  
**Ice Rescue**  
**0.25 Credits      Class 0.50      Lab 0.00**  
 Ohio Department of Natural Resources Division of Watercraft approved course teaches techniques used in ice rescue. Includes judging ice strengths, how ice is formed, identifying types of ice and the multiple factors which affect ice strength, the study of rescue techniques and hands-on training in the use of recommended equipment. Prerequisite: FS 128. Course fee: \$20.

**FS 225**  
**Basic River Rescue**  
**2.00 Credits      Class 1.00      Lab 3.00**  
 Theory and practical applications of moving water rescue techniques. Emphasizes laboratory activities. Active participation in organized teams which perform mock river rescues of trapped people in hazardous water situations. Course fee: \$80.

**FS 235**  
**Underground Storage Tank Inspection**  
**4.00 Credits      Class 4.00      Lab 0.00**  
 State regulations, nationally recognized standards and inspection skills. Students who successfully complete the course earn certification in Underground Storage Tank Inspection.

**FS 236**  
**Underground Storage Tank Installer/Remover Recertification**  
**0.25 Credits      Class 0.25      Lab 0.00**  
 Underground storage tank installer/remover recertification course meeting requirements of the State Fire Marshal BUSTR 1301:7-9-11 regulations.

**FS 253**  
**Fire Hydraulics**  
**3.00 Credits      Class 3.00      Lab 0.00**  
 Designed to focus on fireground hydraulics and water supply used to properly calculate pump discharge pressure, fire attack, hose layouts, friction loss, elevation and pressure problems in hose lays. Prerequisite: MATH 108. Offered: Winter. Course fee: \$20.

**FS 290**  
**Fire Science Special Topics**  
**0.25–5.00 Credits      Class 0.25–5.00      Lab 0.00**  
 Structured exploration of a specific topic(s) by participants in a group. Prerequisites: FS 103 and 36 hour certification. Course fee: \$5.

**FS 291**  
**Fire Science Independent Study**  
**1.00–5.00 Credits      Class 1.00–5.00      Lab 0.00**

Individual study or research. Topics are arranged on an individual basis with instructor permission. Prerequisites: FS 103 and 36 hour certification.

**FS 292**  
**Fire Science Field Experience**  
 1.00-4.00 Credits Class 0.00 Lab 12.00-48.00  
 On-the-job training in a fire service facility through special arrangement with an instructor. Course fee: \$30.

**FS 294**  
**Fire Science Cooperative Work Experience**  
 2.00-5.00 Credits Class 1.00 Lab 10.00-40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Course fee: \$30.

**FS 296**  
**Fire Science Practicum**  
 2.00 Credits Class 1.00 Lab 7.00  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisites: FS 103 and 36 hour certification. Prerequisite: FS 110 Offered: Winter. Course fee: \$40.

**FS 297**  
**Fire Science Observation Hour**  
 1.00-3.00 Credits Class 0.00 Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity. Course fee: \$25.

**FS 298**  
**Fire Science Internship**  
 3.00-6.00 Credits Class 0.00 Lab 40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$25.

## FT Fitness

**FT 100**  
**Concepts in Fitness**  
 3.00 Credits Class 3.00 Lab 0.00  
 Offered: Fall.

**FT 110**  
**Exercise Science**  
 3.00 Credits Class 2.00 Lab 3.00  
 Offered: Fall.

**FT 120**  
**Nutrition for Fitness**  
 2.00 Credits Class 2.00 Lab 0.00  
 Offered: Winter.

**FT 130**  
**Aerobic and Group Exercise**  
 3.00 Credits Class 2.00 Lab 3.00

**FT 140**  
**Health Appraisal**  
 4.00 Credits Class 4.00 Lab 0.00  
 Offered: Spring.

**FT 150**  
**Health Teaching and Behavioral Change**  
 3.00 Credits Class 3.00 Lab 0.00

**FT 160**  
**Resistance Training**  
 2.00 Credits Class 1.00-10.00 Lab 3.00

**FT 200**  
**Exercise Physiology and Kinesiology**  
 4.00 Credits Class 4.00 Lab 0.00  
 Offered: Fall.

**FT 220**  
**Fitness Management and Program Administration**  
 4.00 Credits Class 4.00 Lab 0.00  
 Offered: Winter.

**FT 296 A**  
**Group Exercise Practicum**  
 3.00 Credits Class 1.00 Lab 14.00  
 Offered: Spring.

**FT 296 B**  
**Health Fitness Practicum**  
 3.00 Credits Class 1.00 Lab 14.00  
 Offered: Summer.

**FT 296 C**  
**Fitness Management Practicum**  
 3.00 Credits Class 1.00 Lab 14.00  
 Offered: Winter.

## GEO Geographics

**GEO 100**  
**Introduction to GIS**  
 2.00 Credits Class 1.00 Lab 3.00  
 Covers the skills needed to use traditional map information. Geographic Information Systems will be defined and its use in government and industry will be examined. Prerequisite: MICS 112. Offered: Fall, Winter, Spring. Course fee: \$55.

**GEO 101**  
**Intermediate GIS**  
 3.00 Credits Class 2.00 Lab 3.00  
 Technical inner workings of GIS. Students will explore, examine and experience the rules and operations that govern data storage, data analysis and data display. Prerequisite: GEO 100. Offered: Winter. Course fee: \$55.

**GEO 102**  
**Introduction to GPS**  
 2.00 Credits Class 1.00 Lab 3.00  
 Concepts of the Global Positioning System and its history, design and application are discussed. Students will have an opportunity to collect and positional data with GPS receivers. Prerequisite: GEO 103. Offered: Fall, Winter, Spring. Course fee: \$55.

**GEO 103**  
**Computing in GIS**  
 1.00 Credit Class 1.00 Lab 2.00  
 This course will begin with a look at the various uses of computers. The progress through the functionality and components of a PC to actual hands-on use of the IBM-compatible PC and the disk operating system (DOS). Offered: Fall. Course fee: \$55.

**GEO 120**  
**Cartography**  
 3.00 Credits Class 2.00 Lab 3.00  
 Theoretical understanding of the map making process combined with technical skill development exercises to create topographic, thematic and cadastral maps concentrating on computerized mapping. Offered: Winter. Course fee: \$55.

**GEO 200**  
**Applications in GIS**  
 3.00 Credits Class 1.00 Lab 6.00  
 Understanding of GIS applications on the Hocking College campus with real world data. Prerequisite: GEO 101. Offered: Spring. Course fee: \$55.

**GEO 201**  
**GIS Data Conversion**  
 3.00 Credits Class 1.00 Lab 6.00  
 Students will collect and prepare data from various sources. Preparation will include calculation of accuracy statements and accuracy checks against existing data performance standards. Students will also explore data conversion and transfer techniques within and between major GPS and GIS softwares. Prerequisite: GEO 200. Course fee: \$55.

**GEO 202**  
**Advanced GIS Applications**  
 3.00 Credits Class 1.00 Lab 6.00  
 A work experience where sophisticated map products and tabular data are expected products of GIS. Students may be placed under the supervision of various local governmental agencies and/or private industry. Prerequisite: GEO 201. Course fee: \$55.

**GEO 203**

**GPS Data Acquisition**

3.00 Credits      Class 2.00      Lab 3.00  
 GIS quality and control survey quality GPS equipment and procedures to collect positional data for GIS database projects. Prerequisites: GEO 102, GEO 120 and NRM 123. Offered: Spring. Course fee: \$80.

**GEO 204****Remote Sensing**

3.00 Credits      Class 2.00      Lab 3.00  
 Remote sensing as a means of data acquisition for resource analysis and mapping is covered, including a variety of remote sensors that sample wavelength within the electromagnetic spectrum. Multistage sampling of natural resources will be discussed. Prerequisite: GEO 200. Course fee: \$55.

**GEO 206****SML Creation**

3.00 Credits      Class 2.00      Lab 3.00  
 This course will enable students to create graphical user interfaces and command line intensive operations within geographic information system softwares. Prerequisites: GEO 101 and GEO 200. Course fee: \$65.

**GEO 290****GIS/GPS Special Topics**

2.00-5.00 Credits      Class 0.50-5.00      Lab 0.00  
 Structured exploration of a specific topic by participants in a group.

**GEO 291****GIS/GPS Individual Study**

0.25-5.00 Credits      Class 0.25-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**GEO 292****GIS/GPS Field Experience**

1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
 On-the-job training in a geographic facility through special arrangement with an instructor.

**GEO 293****GIS/GPS Directed Practice**

1.00-8.00 Credits      Class 0.00      Lab 5.00-40.00  
 Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function.

**GEO 294****GIS/GPS Cooperative Work Experience**

2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**GEO 296****GIS/GPS Practicum**

2.00-7.00 Credits      Class 1.00      Lab 7.00-42.00  
 This course consists of a directed practicum in a resources field, in order to provide students an avenue to apply previously learned concepts and practices in a work situation. It also allows the participant to acquire on-the-job training. Additionally, the student will become familiar with the cooperating agency and its operation. The student will perform duties commensurate with the interests of the cooperating agency and Hocking College. These duties will be educationally appropriate to the student's chosen field of study. These same duties will mesh with the agency's daily routine and overall missions. The seminar aspect will allow the student to discuss natural resources experiences with emphasis on public relations, management styles, personal and professional growth, expectations, job performance, and site analysis.

**GEO 297****GIS/GPS Observation Hours**

1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**GEO 298****GIS/GPS Internship**

3.00-6.00 Credits      Class 0.00      Lab 20.00-40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor.

**GEOG****Geography****GEOG 201****Geography**

3.00 Credits      Class 2.00      Lab 3.00  
 An examination of the economic and geographic factors that determine natural resource distribution, availability and utilization. Also examines the earth's surface region by region in order to determine resource availability, transportation concerns and environmental compatibility of resource use. Offered: Spring.

**GEOL****Geology****GEOL 101****Geology**

3.00 Credits      Class 2.00      Lab 3.00  
 An introduction to the scope and purpose of the science of geology covers basic considerations and procedures in identifying common rocks and minerals the conditions and processes that form the earth and how these earth forming processes affect man and man's use of the earth. Offered: Fall, Winter, Spring. Course fee: \$25.

**GEOL 102****Environmental Geology**

5.00 Credits      Class 3.00      Lab 6.00  
 Offered: Winter. Course fee: \$25.

**GEOL 105****Soils**

3.00 Credits      Class 2.00      Lab 3.00  
 Offered: Fall, Winter, Spring.

**GEOL 106****Soils II**

3.00 Credits      Class 2.00      Lab 3.00  
 Soil and conservation management as it relates to sils and runoff, drainage systems, soil classification and soil surveys, interpretations, and land use planning. Prerequisite: GEOL 105. Offered: Spring. Course fee: \$25.

**GOVT****Government****GOVT 142****Interaction with Government and Politics**

3.00 Credits      Class 3.00      Lab 0.00  
 Provides an overview of the functions, structures, institutions, processes and products of the national government and impact of these on the citizens. Emphasizes relating discussions in the classroom to the personal world and conceptualizing how government and politics function in the real world.

**GOVT 290****Government Special Topics**

1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**GOVT 291****Government Individual Study**

1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged with instructor permission on an individual basis.

**GS****General Studies****GS 101****Experience Hocking**

1.00 Credit      Class 1.00      Lab 0.00  
 Orientation to college life at Hocking College and an overview of the services available to students. Course fee: \$10.

**GS 104****Time Management**

1.00 Credit      Class 1.00      Lab 0.00  
 Planning and management of time in relation to organizational and individual goal setting, delegation, effective business conferences and decision making. Basic steps toward more effective planning for time management. Offered: Winter. Course fee: \$5.

**GS 108**  
**Caregiver – Skills and Issues**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Overview of the caregiving process for professionals and family members. Addresses skills of the caregiver, coping strategies, relationships, stages of caregiving, and effects of caregiving on the caregiver.

**GS 110**  
**Applied Concepts of Employment – Tutors**  
 0.50–1.00 Credits      Class 1.00      Lab 0.00  
 Overview of and training for positions within the on-campus employment system. Aspects of employment related to professionalism, confidentiality, personal commitment to the job and performance evaluations. Applicable to any work situation.

**GS 114**  
**College Student Issues**  
 1.00–3.00 Credits      Class 1.00–3.00      Lab 0.00  
 Acquaints resident assistants with issues relevant to college students as well as provide training and guidance on coping with various situations. Topics range from theoretical understanding of the dynamics of human relations to practical applications of emergency techniques.

**GS 124**  
**Leadership Challenge**  
 0.75 Credit      Class 0.75      Lab 0.00  
 Various challenges are used to improve group communication, cohesion problem solving skills, leadership techniques and safety awareness. Course fee: \$40.

**GS 125**  
**Smart Start**  
 1.00 Credit      Class 0.00      Lab 3.00  
 Group bonding exercises which build a network for the learner's college career. Activities orient students to campus and surrounding areas, including learning assistance, facilities and various recreational facilities and opportunities. Course fee: \$200.

**GS 126**  
**Orientation Leadership**  
 1.00 Credit      Class 0.00      Lab 3.00  
 Orientation leaders participate in mentoring and leadership roles to assist in the orientation of new students to the Hocking College campus. Course fee: \$150.

**GS 127**  
**Quest Recreation**  
 2.00 Credits      Class 0.00      Lab 5.00  
 Outdoor adventure pursuits are used to introduce problem solving techniques, team work process, initiative, innovation, personal success and leadership skills. Students take on all facets of planning. Adventures may include canoeing, caving, camping and swimming. Initiative games are used to simulate and demonstrate group interaction, teamwork, problem solving and ideation. Course fee: \$110.

**GS 128**  
**Quest Recreation – Operator Training**  
 3.00 Credits      Class 1.00      Lab 12.00  
 Techniques, strategies and hands on experience in planning, equipping, feeding and transporting adult participants in a variety of adventure activities like camping, caving, seasonal recreation, ropes course events, boating, fishing and initiative games as presented. Emphasis is placed on safety, comfort, interaction and the unique individuality of each participant. Prerequisite: Quest Recreation composite or instructor permission.

**GS 129**  
**Orientation to College and Service Learning**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Policies and procedures, systems, curriculum, resources, certificate and degree requirements, and the responsibilities of students entering college. Effective methods for becoming a master student are reviewed along with topics such as time management, note taking, test anxiety, creativity, etc. Orientation to various community service projects within the D.R.C., completion of an in-class project and preparation of a written proposal for an individual community service project for completion of recompense for the education provided. Offered: Fall.

**GS 130**  
**PASS – Personal Academic Success Strategies**  
 4.00 Credits      Class 4.00      Lab 0.00  
 Fine tunes skills needed to succeed in college course work. Concepts and techniques discussed in this course come from hundreds of students from various backgrounds and geographic areas. Effective methods for

becoming a master student are reviewed along with topics such as time management, note taking, test anxiety, creativity, relationships, personal learning styles, learning resources and career development. Course fee: \$10.

**GS 131**  
**Integrated Study Skills**  
 2.00 Credits      Class 2.00      Lab 2.00  
 Designed to develop study and life skills necessary to succeed in college. Orientation to campus and community resources. Transfer of learning skills to other courses. Course work integrated with writing, reading, math, and technical skills. Course fee: \$40.

**GS 132**  
**Career Strategies**  
 0.25–3.00 Credits      Class 0.50–3.00      Lab 0.00  
 Increases self knowledge, interpersonal strengths, and occupational awareness. Synthesizes career planning components into an effective career strategy for personal fulfillment.

**GS 133**  
**Defensive Driving**  
 0.25 Credit      Class 0.25      Lab 0.00  
 Part of the National Safety Council's improvement program. Topics include preventing accidents, defensive driving techniques, avoiding collisions with vehicles, the art of passing and being passed and the "mystery crash." Offered: Fall. Course fee: \$50.

**GS 135**      PACE  
**Degree Development Seminar**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Development for individual plan for Association of Individualized study degree with guidance of an instructor in Arts and Sciences. Offered: Summer, Fall, Winter, Spring.

**GS 136**  
**University Bound Seminar**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Prepares general education students for transfer to four-year institutions. Students identify educational and career goals, develop curriculum plans and research four-year institutions and programs to meet goals.

**GS 140**  
**Caregiver Options**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Provides caregivers with needed skills and resources required to provide positive relationships and experiences for all persons involved. Focuses on issues related to the variety of options available to provide needed care, including independent living, home care and assisted care.

**GS 141**  
**Caregiver – Agenda for the Future**  
 1.00 Credit      Class 1.00      Lab 0.00  
 A survey of the development, thinking and current practices in the management of the assistance for elderly, disabled or chronically ill loved one as provided by the family members. Includes ways in which these methods may provide a foundation for the future social, medical, legal and psychological needs of such persons in a changing world.

**GS 160**  
**Taxidermy**  
 1.00 Credits      Class 0.00      Lab 3.00  
 Covers basic techniques of mounting birds, fish and mammals, including taxidermy log books, taxidermy supply order forms and techniques in body measurements. Course fee: \$115.

**GS 161**  
**Advanced Taxidermy**  
 1.00 Credits      Class 0.00      Lab 3.00  
 Covers the taxidermy of big-game heads. Methods of tanning capes, use of liquid tan and dry preservatives, painting, habitats and exhibit construction are included. Prerequisite: GS 260. Course fee: \$115.

**GS 250**  
**Improving Test Performance**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Specifically designed to meet the needs of adult students. Emphasizes sharing of academic concerns and effective study techniques. Topics include time management, test anxiety, studying for exams, strategies for taking exams, improving reading comprehension, reading a textbook effectively, taking notes, improving memory and effective listening. Course fee: \$5.



**GS 251** PACE  
**Prior Learning Documentation**  
 1.00 Credit Class 1.00 Lab 0.00  
 Students analyze, document and present learning acquired prior to enrolling, in a format appropriate for receiving Credit for Learning from Experience and/or Credit by Advanced Standing. Offered: Summer, Fall, Winter, Spring.

**GS 290** PACE  
**General Studies Special Topics**  
 0.50–5.00 Credits Class 0.50–5.00 Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**GS 291** PACE  
**General Studies Individual Study**  
 1.00–5.00 Credits Class 1.00–5.00 Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**GS 293**  
**Service Learning**  
 1.00–3.00 Credits Class 1.00–3.00 Lab 0.00  
 Students will explore aspects of community service through visits to service sites, journal and short essay writing, group reflection and discussion, and planning and implementation of a class service project.

**GS 298**  
**General Studies Internship**  
 3.00–9.00 Credits Class 0.00–3.00 Lab 20.00–40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor.

## HC Health Core

**HC 290**  
**Health Core Special Topics**  
 0.25–5.00 Credits Class 0.50–5.00 Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

## HIM Health Information Management

**HIM 100**  
**Health Information and Health Agency Orientation**  
 3.00 Credits Class 3.00 Lab 0.00  
 Introduction to the health information management field and the structure, characteristics and documentation requirements of various health care facilities. Includes the value and uses of the medical record and the roles and functions of the HIM technology practitioner. The influence, roles and functions of regulatory and accrediting agencies are presented as well as an introduction to the roles and functions of the American Health Information Management Association. Offered: Fall. Course fee: \$35.

**HIM 110**  
**Health Records and Procedures I**  
 3.00 Credits Class 2.00 Lab 4.00  
 Introduction to acute care hospitals and ambulatory care facilities, their ownership, mission and organizational structure; the Uniform Health Discharge Data Set (UHDDS); the Uniform Bill 82/92 (UB 82)/ HCFA form 1500; how the medical record is compiled, abstracted, appropriate medical record content; knowledge of JCAHO, conditions of participation and AOA documentation requirements for acute care and ambulatory patient records. Offered: Fall. Course fee: \$35.

**HIM 112**  
**Health Information and the Law**  
 3.00 Credits Class 3.00 Lab 0.00  
 Develops the student's knowledge of legal principles that apply to health information as follows: how to preserve the confidentiality of patient-related data, how to prepare a medical retention plan based on current legal statute, JCAHO, Medicare, and Medicaid requirements; respond to various requests for health information via case studies, authorizations for release of information, court orders, and subpoenas. Issues such as releasing health information in a medical emergency, faxing health information, charging for copies, the legality of informed consents, and common legal terminology are also introduced in this course. Offered: Winter. Course fee: \$35.

**HIM 120**  
**Basic Coding Elements**  
 3.00 Credits Class 2.00 Lab 4.00

Nomenclatures and classification systems. Focuses on assignment of codes utilizing coding principles for ICD-9-CM. Identification of the principle diagnosis, principle procedure and sequencing of selected codes. Prerequisites: BIOS 112, HLTH 111, BIOS 113, BIOS 114, HIM 215, HLTH 101. Offered: Fall. Course fee: \$35.

**HIM 121**  
**Health Records and Procedures II**  
 3.00 Credits Class 2.00 Lab 4.00  
 The student learns the role of federal, state, and local governments and non-government entities and their effect on medical record documentation, the current mechanisms of financing health care, patient care and information technology and their impact on health care systems, the role of HIM professional in today's health care environment, the importance of data integration and clinical data management, the difference between manual and electronic processing of data, the importance of quality data and the mechanisms to ensure quality, the importance of consistency and compatibility in data collection within a health care facility, how to conduct quality assessment/clinical pertinence reviews, evaluate an information systems database, how to examine current storage retrieval systems and determine alternative solutions to solve identified problems, the main coding systems currently in use, the factors that affect coding reimbursement, the overall purpose of registering and the fundamental purposes of health information systems. Prerequisites: HIM 100, HIM 110. Offered: Spring. Course fee: \$35.

**HIM 200**  
**Health Statistics**  
 3.00 Credits Class 2.00 Lab 3.00  
 Health data collection methodologies. Topics include health data definitions, collection of health data, computing institutional statistics and presentation of health data. Develops skills in preparing data for analysis, calculating institutional statistics and interpreting statistical data. Prerequisites: HIM 100, HIM 110 and MATH 108. Offered: Winter. Course fee: \$35.

**HIM 201**  
**Health Information Management Directed Practice I**  
 4.00 Credits Class 0.00 Lab 14.00  
 Directed practice in the recognition of ethical responsibilities inherent in the role of the health information management technician. Practice of medical record procedures including filing, maintenance and acquisition of health records, handling and responding to requests for information, transcription, outpatient coding and forms development, design, approval, evaluation and usage. Prerequisite: All first year HIM courses. Offered: Fall. Course fee: \$25.

**HIM 203**  
**Applied Concepts of Coding**  
 3.00 Credits Class 2.00 Lab 4.00  
 Applied Concepts of Coding, the second in a series of two coding courses, allows the student to expand the information gained in HIM 120, especially regarding sequencing of codes; using the information contained in the medical record to choose the principal diagnosis and procedure. The interrelationship of disease and procedure classification systems, disease and procedure indices, physician profiles, and case mix classification systems will be explored. Students will be assigning codes using ICD-9-CM classification systems. Prerequisite: HIM 120. Offered: Winter. Course fee: \$35.

**HIM 204**  
**Current Topics in Health Information Management**  
 0.50–3.00 Credits Class 0.50–3.00 Lab 0.00  
 Topics of current interest in health information management.

**HIM 210**  
**Health Care Reimbursement Methodologies**  
 2.00 Credits Class 1.00 Lab 2.00  
 Students learn each phase of the medical claim cycle from the time the patient calls for an appointment until the financial transaction for the encounter is completed. Types of insurance payers and the history and mechanics behind twelve reimbursement methodologies are discussed. Standard requirements for both inpatient and outpatient billing are discussed. Offered: Winter. Course fee: \$35.

**HIM 211**  
**Health Information Management Directed Practice II**  
 4.00 Credits Class 0.00 Lab 14.00  
 Application of classroom learning and hands-on experience with entry level competencies for Accredited Record Technician. Practice of medical record procedures include filing, maintenance and acquisition of health records, handling and responding to requests for information, transcription, outpatient coding and forms development, design, approval, evaluation and usage. Prerequisite: HIM 201. Offered: Winter.

Course fee: \$25.

**HIM 212**  
**Health Information Management Quality Control**  
 2.00 Credits      Class 2.00      Lab 0.00  
 Quality assurance, utilization review, risk management, regulatory agencies driving quality assurance/quality improvement and reimbursement procedures in health care facilities. Offered: Winter.

**HIM 215**  
**Interpreting Diagnostic Data**  
 2.00 Credits      Class 2.00      Lab 1.00  
 Interpretation of Diagnostic Data teaches the student how to decipher laboratory terminology, abbreviations, and common drugs via the use of actual medical records and laboratory and drug reference texts. Students' medical terminology and medical record content interpretation skills are honed to help them identify medical complications and comorbidities that can enhance reimbursement through more accurate DRG and ICD-9-CM code assignment. In addition, students learn about the basic concepts of Utilization Review and how to compare claims submitted to third-party payers with actual reimbursement received. Prerequisites: HIM 100, HIM 110, HIM 120, Medical Terminology I and II, Human Organism, Anatomy and Physiology I and II. Offered: Fall. Course fee: \$35.

**HIM 220**  
**Planning for Health Information Services**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Introduction to the techniques used in planning, organizing, controlling, and directing a Health Information Department. Case study projects focus on developing the student's knowledge and skills at identifying and selecting resources necessary to support departmental operations and information systems. Using case studies, the student determines equipment and supply needs for current and/or new systems. The student develops business writing skills by writing proposals for administrators objectively defending the rationale for decisions regarding the selection of equipment, supplies, storage systems, and personnel etc. In addition, the student is introduced to the concepts of human relations and personnel management, budgeting, flow charting, preparing P charts, and designing floor plans to scale. Students plan and present a continuing education session for their instructor and classmates, and evaluate the results of a Joint Commission survey and prepare a plan of correction. Prerequisite: HIM 200. Offered: Spring. Course fee: \$35.

**HIM 221**  
**Health Information Management Directed Practice III**  
 4.00 Credits      Class 0.00      Lab 14.00  
 Prepares the HIM student to competently perform functions in a medical record department and recognize the ethical responsibilities inherent in the role of the HIM technician. Practice of medical record procedures including flow charting, employee work scheduling, quality and quantity standards, quality assurance studies, updating job descriptions and disease research. Prerequisites: HIM 211 and HIM 201. Offered: Spring. Course fee: \$25.

**HIM 222**  
**CPT Coding**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Introduces the current procedural terminology text; CPT codes, HCPCS and CPT editorial notations; evaluation and management codes; different surgical packages; the inclusive global concept of the AMA CPT-4 surgical package; starred procedures; coding of surgical repairs; correct usage of casting codes; application of medicine codes and correct ways to attack and write modifiers. Prerequisite: First year and fourth and fifth quarter HIM courses, HIM 203. Offered: Spring. Course fee: \$35.

**HIM 223**  
**Personnel Supervision**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Functions and techniques of personnel management. Topics include external and internal organizational factors influencing personnel activities, employee selection, employee assimilation, employee compensation and environmental factors. Prerequisite: HIM 203. Offered: Spring.

**HIM 290**  
**Health Information Management Special Topics**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**HIM 291**  
**Health Information Management Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis

with instructor permission.

**HIM 292**  
**Health Information Management Field Experience**  
 1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
 On-the-job training in a health information management facility through special arrangement with an instructor. Course fee: \$25.

**HIM 293**  
**Health Information Management Directed Practice**  
 2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
 Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function. Prerequisite: Instructor permission. Course fee: \$25.

**HIM 294**  
**Health Information Management Cooperative Work Experience**  
 2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Prerequisite: Instructor permission. Course fee: \$25.

**HIM 296**  
**Health Information Management Practicum**  
 2.00-7.00 Credits      Class 1.00      Lab 7.00-42.00  
 The student is placed in an actual working environment for a minimum amount of time to gain experience before graduation. Course fee: \$25.

**HIM 297**  
**Health Information Management Observation Hour**  
 1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity. Prerequisite: Instructor permission.

**HIM 298**  
**Health Information Management Internship**  
 3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$25.

## HLTH Health

**HLTH 101**  
**Medical Terminology I**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Building a basic medical vocabulary with an emphasis on prefixes, suffixes and roots. Spelling and pronunciation rules are covered. Anatomical, physiological and pathological terminology pertaining to selected body systems are explored. Offered: Fall, Spring.

**HLTH 102**  
**Health Promotion Elective**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Credit modules designed for health, public safety, and natural resources students. Students are exposed to knowledge, skills and attitudes related to health promotion and physical fitness for life. Prerequisite: See instructor. Development and stretching of all major muscle groups of the body in order to maximize and create a well balanced physique. This class will provide the intensity to generate muscle tissue growth, increase metabolic rate and increase flexibility to help prevent postural problems and joint injuries as well as increase joint range of motion (a must for the athlete). A low impact exercise routine stressing warm-up stretch, walking and cool-down stretching. An excellent opportunity to develop and establish a healthy lifestyle change. Comprehensive and balanced program that works every major muscle group in the body. Performed in minute intervals of aerobic conditioning and muscle strengthening movements. Hatha Yoga philosophy and instruction as they relate to practicing postures.

**HLTH 102 A**  
**Dance Aerobics**  
 1.00 Credit      Class 0.00      Lab 2.00  
 Enjoyable exercise program of dance and jogging steps choreographed to brisk music to strengthen and increase the efficiency of the cardiovascular system. The lightweight component utilizes small one to three pound hand weights in simple routines to tone the upper body. Dynabands, improve muscular strength and endurance of the lower body. Course fee: \$30.

**HLTH 102 B**  
**Beginning Swimming**  
 1.00 Credit      Class 0.50      Lab 2.00  
 Course fee: \$25.

**HLTH 102 C**  
**Climbing**  
 1.00 Credit      Class 0.00      Lab 2.50  
 Introduces various methods, equipment, and techniques used in the sport of rock climbing. Includes: rock climbing equipment care, selection and use, climbing methods, movement on the rock, route grading, belaying the climber, top roping, and the basic fundamentals of lead climbing, as well as the proper use, storage, and care of equipment. Safety procedures and practices are stressed. Course fee: \$25.

**HLTH 102 H**  
**Tuning and Toning**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Course fee: \$35.

**HLTH 102 K**  
**Hi-Impact Kick Boxing**  
 1.00 Credit      Class 1.00      Lab 0.00  
 A comprehensive and balanced program that works each major muscle group in the body in a fun exercise program. Its purpose is to strengthen and increase the efficiency of the cardiovascular system over an extended period of weeks. The course involves blending your own hidden strength with the ancient art of self-defense, movement, and boxing, combined with today's great music. An extremely high impact and high movement course designed especially to quicken feet and hand movement plus balance. Course fee: \$35.

**HLTH 102 M**  
**Aqua Aerobics**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Aerobic swimming program for improving cardiovascular health and assisting with weight control. Involves simple rhythmic movements in the water. Being able to swim is not a requirement. Course fee: \$35.

**HLTH 102 Q**  
**Health and Physical Education**  
 1.00 Credit      Class 0.00      Lab 3.00  
 Aerobic muscle strengthening and stretching circuit training program designed to improve cardiovascular fitness, muscle strength, endurance and flexibility. Each participant is pre- and post-tested in seven areas of fitness. Prerequisite: Must be OPOTA Blend student. Offered: Fall. Course fee: \$10.

**HLTH 102 S**  
**Step Aerobics**  
 1.00 Credit      Class 0.00      Lab 2.00  
 Comprehensive and balanced program that works every major muscle group in the lower body, while strengthening and conditioning the upper body. Involves stepping up and down on a platform while simultaneously performing upper body strength training movements to the accompaniment of music. Designed for the individual who wants a low impact, excellent cardiopulmonary workout without the frills of a traditional dance aerobic setting. Course fee: \$35.

**HLTH 102 V**  
**Beginning Tennis**  
 1.00 Credit      Class 1.00      Lab 2.00  
 Tennis is a life long leisure and exercise activity including forehand stroke, backhand stroke, serving, footwork, scoring, doubles and singles play. Course fee: \$25.

**HLTH 102 Y**  
**Yoga**  
 1.00 Credit      Class 1.00      Lab 1.00  
 This course provides participants with instruction in hatha yoga postures (asanas). The practice of asanas contributes to physical strength and flexibility. In this class close attention is paid to spinal alignment and postural detail. The precision required of this practice allows participants to identify poor postural habits and movement patterns. Participants will learn to identify their body's reaction to stress and methods to relax the body as a tool for stress reduction. All postures (asanas) are identified by their Sanskrit name. Yoga philosophy is presented as it relates to the practice of asana. Course fee: \$30.

**HLTH 103**  
**Healthy People**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Promotes personal health and wellness. Stress management, nutrition, beginning a fitness program, environmental factors and behavior

change strategies are included. Course fee: \$20.

**HLTH 104**  
**Therapeutic Touch**  
 0.50-1.00 Credit      Class 0.50-1.00      Lab 0.00  
 Use of self to assist another in the restorative process through the Krieger/Kunz method of Therapeutic Touch. The relationship between nursing theory, nursing research and nursing practice will be described.

**HLTH 111**  
**Medical Terminology II**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Anatomical, physiological and pathological terminology pertaining to selected body systems and medical specialties are explored. Selected clinical procedures, laboratory tests and abbreviations are discussed. Prerequisite: HLTH 101. Offered: Winter.

**HLTH 132**  
**How to Obtain Blood Samples**  
 1.00 Credit      Class 1.00      Lab 0.00  
 This course will familiarize individuals with the skills necessary for successful venipuncture. Course fee: \$60.

**HLTH 133**  
**How to Obtain Blood Samples - Clinical**  
 0.50 Credit      Class 0.50      Lab 0.00  
 Participants will have the opportunity to visit a laboratory and observe the role of the phlebotomist. Venipuncture will be performed with the laboratory preceptor. This clinical experience will involve spending five hours at the laboratory site and completing worksheets related to the experience. Prerequisite: Instructor permission. Course fee: \$40.

**HLTH 136**  
**Introduction to Health Care Practice**  
 2.00 Credits      Class 1.00      Lab 2.00  
 Offered: Fall.

**HLTH 149**  
**Stress and Stress Management**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Stress and its implication and relationship to illness. Alternatives in handling stress. Course fee: \$20.

**HLTH 166**  
**Complimentary Therapies**  
 0.50-1.00 Credit      Class 0.50-1.00      Lab 0.00  
 Introduces general public and health professionals to natural and complimentary therapies. Includes pain control through accupressure and non-drug therapies, stress management, vitamin and herb therapy.

**HLTH 202**  
**Community Health**  
 2.00 Credits      Class 2.00      Lab 0.00  
 A study of organizational issues of community health, which deals with health professionals, public health agencies, and other issues of health delivery. The course includes the physical aspects of community health, including communicable disease, chronic disease and safety; psychosocial issues, including drug and alcohol abuse and mental health problems; environmental issues, including air, water, waste and noise pollution and food sanitation; and special issues of community health. Offered: Fall, Spring.

## HOTR Hotel/Restaurant

**HOTR 101**  
**Mixology and Bar Management**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Basic understanding of how to mix drinks. Surveys basic drinks and other spirits and includes management principles. Emphasizes cost control and purchasing. Concurrent with HRCA 231. Course fee: \$75.

**HOTR 102**  
**Wines and Beers**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Focus on wines and beers of the world including their origin and history. Wine growing regions of Europe, North America and countries new to wine exportation are studied. Traditions, trends, proper glasses, presentation and terminology are covered. Prerequisite: Must be at least 21 years of age. Concurrent with HRCA 231. Course fee: \$90.

**HOTR 104**  
**Hospitality Management Development**  
 4.00 Credits      Class 1.00      Lab 10.00

An opportunity to be trained and to perform as a manager in a full service hotel. Prerequisites: HOTR 223, HOTR 224, HOTR 225, HOTR 226 and HOTR 227. Offered: Spring. Course fee: \$50.

**HOTR 107** PACE  
**Hospitality Industry Training**  
 2.00 Credits Class 2.00 Lab 0.00  
 Provides the ability to train personnel in new or established hotel/restaurant operations. Prerequisite: Must have completed at least 60 credit hours in Culinary Arts or Hotel/Restaurant. Offered: Summer, Fall, Winter, Spring.

**HOTR 108** PACE  
**Hospitality Human Resources Management**  
 2.00 Credits Class 2.00 Lab 0.00  
 Today's hospitality professionals are concerned about recruiting workers from a shrinking labor pool and retaining qualified employees. The course includes updated information on the Family and Medical Leave Act, the Americans with Disabilities Act, and performance appraisal issues. Offered: Summer, Fall, Winter, Spring.

**HOTR 110**  
**Quality Sanitation Management**  
 2.00 Credits Class 2.00 Lab 1.00  
 Student's will learn to keep guest satisfaction high through effective quality and cost-control management, ensure compliance with the FDA Food Code and reduce risks through a Hazard Analysis Critical Control Point approach. Offered: Fall, Winter.

**HOTR 111**  
**Food Management I**  
 3.00 Credits Class 2.00 Lab 3.00  
 Management organization, menu planning, material control, recipes and costing, personnel methods, equipment and facilities, food production methods and an introduction to baking and desserts. Offered: Spring. Course fee: \$75.

**HOTR 112**  
**Food Management II**  
 3.00 Credits Class 2.00 Lab 3.00  
 Food service management including management organization, menu planning, material control, recipes and costing, personnel management, equipment and facilities management, food production methods, food preparation techniques, food service and clean-up. Offered: Spring. Course fee: \$75.

**HOTR 114**  
**Food Management and Preparation I**  
 3.00 Credits Class 2.00 Lab 3.00  
 Food service management including analysis of menus, recipes, inventory control, yield test and cost comparisons of food and labor situations related to food service. Students plan, prepare, serve and clean-up a food service function. Offered: Fall, Winter. Course fee: \$75.

**HOTR 115** PACE  
**Security Management**  
 2.00 Credits Class 2.00 Lab 0.00  
 Security and loss prevention for hospitality properties. Safety and loss are addressed as necessary management programs and policies to ensure successful operations. Offered: Summer, Fall, Winter, Spring.

**HOTR 118** PACE  
**Hospitality Computer Systems**  
 2.00 Credits Class 2.00 Lab 0.00  
 Designed to show computer applications for all hospitality functional areas, including the basics of purchasing, implementing, maintaining and effectively managing today's information systems. Offered: Summer, Fall, Winter, Spring.

**HOTR 119**  
**Food Management and Preparation II**  
 3.00 Credits Class 2.00 Lab 3.00  
 Food service management including management organization, menu planning, material control, recipes and costing, personnel management, equipment and facilities management, food production methods, food preparation techniques, food service, and clean-up. Prerequisite: HOTR 114. Offered: Winter, Spring. Course fee: \$75.

**HOTR 120**  
**Introduction to Hospitality Industry**  
 2.00 Credits Class 2.00 Lab 0.00  
 Introduction to the lodging and food service industry. Explanation of the interrelationships involved and the variety of career opportunities available. Offered: Fall. Course fee: \$25.

**HOTR 121**  
**Hospitality Ethics**  
 2.00 Credits Class 2.00 Lab 0.00  
 Business values and how they affect actions, decisions and conduct in each department of a hotel. Policies, written and understood, are analyzed from employee, management and owner viewpoints.

**HOTR 122** PACE  
**Tourism and Hospitality Industry**  
 2.00 Credits Class 2.00 Lab 0.00  
 This course provides an introduction to the world's fastest-growing industry. Students will be exposed to factors that will impact tourism throughout their careers. Included will be research methods, marketing planning, and other applications. Offered: Summer, Fall, Winter, Spring.

**HOTR 124**  
**Convention Management and Service**  
 3.00 Credits Class 3.00 Lab 0.00  
 This course will take an in-depth look at the nature and scope of today's meetings and conventions market. Students will learn how the hospitality industry is responding to the increasing demands of the market and learn how selling to and servicing the conventions and meetings market offers the opportunity for graduates to experience an exciting and rewarding career with unlimited potential. Offered: Fall.

**HOTR 126** PACE  
**Managing for Quality**  
 3.00 Credits Class 3.00 Lab 0.00  
 Students will learn how to improve their leadership abilities and develop an understanding of high-performance teams and employee empowerment. The course will cover how to put quality management tools into action to enhance service and boost business. Prerequisites: HOTR 110, HOTR 115, HOTR 235, HOTR 170, HOTR 241. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**HOTR 140**  
**Basic Financial Accounting**  
 3.00 Credits Class 3.00 Lab 0.00  
 Application of practical accounting techniques to the hospitality service industry. Emphasizes the needs of management and the application of accounting concepts and techniques to managerial decision making. Front office procedures, food and beverage control and useful hotel and restaurant statistics are surveyed. Offered: Winter, Spring. Course fee: \$25.

**HOTR 170**  
**Hospitality Sales and Marketing**  
 3.00 Credits Class 3.00 Lab 0.00  
 Basic knowledge and practical experience enabling the student to develop strategic marketing plans for hotel/motel properties. Offered: Fall. Course fee: \$20.

**HOTR 180**  
**Hotel Restaurant Lab 3 A**  
 3.00 Credits Class 3.00 Lab 2.00  
 Offered: Fall.

**HOTR 181**  
**Hotel Restaurant Lab 3 B**  
 3.00 Credits Class 3.00 Lab 2.00  
 Offered: Winter.

**HOTR 182**  
**Hotel Restaurant Lab 3 C**  
 3.00 Credits Class 3.00 Lab 2.00  
 Offered: Spring.

**HOTR 223**  
**Food and Beverage Lab**  
 5.00 Credits Class 0.00 Lab 12.00  
 Integrates hands-on experience with academic instruction. Application of classroom concepts to practical situations in assigned work stations at the Ramada Inn. Prerequisites: HOTR 110, SUPR 117, HOTR 233, HOTR 234, HOTR 235. Offered: Fall. Course fee: \$25.

**HOTR 224**  
**Financial Management Lab**  
 4.00 Credits Class 0.00 Lab 12.00  
 This course provides the student with "hands-on" experience by application of classroom concepts to practical situations of handling financial matters at the Ramada Inn, the on-campus operational hotel. Prerequisites: COMM 122, HOTR 140, HOTR 241, MATH 108 B. Offered: Winter. Course fee: \$25.

**HOTR 225**

**Rooms Division Lab**

4.00 Credits      Class 0.00      Lab 12.00

Integrates hands-on experience with academic instruction. Application of classroom concepts to practical situations in assigned work stations at the Ramada Inn. Prerequisites: COMM 123, HOCR 242, HOCR 263, HOCR 115. Offered: Spring. Course fee: \$25.

**HOCR 226****Marketing and Sales Lab**

4.00 Credits      Class 0.00      Lab 12.00

Integrates hands-on experience with academic instruction. Application of classroom concepts to practical situations in assigned work stations at the Ramada Inn. Prerequisites: HOCR 170, HOCR 260, HOCR 122 and HOCR 124. Offered: Fall. Course fee: \$25.

**HOCR 227****Human Resources Lab**

4.00 Credits      Class 0.00      Lab 6.00

Integrates hands-on experience with academic instruction. Application of classroom concepts to practical situations in assigned work stations at the Ramada Inn. Prerequisites: HOCR 230, HOCR 107 and HOCR 108. Offered: Winter. Course fee: \$25.

**HOCR 228****Club Management Lab**

4.00 Credits      Class 0.00      Lab 12.00

Integrates hands-on experience with academic instruction. Application of classroom concepts to practical situations in assigned work stations at the Ramada Inn. Course fee: \$25.

**HOCR 230****International Hotels - Development and Marketing**

2.00 Credits      Class 2.00      Lab 0.00

Today's hospitality managers must understand the international business world in the rapidly changing global arena. This book features extensive coverage of cultural diversity issues and strategies for attracting guests from around the world and meeting their unique needs. Offered: Winter.

**HOCR 231****Serving Alcohol with Care**

1.00 Credit      Class 1.00      Lab 0.00

Serving alcohol with care, understanding Ohio Liquor Laws and recognizing effects of alcohol consumption. Prepares the student to deal with potential alcohol related problems and aid in the recognition and fulfillment of social/moral obligations while engaged in the sale and service of alcoholic beverages. Upon successful completion, a certificate from the American Hotel and Motel Association is issued. Offered: Fall. Course fee: \$45.

**HOCR 232****Contemporary Club Management**

2.00 Credits      Class 2.00      Lab 0.00

Introduces students to the unique world of club management. The certification program of the Club Managers Association of America guided the development of the book's content, which was authored by hospitality educators with expertise in the area of club management. Offered: Spring.

**HOCR 233****Food and Beverage Controls**

3.00 Credits      Class 3.00      Lab 0.00

Introduction to techniques for developing new customers, meeting customer needs, maximizing profits and maintaining long term customer relationships. Includes cost, sales and control of food and beverage operations. Offered: Summer, Fall, Winter, Spring.

**HOCR 234****Bar and Beverage Management**

2.00 Credits      Class 2.00      Lab 0.00

Introduction to bar and beverage management. Planning, equipping, staffing, operating and marketing a facility. How beverages are made, purchased, controlled and mixed into different kinds of drinks. Music, entertainment, lighting and a review of Ohio laws, service and food are discussed. Offered: Fall, Winter.

**HOCR 235****Food and Beverage Services**

2.00 Credits      Class 2.00      Lab 0.00

Principles of quality service and development of food and beverage service skills. Topics include dining room service, buffet and banquet service, table cookery, wines, spirits and beers. Ohio laws and regulations for alcohol control are reviewed. Offered: Summer, Fall, Spring. Course fee: \$25.

**HOCR 236****Budgeting for Hospitality**

3.00 Credits      Class 3.00      Lab 0.00

Introduction to financial accounting concepts used by managers and supervisors in the hospitality industry. Course includes development of an annual budget for a full service hotel. Course fee: \$25.

**HOCR 240****Hospitality Managerial Accounting**

3.00 Credits      Class 3.00      Lab 0.00

Analysis of financial statements, identification of costs, development of realistic budgets, forecasting, and planning cash flow in order to make effective managerial, business, and operational decisions. Course fee: \$50.

**HOCR 241****Front Office Operations**

3.00 Credits      Class 3.00      Lab 0.00

Introduction to technical innovation and technical theory such as yield management, manual night audit and record procedures. Combines technical theory with quality service concepts. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**HOCR 242****Housekeeping Management**

2.00 Credits      Class 2.00      Lab 0.00

Planning, organizing, staffing, directing and controlling housekeeping operations within budgets. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**HOCR 243****Hotel and Restaurant Law**

3.00 Credits      Class 3.00      Lab 0.00

Laws significant to the hospitality industry. Emphasis on awareness of potential legal problems is designed to enable resolutions of problems before they could result in liability. Concurrent with HOCR 107 and HOCR 227. Prerequisite: SUPR 117 and HOCR 115. Offered: Winter. Course fee: \$30.

**HOCR 244****Audits and Controls for Lodging Establishments**

2.00 Credits      Class 1.00      Lab 3.00

Principles of managerial and basic marketing management concepts. Covers the management of personnel and routine managerial duties. Course fee: \$15.

**HOCR 260****Marketing of Hospitality Services**

3.00 Credits      Class 3.00      Lab 0.00

Researching potential sources of business, analyzing potential customer needs, selling services and maintaining long-term customer relationships. Offered: Summer, Fall. Course fee: \$25.

**HOCR 263****Facilities Management**

2.00 Credits      Class 2.00      Lab 0.00

Energy management, heating, refrigeration, ventilation, air conditioning, electricity and water systems. Practical exercises in food service equipment and use of tools and materials. Offered: Spring. Course fee: \$25.

**HOCR 275****Resort Management and Development**

3.00 Credits      Class 3.00      Lab 0.00

Application of successful business resort concepts to any type of property. Reflects the increase in importance attached to vacation travel and special weekend packages. Offered: Spring.

**HOCR 276****Introduction to Hospitality Real Estate**

2.00 Credits      Class 2.00      Lab 0.00

An introduction to hospitality real estate from both a broker and buyer viewpoint including: proforma, feasibility studies, market studies, break-even analysis, cap rates, cash-on-cash return, real estate terms and law, contracts offers, acceptances, construction methods and types, loan packaging, payment computation and wrap mortgages.

**HOCR 277****Architectural Development and Design**

2.00 Credits      Class 2.00      Lab 0.00

An overview of hospitality architectural development and design including: construction methods, functional design considerations, proper topographical locations, parking considerations, ancillary services and design, recreational facilities, restaurant design, lounge design, banquet and meeting room design, sleeping room design,

common area design and location, market and feasibility studies, deciding capacities and needs, furniture, fixture and equipment requirements, and interior decoration.

**HOTR 290****Hotel and Restaurant Special Topics**

1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Structured exploration of a specific topic(s) by participants in a group.

**HOTR 291****Hotel and Restaurant Individual Study**

1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**HOTR 292****Hotel and Restaurant Field Experience**

3.00 Credits Class 0.00 Lab 36.00

On-the-job training in a hotel/restaurant facility through special arrangement with an instructor.

**HOTR 293****Hotel and Restaurant Directed Practice**

2.00–8.00 Credits Class 1.00 Lab 5.00–35.00

Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function.

**HOTR 294****Hotel and Restaurant Cooperative Work Experience**

4.00 Credits Class 2.00 Lab 20.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Prerequisites: HOTR 223, HOTR 234 and HOTR 126. Course fee: \$25.

**HOTR 296****Hotel and Restaurant Practicum**

2.00 Credits Class 0.00 Lab 16.00

The student is placed in an actual working environment for a minimum amount of time to gain experience before graduation. Course fee: \$25.

**HOTR 297****Hotel and Restaurant Observation Hour**

1.00–3.00 Credits Class 0.00 Lab 15.00–45.00

Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity. Course fee: \$25.

**HOTR 298****Hotel and Restaurant Internship**

6.00–9.00 Credits Class 3.00 Lab 20.00–40.00

On-the-job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$25.

**HRCA****Hotel Restaurant/Culinary Arts****HRCA 294****Hotel/Restaurant and Culinary Cooperative Work/Seminar**

2.00–8.00 Credits Class 1.00 Lab 10.00–70.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Prerequisites: HOTR 223, HOTR 241, HOTR 242 and HOTR 126. Course fee: \$25.

**HUM****Humanities****HUM 200****Introduction to World Literature**

3.00 Credits Class 3.00 Lab 0.00

Examines various literary works representing historical periods from the ancient world through the twentieth century. Presents a progression of literary styles and forms representing the universality of human concerns through the ages. Prerequisite: COMM 121 Course fee: \$20.

**HUM 201****Western Civilization and Culture****3.00 Credits**

Class 3.00

Lab 0.00

Provides an understanding that the human experience is not, and has never been, a series of stagnant, isolated moments. Students will learn to appreciate the fact that all people have not shared the same world views, opportunities and problems. Prerequisite: COMM 121 Course fee: \$5.

**HUM 202****Understanding and Appreciating Theatre Arts**

3.00 Credits Class 3.00 Lab 0.00

Designed to give participants an opportunity to increase their insight and understanding of theatre art. Students will study the historical tradition of theatre art, its ever changing place in society and the composite talents and skills that create the drama, the productions and the performances an audience sees. Course fee: \$5.

**HUM 203****Ethics, Values, and Morality**

3.00 Credits Class 3.00 Lab 0.00

Rationales by which individuals and societies determine what constitutes ethical and moral behavior. Includes an overview of moral philosophy and theories of value formation. Offered: Fall, Winter, Spring. Course fee: \$5.

**HUM 204****20th Century U.S. Music**

3.00 Credits Class 3.00 Lab 0.00

Explores the predominant music of the United States during the twentieth century. Includes an examination of the foundations and development of classical, jazz, popular, folk and Broadway music of the last one hundred years. Course fee: \$5.

**HUM 290****Humanities Special Topics**

1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Structured exploration of a specific topic(s) by participants in a group.

**HUM 291****Humanities Individual Study**

1.00–5.00 Credits Class 1.00–5.00 Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**IM****Interactive Multimedia****IM 110****Graphic Design**

3.00 Credits Class 2.00 Lab 3.00

Design and creation of graphic elements. Basic photographic techniques. Composition, balance, harmony and exposure will be discussed. Students will use Adobe Photoshop to create, modify and combine graphic elements for use in web sites, video and print. Offered: Fall. Course fee: \$100.

**IM 112****Illustration**

2.00 Credits Class 1.00 Lab 3.00

Basics of illustration using Adobe Illustrator software to design and create graphics for use in web sites, video and print. Students will use essential Illustrator tools, including the pen and pencil, gradients and gradient meshes, brushes, styles, and layers. Offered: Fall. Course fee: \$100.

**IM 120****Interactive Media I**

3.00 Credits Class 2.00 Lab 3.00

Use of Macromedia Director software to create interactive media presentations. Students plan and execute programs combining digital photographs, digital audio, vector art and other elements into a unified whole. The completed presentation is mastered to CD-ROM. Offered: Winter. Course fee: \$100.

**IM 130****Interactive Media II**

3.00 Credits Class 2.00 Lab 3.00

Use of Macromedia Director's scripting language, Lingo, to create advanced media presentations. Students combine media elements, including video, into an interactive program. Prerequisite: IM 120. Offered: Spring. Course fee: \$100.

**IM 220****Video Compositing**

2.00 Credits Class 1.00 Lab 3.00

Use of Adobe AfterEffects software to create composite media incorporating still images, video, titles and audio. Students add elements to a timeline, using keyframes to control element position, size, rotation, transparency and other behavioral traits. Students then transfer the completed composition to videotape and to a non-linear video editing system. Offered: Winter. Course fee: \$100.

**IM 222**  
**Dynamic Web Media**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Use of Macromedia Flash to create animated media for the World Wide Web. Students combine graphic and audio elements and use Flash to control behavior. Completed animation is saved to disk in Flash format and incorporated into a web page. Offered: Winter. Course fee: \$100.

**IM 224**  
**Interactive Media Distribution**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Distribution of media programs via CD, DVD, and the World Wide Web. Students use Adobe Photoshop and Media 100 Cleaner to compress video, audio and still images for the desired medium. Bandwidth and hardware requirements and limitations are discussed and demonstrated. Offered: Winter. Course fee: \$100.

## INTP Interpretive Services

**INTP 100**  
**Introduction to Interpretation**  
 2.00 Credits      Class 0.00      Lab 6.00  
 An orientation to the field of interpretation with field trips to interpretive facilities to observe professional interpreters. Offered: Fall. Course fee: \$20.

**INTP 109**  
**Night Interpretation**  
 2.00 Credits      Class 1.00      Lab 3.00  
 By participation and practice, students will learn techniques of planning and presenting night programs for a variety of audiences and settings. Offered: Fall.

**INTP 114**  
**Interpretive Employment Seminar**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Offered: Winter.

**INTP 115**  
**Interpretive Methods**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Principles and practices to prepare and conduct guided visitor activities including guided walks and illustrated programs. Professionalism and communication skills are included. Offered: Fall, Winter, Spring. Course fee: \$25.

**INTP 116**  
**Interpretive Guide Seminar**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Offered: Winter, Spring.

**INTP 117**  
**Interpretive Interaction Techniques**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Covers effective interaction with the audience during a presentation. Non-verbal skills, talents, gimmicks and innovative techniques are used to build a repertoire for naturalists, tour guides, teachers, speakers or anyone who communicates. Prerequisite: INTP 115. Course fee: \$15.

**INTP 118**  
**Environmental Education Techniques**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Offered: Spring.

**INTP 120**  
**Outdoor Programs**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Development and preparation of interpretive programs using environmental and outdoor educational activities successful on formal school sites and non-formal learning centers including nature centers, parks and camps. Prerequisite: REC 115. Course fee: \$15.

**INTP 210**      PACE  
**Recreation Programming**  
 2.00 Credits      Class 2.00      Lab 1.00  
 Studies how to plan leisure time activities for the general public.

Responding to human needs, recognizing physical capabilities and limitations of individuals or groups and identifying appropriate activities for special populations is covered. Prerequisite: INTP 115. Offered: Fall.

**INTP 215**  
**Historical Interpretation Techniques**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Studies the processes of historical interpretation which utilize third and first person techniques. This is a period research and characterization course and required each participant to develop a character which keeps with the period and assigned theme. The importance of research in revealing the people, lifestyles, mannerisms, dress, industry, education, medicine, politics and religion of the period is emphasized. Prerequisite: INTP 115. Offered: Fall. Course fee: \$60.

**INTP 220**  
**Historical Perspectives**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Historical research as related to interpretive programming is covered with examination of the settlement and growth of the Hocking Valley through the use of archival materials, libraries, private collections and other resources. Prerequisite: INTP 215. Offered: Winter. Course fee: \$25.

**INTP 225**  
**Development and Design of Outdoor Study Sites**  
 3.00 Credits      Class 2.00      Lab 3.00  
 A survey of existing and potential outdoor education sites that evaluates areas for safety and identifies activities that best show the ecological concepts of the site. Prerequisite: INTP 210. Offered: Winter. Course fee: \$35.

**INTP 230**  
**Self-Guided Interpretive Activity**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Self-guiding interpretive activities including signs and labels, trails, auto tours, tape recordings, and interpretive publications are discussed emphasizing design and layout of self-guiding systems as well as production of support media. Prerequisite: INTP 115. Offered: Winter, Spring. Course fee: \$15.

**INTP 230 A**  
**Project Wild**  
 1.00 Credit      Class 1.00      Lab 0.00  
 An introduction to Project WILD outlining its financial support by the American Forest Institute and its subsequent development by the Western Regional Environmental Education Council. The student earns a copy of the elementary guide which contains 81 wildlife-related activities. Course fee: \$5.

**INTP 230 B**  
**Project Learning Tree**  
 1.00 Credit      Class 1.00      Lab 0.00  
 An introduction of Project Learning Tree by outlining its financial support by the American Forest Institute and its subsequent development by the Western Regional Environment Education Council. The student earns a copy of the elementary guide, which contains 89 forest-related activities. Course fee: \$5.

**INTP 231**  
**Nature Painting**  
 1.00 Credit      Class 0.00      Lab 3.00  
 Nature painting with emphasis on watercolor and acrylic painting. Course fee: \$65.

**INTP 240**  
**Nature Center and Museum Operations**  
 2.00 Credits      Class 1.00      Lab 4.00  
 Practical, hands-on experience in nature center and museum operations planning and delivering of audiences. Prerequisite: INTP 215. Offered: Spring. Course fee: \$35.

**INTP 250**  
**Backpacking and Survival**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Students are taught backpacking techniques, including selection of equipment, hiking skills, selection of food, cooking skills, camping techniques, wilderness travel and wilderness emergencies. Includes training in survival skills such as fire building, shelter construction, finding water and food and the construction of survival kits and tools. Course fee: \$115.

**INTP 254**  
**Nature Drawing I**

**1.00 Credit**            **Class 0.00**            **Lab 3.00**  
Techniques of illustration are presented with emphasis on pen and ink. A number of completed plates are required, which are critiqued and graded on a one-to-one basis with the student. Offered: Winter. Course fee: \$50.

**INTP 258**  
**Winter Camping and Survival**  
**3.00 Credits**            **Class 3.00**            **Lab 1.00**  
Covers skills for winter camping and recognizing survival situations, including information on clothing, equipment, survival kits and the psychology of survival. Course fee: \$25.

**INTP 278**  
**Nature Drawing II**  
**1.00 Credit**            **Class 0.00**            **Lab 3.00**  
Designed for the advanced student of graphic interpretation. Students learn to depict nature in motion, illustrate natural objects and species in the field and graphically depict nature in pen and ink from photographs and other two-dimensional media. Prerequisite: INTP 254. Course fee: \$50.

**INTP 279**  
**Nature Photography**  
**1.00 Credit**            **Class 0.00**            **Lab 3.00**  
Covers the mechanics of 35 mm cameras, lenses, and related equipment for use in photographing nature. Techniques of color photography and composition are explored. Course fee: \$115.

**INTP 290**  
**Interpretive Services Special Topics**  
**0.25-5.00 Credits**    **Class 0.25-5.00**    **Lab 0.00**  
A structured exploration of a specific topic(s) by participants in a group.

**INTP 294**  
**Interpretive Services Cooperative Work Experience**  
**6.00 Credits**            **Class 2.00**            **Lab 40.00**  
An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**INTP 296**  
**Interpretive Services Practicum**  
**2.00-7.00 Credits**    **Class 1.00**            **Lab 7.00**  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**INTP 298**  
**Interpretive Services Internship**  
**6.00-9.00 Credits**    **Class 3.00**            **Lab 20.00-40.00**  
On-the-job training in the workplace of a cooperating agency. Coordinated by an instructor.

## ISE Industrial Systems Engineering

**ISE 107**  
**Manufacturing I**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Introduction to industrial materials and their properties and how these properties relate to product design. Offered: Winter. Course fee: \$45.

**ISE 108**  
**Manufacturing II**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Nonferrous materials, nonmetallic materials, material selection, casting and deformation processing. Offered: Spring. Course fee: \$30.

**ISE 109**  
**Manufacturing III**  
**3.00 Credits**            **Class 2.00**            **Lab 4.00**  
Processes that reshape existing material in the solid state and assembly procedures. Offered: Fall. Course fee: \$40.

**ISE 115**  
**Environmental and Safety Fundamentals**  
**3.00 Credits**            **Class 3.00**            **Lab 0.00**  
Standard safety practices for use in the laboratory and industry. Requirements for the safe handling, storage and proper disposal procedures for chemical and hazardous materials. The legal aspects of OSHA and EPA requirements as they affect employees and employers.

Offered: Fall. Course fee: \$5.

**ISE 130**  
**AC Power Systems**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Offered: Winter.

**ISE 201**  
**Occupational Safety**  
**3.00 Credits**            **Class 3.00**            **Lab 0.00**  
Ohio safety codes and accepted safety practices and procedures pertaining to employees and employers. Workman's compensation, safety design, inspection, personal protective equipment, safety analysis and responsibility. Offered: Fall. Course fee: \$5.

**ISE 210**  
**Control Systems I**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Basic theory and instrument function, measurement and response limitations, calibration of instruments and an analysis of industrial process instrumentation and operations. Pneumatic, hydraulic, electrical, electronic, electromechanical and other combinations of instruments are used. Prerequisite: MATH 110. Offered: Winter. Course fee: \$60.

**ISE 213**  
**Control Systems II**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Digital and analog controllers, off/on, proportional, proportional-reset and proportional-reset-rate. Feedback control systems are studied along with methods for finding the actual value of parameter to be set on the controller for best control. Computer operations are studied (MS-DOS and BASIC) as they apply to supervisory and direct digital control. Prerequisite: MATH 111. Offered: Spring. Course fee: \$60.

## JUV Juvenile Services

**JUV 100**  
**Juvenile Residential Services**  
**3.00 Credits**            **Class 2.00**            **Lab 4.00**  
Operation and programming of juvenile institutional and community based residential facilities. Includes a review of the history, function, social purposes, programs and their effectiveness. Offered: Fall. Course fee: \$20.

**JUV 101**  
**Family Dynamics**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Family interaction and functioning in response to external and internal pressures. Includes a review of symptoms of family dysfunction that come to the attention of authoritative agencies and official responses to those problems. Offered: Fall

**JUV 102**  
**Juvenile Delinquency**  
**3.00 Credits**            **Class 3.00**            **Lab 0.00**  
History, nature and extent of juvenile delinquency. Theories of causation are reviewed in the study of past and current prevention, control and treatment methods. Offered: Fall.

**JUV 105**  
**Child Abuse**  
**3.00 Credits**            **Class 3.00**            **Lab 2.00**  
Dynamics related to child abuse, neglect and abandonment. Includes an overview of the extent of abuse and related dynamics. The influence of abuse on current and future behavior along with its impact on personality development is also explored. Prerequisite: JUV 102. Offered: Winter.

**JUV 110**  
**Adolescent Cognitive Behavior**  
**3.00 Credits**            **Class 3.00**            **Lab 0.00**  
Dysfunctional cognitive and behavioral patterns of adolescents that bring them into contact with the juvenile justice system. Assessment techniques that identify these thinking errors are presented with discussion of intervention methods to assist the youth in modifying their thinking and behavior. Offered: Spring. Course fee: \$5.

**JUV 111**  
**Juvenile Sexual Offender**  
**3.00 Credits**            **Class 3.00**            **Lab 0.00**  
Study of the juvenile offender who has been involved with sexually acting out sexual abuse or sexual assault. Causes and results of such



behavior will be compared with current treatment interventions. Prerequisite: JUV 110. Offered: Spring. Course fee: \$5.

## LANG Languages

### LANG 110

**Spanish**  
5.00 Credits      Class 5.00      Lab 0.00  
An introductory Spanish course designed for study abroad students emphasizing basic language patterns in order to give and receive information in different settings. Offered: Winter.

### LANG 120

**Beginning Spanish**  
3.00 Credits      Class 3.00      Lab 1.00  
Designed for the student with little or no background in Spanish. Includes basic language patterns in order to give and receive information in different contexts. Lessons are organized to reflect the needs of travel professionals.

### LANG 121

**Intermediate Spanish**      PACE  
3.00 Credits      Class 3.00      Lab 1.00  
Vocabulary, intonation and the convention of the Spanish language. Emphasizes is on oral/aural skills, rudimentary writing and reading materials tailored to the needs of the Travel and Tourism student are introduced. Prerequisite: LANG 120.

### LANG 290

**Languages Special Topics**  
1.00–5.00 Credits      Class 1.00–5.00      Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.

### LANG 291

**Languages Individual Study**  
1.00–5.00 Credits      Class 1.00–5.00      Lab 0.00  
Individual study or research. Topics are arranged on an individual basis with instructor permission.

## MA Medical Assistant

### MA 100

**Basic Clinical Assisting Procedures**  
5.00 Credits      Class 4.00      Lab 3.00  
Fundamental clinical assisting procedures in the family practice medical office. Emphasizes procedures employed in the general patient examination including medical asepsis, vital signs, positioning and draping, measuring height and weight, obtaining patient symptoms, charting, health history, patient preparation for and assisting with the physical examination, distance and near visual acuity testing, color vision testing, eye and ear instillations and irrigations and obtaining specimens for laboratory analysis. Offered: Fall. Course fee: \$55.

### MA 102

**Medical Office Procedures I**  
2.00 Credits      Class 2.00      Lab 2.00  
Administrative or office duties of a medical assistant in a physician's office. Includes answering, screening and placing telephone calls; scheduling patient appointments and hospital admissions; handling patient information brochures; purchasing equipment and supplies, paying invoices, inventory control, storing supplies and drugs and equipment maintenance; establishing priorities for work and office procedures manual. Offered: Fall. Course fee: \$20.

### MA 110

**Family Practice Clinical Assisting Procedures**  
4.00 Credits      Class 3.00      Lab 3.00  
Intermediate level clinical procedures in the family practice medical office. Emphasizes tissue healing and surgical sepsis including the application of heat and cold, bandaging, cast application and removal, crutch walking, sterilization and disinfection, minor office surgery and urinalysis. Prerequisite: MA 100. Offered: Spring. Course fee: \$55.

### MA 112

**Medical Law and Ethics**  
3.00 Credits      Class 3.00      Lab 0.00  
Medical ethics and law in the medical office setting. Analyzes medical office situations to determine ethical and legal status. Includes a history of medicine, the Medical Practice Acts, the physician-patient relationship, confidentiality, implied, verbal and written consent, malpractice, creating and terminating a contract and professional law

liability. Identifies reports required by law and emphasizes professionalism in the medical office. Offered: Winter.

### MA 113

**Nutrition for Medical Assistants**  
4.00 Credits      Class 4.00      Lab 1.00  
Introduction to the science of nutrition. Prepares medical assistants in the application of nutritional concepts to patient care. Emphasizes the function, food sources and dietary deficiencies of nutrients. Includes the process of digestion; menu planning for childhood and adolescence, the elderly and the pregnant patient; food poisoning, food preservation and additives; dental care; modified diet therapy for diabetes mellitus and cardiovascular and gastrointestinal disorders. Offered: Winter.

### MA 115

**Medical Transcription**  
3.00 Credits      Class 2.00      Lab 4.00  
Transcribing medical reports from cassette transcribers. Emphasizes spelling, punctuation, grammar and proofreading. Patient histories, physical examinations, progress notes, discharge summaries, x-ray reports and letters are transcribed by the student. Prerequisites: HLTH 101 and OAT 180. Offered: Winter. Course fee: \$37.

### MA 120

**OB, GYN, Pediatric Clinical Assisting Procedures**  
4.00 Credits      Class 3.00      Lab 3.00  
Presentation of theory and techniques required by the medical assistant to perform gynecologic, obstetric and pediatric examining room techniques. Includes the menstrual cycle and gynecologic examination, instructing the patient in methods of birth control, signs and symptoms of pregnancy, the prenatal examination, problems of pregnancy, growth and development of the embryo and fetus, labor and delivery, care of the newborn, and the pediatric examination. Prerequisite: MA 110. Offered: Winter. Course fee: \$55.

### MA 122

**Medical Office Procedures II**  
2.00 Credits      Class 2.00      Lab 2.00  
Filing systems, procedures, equipment and supplies, retention schedules, patient records, types of health insurance coverage, initiating and updating records, insurance terminology, handling insurance claims, coding for professional services, provisions of Blue Cross, Blue Shield, Medicare, Medicaid, CHAMPUS and Workman's Compensation and typing insurance forms. Prerequisites: OAT 100 and MA 102. Offered: Winter. Course fee: \$20.

### MA 200

**Advanced Clinical Assisting Procedures**  
5.00 Credits      Class 4.00      Lab 3.00  
Procedures employed in administering patient therapy and diagnostic testing, administration of medications, performing venipuncture, running electrocardiograms, administering ultrasound treatments, assisting with sigmoidoscopy and patient preparation and positioning for x-rays. Offered: Fall. Course fee: \$55.

### MA 202

**Basic Pharmacology for Medical Assistants**  
4.00 Credits      Class 4.00      Lab 0.00  
Pharmacology principles relating to the medical office. Emphasizes correlation of drug therapy with pathologic conditions, patient education regarding medications and obtaining competency in researching drugs in a drug reference. The use, action, side effects, implications, contradictions and route of drugs commonly administered, dispensed and prescribed in the medical office including antihistamines, immunizing agents, antibiotics, cardiovascular drugs, digestive drugs and drugs affecting the urinary, nervous and respiratory systems. Offered: Fall.

### MA 203

**Medical Assistant Externship I**  
4.00 Credits      Class 0.00      Lab 13.00  
Directed practicum in a medical office, clinic or comprehensive health care facility where the student spends two days each week performing administrative and clinical skills under the supervision of a preceptor. A weekly externship seminar is included to discuss experiences. Prerequisites: MA 102, MA 112, MA 122, MA 120, MA 223, MA 110. Offered: Fall. Course fee: \$25.

### MA 204

**Medical Assistant Externship II**  
4.00 Credits      Class 0.00      Lab 13.00  
Continuation of MA 203. Prerequisite: MA 203. Offered: Winter. Course fee: \$25.

### MA 205

**Medical Assistant Externship III**  
 4.00 Credits      Class 0.00      Lab 13.00  
 Directed practicum in a medical office, clinic, or comprehensive health care facility to provide direct patient contact; apply clinical and administrative theory to practical situations; perform clinical and administrative procedures in a medical office; and gain insight into the medical assistant role in the health care team. Two days each week are spent in a general or specialty practice office performing administrative and clinical skills under the supervision of a preceptor. Prerequisite: MA 204. Offered: Spring. Course fee: \$25.

**MA 220**  
**Medical Laboratory Procedures**  
 6.00 Credits      Class 5.00      Lab 3.00  
 Theory and techniques required to perform laboratory tests in the medical office. Emphasizes patient preparation, completion of laboratory forms, collection of specimens for testing in the medical office or for transporting to an outside laboratory, performing laboratory tests and reporting results, identifying abnormal results, quality control and laboratory safety. Clinical procedures include venipuncture, obtaining a capillary blood specimen, blood banking, hematologic laboratory tests, blood chemistry tests, microbiologic laboratory tests and urinalysis. Prerequisite: MA 200. Offered: Spring. Course fee: \$55.

**MA 221**  
**Medical Management Computerization**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Computer concepts and applications for the medical office. Emphasizes utilization of microcomputers in the medical office including the data processing cycle, components of the computer system, selection of hardware and software, secondary storage devices, the disk operating system (DOS) and medical office management applications. Offered: Winter. Course fee: \$55.

**MA 222**  
**Medical Procedures III**  
 4.00 Credits      Class 3.00      Lab 3.00  
 Financial and business records in a physician's office. Methods of billing, extending credit, installment payments, collection methods and problems, laws pertaining to credit and collection, banking terminology and services, checking accounts, accounting systems, daily service records, combined cash journals, patients' and general ledgers, disbursement records, petty cash records, financial statements, payroll taxes and deductions, tax returns, employee earning records and payroll registers are covered. Prerequisite: MA 122. Offered: Winter. Course fee: \$40.

**MA 223**  
**Computer Applications in Medical Assisting**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Medical office computer applications. Functions performed by medical office management application programs which include file maintenance, patient registration, posting transactions, appointments, patient billing, insurance billing and reports. Offered: Spring. Course fee: \$55.

**MA 224**  
**Advanced Pharmacology for Medical Assistants**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Advanced principles of pharmacology relating to the medical office. Emphasis is placed on the correlation of drug therapy with pathologic conditions, patient education regarding medications and obtaining competency in researching drugs in a drug reference. Documentation of drug administration and assessment for side effects/benefits of drugs is thoroughly discussed. Use, action, side effects, implications of medications that are dispensed and prescribed in the medical office including digestive drugs and drugs affecting the urinary, nervous, endocrine and respiratory systems. Drugs that are used to control pain are presented with special emphasis on the medical assistants responsibilities when administering and/or working with controlled substances. Offered: Winter.

**MA 225**  
**Case Studies in Medical Assisting**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Integration of all components of the Medical Assistant curriculum. Through simulated case studies, the student demonstrates competency in knowledge and skills required for entry level employment in a medical office or clinic. Assists the student in preparation for the Certification Examination for Medical Assistants. Offered: Spring.

**MA 239**  
**Principles and Techniques of Electrocardiography**  
 1.00 Credit      Class 0.00      Lab 2.00

Theory and techniques of electrocardiography including patient preparation and the running, care and maintenance of the ECG. Course fee: \$55.

**MA 290**  
**Medical Assistant Special Topics**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

**MA 291**  
**Medical Assistant Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**MA 292**  
**Medical Assistant Field Experience**  
 1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00  
 On-the-job training in a medical assistance facility through special arrangement with an instructor. Course fee: \$25.

**MA 293**  
**Medical Assistant Directed Practice**  
 2.00-8.00 Credits      Class 1.00      Lab 5.00-35.00  
 Directed practice instruction in the performance of a particular function from an assigned instructor, and then observed and critiqued by the instructor in a repeat performance of that function. Course fee: \$25.

**MA 294**  
**Medical Assistant Cooperative Work Experience**  
 2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Course fee: \$25.

**MA 296**  
**Medical Assistant Practicum**  
 2.00-7.00 Credits      Class 1.00      Lab 7.00-42.00  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Course fee: \$25.

**MA 297**  
**Medical Assistant Observation Hour**  
 1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**MA 298**  
**Medical Assistant Internship**  
 3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$25.

## MATH Mathematics

**MATH 101**  
**Basic Mathematics**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Whole number operations, fractions and decimals are covered. Applications of these topics and order of operation is emphasized. Offered: Fall. Course fee: \$16.

**MATH 102**  
**Pre-Algebra**  
 3.00 Credits      Class 3.00      Lab 1.00  
 Metric and English systems of measurement, percents, operations on signed numbers and evaluating expressions containing powers and/or roots are covered. Applications of the topics is emphasized. Prerequisite: MATH 101. Offered: Fall. Course fee: \$16.

**MATH 104**  
**Pharmacology Math**      PACE  
 1.00 Credit      Class 1.00      Lab 1.00  
 Computational skills necessary to safely administer medications. Includes temperature conversions. Prerequisite: MATH 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**MATH 108**      PACE  
**Introduction to Algebra**

**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Measurement systems, measurement quality, unit analysis, algebraic operations, simple equations and formulas, ratio and proportion, the Cartesian coordinate system, graphing linear equations, writing equations of straight lines, functions, interpolation, and the mathematical construction and use of table, charts, and graphs. Applications from various technical fields are included. Prerequisite: MATH 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$16.

**MATH 108 B**  
**Introduction to Algebra for Business**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Measurement systems, measurement quality, unit analysis, algebraic operations, simple equations and formulas, ratio and proportion, the Cartesian coordinate system, graphing linear equations, writing equations of straight lines, functions, interpolation, and the mathematical construction and use of tables, charts, and graphs. Applications from business are included. Prerequisite: MATH 102. Offered: Fall, Winter, Spring. Course fee: \$16.

**MATH 108 E**  
**Introduction to Algebra for Engineering**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Measurement systems, measurement quality, unit analysis, algebraic operations, simple equations and formulas, ratio and proportion, the Cartesian coordinate systems, graphing linear equations, writing equations of straight lines, functions, interpolation, and the mathematical construction and use of tables, charts, and graphs. Applications from engineering are included. Prerequisite: MATH 102. Offered: Fall. Course fee: \$16.

**MATH 108 H**  
**Introduction to Algebra for Health**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Measurement systems, measurement quality, unit analysis, algebraic operations, simple equations and formulas, ratio and proportion, the Cartesian coordinate system, graphing linear equations, writing equations of straight lines, functions, interpolation, and the mathematical construction and use of tables, charts, and graphs. Applications from nursing and health including medication dosage calculations are included. Prerequisite: MATH 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$16.

**MATH 108 N**  
**Introduction to Algebra for Natural Resources**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Measurement systems, measurement quality, unit analysis, algebraic operations, simple equations and formulas, ratio and proportion, the Cartesian coordinate system, graphing linear equations, writing equations of straight lines, functions, interpolation, and the mathematical construction and use of table, charts, and graphs. Applications from natural resources are included. Prerequisite: MATH 102. Offered: Fall, Winter, Spring. Course fee: \$16.

**MATH 109**  
**Business Math**  
**4.00 Credits**      **Class 4.00**      **Lab 0.00**  
 An algebraic approach to solving applied business mathematics problems. Topics include basic statistics, interest, taxes, depreciation, annuities, investments and other business applications. Prerequisite: MATH 108. Offered: Fall, Spring. Course fee: \$16.

**MATH 110**      **PACE**  
**Geometry and Trigonometry**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Plane and solid geometry, right triangle trigonometry, Laws of Sine and Cosine and basic statistics. Word problems will be emphasized. Prerequisite: MATH 108. Offered: Summer, Fall, Winter, Spring. Course fee: \$16.

**MATH 111**      **PACE**  
**Intermediate Algebra**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Basic manipulations and operations involving algebraic terms, factoring and removal of monomial factors, algebraic fractions and equations involving fractions, exponents (zero, negative and fractional) and radicals are covered. Word problems are emphasized. Prerequisite: MATH 108. Offered: Summer, Fall, Winter, Spring. Course fee: \$16.

**MATH 112**      **PACE**  
**Advanced Algebra**  
**3.00 Credits**      **Class 3.00**      **Lab 1.00**  
 Solving quadratic equations (by using either the quadratic formula or factoring); both natural and common logarithms; solving equations by graphing; solving simultaneous equations using graphing, substitution,

addition/subtraction, or determinates; and the manipulation of vectors and their sums are covered. Word problems are emphasized. Prerequisites: MATH 110 and MATH 111. Offered: Summer, Fall, Winter, Spring. Course fee: \$16.

**MATH 113**  
**Comprehensive College Algebra**  
**5.00 Credits**      **Class 5.00**      **Lab 0.00**  
 Review of high school algebra including linear and quadratic equations and inequalities, factoring, operations on algebraic fractions, radicals and exponents, simultaneous linear equations and simple graphing techniques. Prerequisite: Placement. Offered: Fall, Winter. Course fee: \$16.

**MATH 115**  
**Pre-Calculus**  
**5.00 Credits**      **Class 5.00**      **Lab 0.00**  
 Selected topics from algebra, geometry, trigonometry, and statistics. The Math 113/115 sequence is designed to allow students with two or more years of high school algebra to complete the equivalent of the MATH 108, 110, 111, 112 sequence in two quarters rather than four. Prerequisite: MATH 113. Offered: Fall. Course fee: \$16.

**MATH 150**  
**Food Service Math**  
**2.00 Credits**      **Class 2.00**      **Lab 1.00**  
 Basic arithmetic operations, including the application of basic math operations to food service problems such as recipes, portioning and daily report completion are covered. Offered: Winter. Course fee: \$16.

**MATH 163 A**  
**Calculus**  
**4.00 Credits**      **Class 4.00**      **Lab 0.00**  
 Limits and continuity, differentiation, rates of change, differentiation techniques, higher order derivatives, maximum/minimum problems, implicit differentiation, exponential and logarithmic functions, the antiderivative, the definite integral and various application problems are covered. Prerequisites: MATH 112 and MATH 115. Offered: Fall, Spring. Course fee: \$16.

**MATH 174**  
**Math for Automotive**  
**3.00 Credits**      **Class 3.00**      **Lab 0.00**  
 Math and algebra formulas, expressions and equations to solve the technical problems found in the automotive industry. Includes percentages, ratio and proportions, powers and roots, English/metric measurements and conversions as well as graphs and charts. Offered: Winter. Course fee: \$16.

**MATH 290**  
**Mathematics Special Topics**  
**1.00–5.00 Credits**      **Class 1.00–5.00**      **Lab 0.00**  
 Structured exploration of a specific topic(s) by participants in a group. Course fee: \$16.

**MATH 291**      **PACE**  
**Mathematics Individual Study**  
**1.00–5.00 Credits**      **Class 1.00–5.00**      **Lab 0.00**  
 Individual study or research. Topics are arranged on an individual basis with instructor permission. Offered: Summer, Fall, Winter, Spring. Course fee: \$16.

## MATL Materials and Manufacturing

**MATL 100**  
**Properties of Materials**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
 Structure and properties of materials, such as basic atomic, molecular, crystalline and amorphous structures for ceramics, metals and polymers. Methods of evaluating structures and properties of materials are demonstrated. Offered: Fall. Course fee: \$60.

**MATL 102**  
**Steel and Mechanical Properties**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**  
 Principles of metallurgy including the effects of plastic deformation and microstructure on steel properties. The iron-iron carbide equilibrium diagram is studied to relate heat treating and alloying effects that produce specific mechanical properties. Offered: Winter. Course fee: \$60.

**MATL 103**  
**Material Properties of Polymers**  
**3.00 Credits**      **Class 3.00**      **Lab 2.00**

Thermoplastics and thermosetting polymers and methods used in manufacturing are covered. Methods of testing plastics materials are covered in the lab. Offered: Winter. Course fee: \$60.

**MATL 110****Nonferrous Metals**

3.00 Credits      Class 3.00      Lab 2.00

Nonferrous metals and alloys, including fabricating metals from ores, altering mechanical and chemical properties, and alloying techniques. Prerequisite: MATL 102. Offered: Spring. Course fee: \$60.

**MATL 111****Processing Polymers**

3.00 Credits      Class 3.00      Lab 2.00

Properties of thermoplastic and thermoset resins. Applications of these resins are studied through molding, casting, thermo-forming, coating, fabrication, welding and gluing. Prerequisite: MATL 103. Offered: Spring. Course fee: \$60.

**MATL 200****Microscopy Analysis of Materials**

3.00 Credits      Class 2.00      Lab 4.00

Characterization of materials with optical and electron microscopes. Laboratory activities include mount preparation and microstructure analysis of metallic samples. Prerequisites: MATL 102 and CHEM 100. Offered: Winter. Course fee: \$60.

**MATL 205****Composite Compositions**

3.00 Credits      Class 3.00      Lab 2.00

Composite materials and the processing necessary to obtain design properties. Are studied and compatibility of materials and production processes are evaluated for technical and economic feasibility. Prerequisites: MATL 111 and CHEM 102. Offered: Winter. Course fee: \$35.

**MATL 206****Extrusion**

3.00 Credits      Class 2.00      Lab 3.00

Extrusion processes are covered in-depth. Topics include principles of extrusion, types of extruded products, types of extruders, co-extruders, co-extrusion, heating/cooling cycles, dies, barrel temperature control, and pressure and flow rate control. Prerequisite: MATL 111. Course fee: \$60.

**MATL 207****Thermosets**

3.00 Credits      Class 3.00      Lab 2.00

An in-depth study of thermosetting plastics, their properties and applications. Specific topics covered are compression molding, transfer molding and reaction injection molding. Prerequisite: MATL 111. Course fee: \$60.

**MATL 210****Material Processing Systems**

3.00 Credits      Class 3.00      Lab 2.00

Traditional and non-traditional processing techniques to economically optimize properties of materials are covered. Topics include heat, pressure atmosphere and chemical requirements to produce advanced materials. Prerequisites: MATL 110 and MATL 111. Course fee: \$60.

**MATL 222****Injection Molding**

4.00 Credits      Class 3.00      Lab 3.00-6.00

Introduction to injection molding with emphasis on operation, mold set-up, pneumatic and hydraulic control parameters. Factors affecting quality are studied during the manufacturing of production parts. Prerequisite: MATL 111. Offered: Spring. Course fee: \$60.

**MATL 290****Materials Special Topics**

1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00

Structured exploration of a specific topic(s) by participants in a group.

**MATL 291****Materials Individual Study**

1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**MATL 292****Materials Field Experience**

1.00-4.00 Credits      Class 0.00      Lab 12.00-48.00

On-the-job training in a materials facility through special arrangement with an instructor.

**MATL 294****Materials Cooperative Work Experience**

2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must also be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Prerequisites: COMM 122, MATH 108, CHEM 100.

**MATL 296****Materials Practicum**

2.00 Credits      Class 1.00      Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Offered: Spring.

**MATL 297****Materials Observation Hour**

1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00

Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**MATL 298****Materials Internship**

3.00-9.00 Credits      Class 0.00-3.00      Lab 20.00-40.00

On-the-job training in the workplace of a cooperating agency. Coordinated by an instructor. Prerequisites: COMM 122, MATH 108, CHEM 100.

**MCS****Marketing and Customer Service****MCS 150****Distribution Management**

3.00 Credits      Class 3.00      Lab 0.00

Survey of distribution channels commonly found in the delivery of products and services. Actual catalog fulfillment is studied as well as a discussion of how the marketing campaign interacts and supports the distribution effort. Offered: Spring.

**MICR****Microbiology****MICR 247****Microbiology**

4.00 Credits      Class 4.00      Lab 1.00

How microorganisms live in the world around us and our relationship to them. Systematically covers bacteriology, immunology, mycology, viruses and parasites. Offered: Spring. Course fee: \$15.

**MICS****Microcomputer****MICS 101****Basic Computer Skills**

1.00 Credit      Class 1.00      Lab 1.00

This course provides the student with a basic understanding of the operation of a microcomputer with hands-on use of popular computer applications in word processing, spreadsheets, email and world wide web browsing. Course fee: \$45.

**MICS 110****Introduction to Visual Basic**

2.00 Credits      Class 2.00      Lab 2.00

Object oriented programming language used to write Windows-based programs. Visual Basic has a user interface called integrated development environment (IDE) which includes all the tools necessary to create and test a program. Includes writing organized statements and testing the program while remaining inside the same IDE. Offered: Winter. Course fee: \$35.

**MICS 112****Introduction to DOS**

1.00 Credit      Class 1.00      Lab 1.00

Introduction to IBM compatible machines using the disk operating system (DOS). Use of internal and external operating system commands to create, manage and manipulate files. Offered: Winter. Course fee: \$25.

**MICS 115****PC Operating Systems**

**2.00 Credits**      **Class 1.00**      **Lab 3.00**  
Examines the basic commands and features of PC operating systems including Windows, DOS and Linux. Offered: Fall. Course fee: \$30.

**MICS 121**  
**Microsoft Office**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
Introduces the integrated software package, Microsoft Office. Students design and manipulate files to apply the major functions of the word processing, database, and spreadsheet modules of this package. Offered: Summer, Fall, Winter, Spring. Course fee: \$45.

**MICS 121 A**  
**Microsoft Office - Word Processing**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
A hands-on course which presents the word processing component and lab assignments using the software package Microsoft Office. Offered: Fall, Winter, Spring. Course fee: \$15.

**MICS 121 B**  
**Microsoft Office - Database**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
A hands-on course which presents the data base component and lab assignments using the software package Microsoft Office. Offered: Winter, Spring. Course fee: \$15.

**MICS 121 C**  
**Microsoft Office - Spreadsheet**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
A hands-on course which presents the spreadsheet component of and lab assignments using the software package Microsoft Office. Offered: Fall, Spring. Course fee: \$15.

**MICS 141**  
**Introduction to Excel**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
Introduces the spreadsheet software Microsoft Office Excel including creating and modifying spreadsheets and charts, as well as using the database capabilities. Students design and manipulate multiple spreadsheet and database files to apply the major functions of Excel. Offered: Winter. Course fee: \$30.

**MICS 142**  
**Introduction to Access**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
Introduces the database management software, Microsoft Office Access including creating and modifying database tables, queries, reports, and forms. Students design and manipulate multiple databases to apply the major functions of Access. Offered: Fall, Winter, Spring. Course fee: \$30.

**MICS 144**  
**Introduction to Word**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
Introduces the word processing software, Microsoft Office Word including creating and editing documents, spell checking, formatting pages, merging documents, using columns, and working with graphics. Students design and manipulate multiple word processing documents to apply the major functions of Word. Offered: Fall, Winter, Spring. Course fee: \$30.

**MICS 145**  
**Introduction to Windows**  
**1.00 Credit**      **Class 1.00**      **Lab 0.00**  
Introduces the basics of a Windows xx environment including how to: 1) open, close, and switch among applications, 2) copy information from one application to another, 3) use the WordPad and the Paint programs to develop save, and print documents and drawings, 4) use the Windows Explorer to manage disk files. Students develop the skills necessary to work successfully in a Windows xx environment. Course fee: \$30.

**MICS 152**  
**Advanced Access**  
**2.00 Credits**      **Class 2.00**      **Lab 2.00**  
Presents the advanced features of the database management software, Microsoft Office Access including advanced topics on maintaining the database, query and form design, creating macros, and SQL. Students design and manipulate databases to apply the advanced functions of Access. Prerequisite: MICS 142. Offered: Winter, Spring. Course fee: \$30.

**MICS 201**  
**Desktop Publishing**  
**2.00 Credits**      **Class 2.00**      **Lab 2.00**

Computer aided page layout and publishing for writing, assembling and designing publications such as business reports, newsletters, trade journals and brochures, by combining text and graphics. Introduces the student to desktop publishing terms and techniques and use of a popular desktop publishing software package in order to create various types of publications. Offered: Winter. Course fee: \$30.

**MICS 210**  
**Microsoft Publisher**  
**1.00 Credit**      **Class 1.00**      **Lab 1.00**  
Course fee: \$10.

**MICS 280**  
**Software Applications for Desktop Computers**  
**0.25-3.00 Credits**      **Class 0.25-2.00**      **Lab 0.25-3.00**  
Hands-on training introducing current popular microcomputer software applications. Participants design and manipulate files to apply the major components of designated microcomputer packages, languages and/or operating systems. Course fee: \$30.

**MICS 290**  
**Microcomputer Special Topics**  
**1.00-5.00 Credits**      **Class 1.00-5.00**      **Lab 0.00**  
Structured exploration of a specific topic(s) by participants in a group.

**MICS 291**  
**Microcomputer Individual Study**  
**1.00-5.00 Credits**      **Class 1.00-5.00**      **Lab 0.00**  
Individual study or research. Topics are arranged on an individual basis with instructor permission.

## MT Massage Therapy

**MT 110**  
**Swedish Massage I**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
History of massage, principles of hygiene, professional ethics, Ohio scope of practice, anatomical landmarks and Kellogg's chapters on "The Physiological Effects of Massage" and "Rules Relating to Massage". Lab covers basic palpation and begins Kellogg's "Massage of Special Regions". Prerequisite: Certificate of Preliminary Education from the Ohio Medical Board. Offered: Fall. Course fee: \$70.

**MT 120**  
**Swedish Massage II**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
Kellogg's chapters on "The Procedures of Massage" and "Special Methods of Zabludowski and Metzger" and a continuation of "Massage of Special Regions" in the lab setting. Prerequisite: MT 110. Offered: Winter. Course fee: \$70.

**MT 130**  
**Swedish Massage III**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
Kellogg's chapters on "The Therapeutic Applications of Massage", "The Rest Cure" and other pertinent concepts discussed by the author. Lab continues with Kellogg's chapter on "Massage of Special Regions" and "Special Methods of Zabludowski and Metzger". Prerequisite: MT 120. Offered: Spring. Course fee: \$70.

**MT 135**  
**Myology for Massage Therapists**  
**3.00 Credits**      **Class 2.00**      **Lab 2.00**  
Attachments, actions and innervations of the muscles most pertinent to massage therapists including palpation, observation, drawing and muscle testing. Prerequisites: MT 120 and BIOS 152. Offered: Spring. Course fee: \$40.

**MT 210**  
**Massage Techniques I**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
Review of essential concepts from Kellogg's treatise on massage. Theory and practice of deep tissue massage techniques and trigger point therapy. Prerequisite: MT 130. Offered: Summer. Course fee: \$70.

**MT 220**  
**Massage Techniques II**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
Review of essential concepts from Kellogg. Theory and practice of myofascial release work and PIMR stretches. Prerequisite: MT 210. Offered: Fall. Course fee: \$70.

**MT 230**

**Massage Techniques III**  
3.00 Credits      Class 2.00      Lab 3.00  
Integration of all previously learned techniques and application of them to regional anatomy as well as to specific conditions. Prerequisite: MT 220. Offered: Winter. Course fee: \$70.

**MT 240**  
**Massage Integration Seminar**  
4.00 Credits      Class 4.00      Lab 0.00  
Swedish massage particularly as it relates to human anatomy and physiology throughout the different levels of organization and across the various systems of the body. Prerequisites: HC 278, MT 220, EM 133, EM 134. Offered: Winter.

**MT 250**  
**Massage Clinical**  
2.00 Credits      Class 1.00      Lab 3.00  
Clinical performance of 30 one hour massage sessions under the guidance of the instructor. Prerequisite: HC 182, HC 278, HC 283, MT 220. Offered: Winter. Course fee: \$70.

## NET Network Systems

**NET 100**  
**Internet and Web Page Design**  
1.00 Credit      Class 1.00      Lab 1.00  
Introduces the Internet including Web browsers, e-mail, file transfers, and search engines. Hypertext Markup Language (HTML) is used to develop basic web pages. Offered: Winter, Spring. Course fee: \$30.

**NET 110**  
**Cisco I**  
4.00 Credits      Class 3.00      Lab 3.00  
Introduces networking fundamentals, including the OSI model and industry standards, network topologies, IP addressing, networking components and basic network design. Prerequisite: CS 200. Offered: Spring. Course fee: \$50.

**NET 120**  
**Computer Architecture and Hardware**  
2.00 Credits      Class 1.00      Lab 3.00  
Examines the architecture of mainframe and personal computers (PCs), including hardware components of a PC and how they interact. Installing, configuring, and troubleshooting PC hardware and software are covered. Offered: Spring. Course fee: \$30.

**NET 200**  
**Advanced Web Page Design**  
3.00 Credits      Class 2.00      Lab 4.00  
Advanced HTML, effective web page design, and programming techniques for web pages. Prerequisite: NET 100. Offered: Fall. Course fee: \$30.

**NET 210**  
**Cisco II**  
3.00 Credits      Class 2.00      Lab 5.00  
Introduces routing theory and router technologies including beginning router configurations, routed and routing protocols, and beginning LAN switching. Prerequisite: NET 110. Offered: Fall. Course fee: \$50.

**NET 211**  
**Cisco III**  
4.00 Credits      Class 2.00      Lab 6.00  
Presents advanced routing and switching, including advanced router configurations, LAN switching, network management, and advanced network design. Prerequisite: NET 210. Offered: Winter. Course fee: \$50.

**NET 212**  
**Cisco IV**  
4.00 Credits      Class 2.00      Lab 6.00  
A project based learning course, including advanced network design projects, advanced network management projects, and WAN services. Prerequisite: NET 211. Offered: Spring. Course fee: \$50.

**NET 213**  
**Network Design and CCNA Review**  
2.00 Credits      Class 2.00      Lab 2.00  
This course is for students who have successfully completed semesters 1-4 of CISCO Networking Academy. Students cover the additional topics needed to prepare for the Cisco Certified Design Associate (CCDA) exam. Network case studies will be examined and modeled using network design software. Students also review CCNA and Introduction to networking topics. Prerequisite: NET 212. Offered:

Spring. Course fee: \$50.

**NET 215**  
**Network Systems Security**  
3.00 Credits      Class 2.00      Lab 3.00  
Techniques and methods used to secure network systems as applied to computers, networks and the Internet. Prerequisites: NET 211 and CS 201. Offered: Spring. Course fee: \$30.

**NET 220**  
**Server Management**  
4.00 Credits      Class 3.00      Lab 4.00  
Installing and configuring web, e-mail, FTP, and database servers. Integrating internal networks with the Internet as well as exploring and evaluating current networking technologies are also covered. Prerequisite: CS 201. Offered: Spring. Course fee: \$30.

**NET 225**  
**Network Communication Theory**  
2.00 Credits      Class 2.00      Lab 1.00  
Introduces communications theory, including digital and analog signals, multiplexing, modulation and codes, bandwidth and noise in communications systems. Prerequisite: CS 200. Offered: Fall.

**NET 240**  
**Cisco V**  
4.00 Credits      Class 2.00      Lab 6.00  
Advanced routing topics. Students learn to extend IP addresses using VLSM and route summarization, configure OSPF, EIGRP, and BGP, control network activity using access list-based features, and redistribute routes between different routing protocols such as RIP, IGRP, EIGRP, and OSPF. Prepares the student for the Cisco Routing Exam (640-503), one of the four exams that make up the Cisco CCNP certification. Prerequisite: NET 212. Offered: Fall. Course fee: \$50.

**NET 241**  
**Cisco VI**  
4.00 Credits      Class 2.00      Lab 6.00  
Prerequisite: NET 240. Offered: Winter. Course fee: \$50.

**NET 242**  
**Cisco VII**  
4.00 Credits      Class 2.00      Lab 6.00  
Prerequisite: NET 241. Course fee: \$50.

**NET 242 A**  
**Cisco VII A**  
2.00 Credits      Class 1.00      Lab 3.00  
Prerequisite: NET 241. Offered: Winter. Course fee: \$25.

**NET 242 B**  
**Cisco VII B**  
2.00 Credits      Class 1.00      Lab 3.00  
Prerequisite: NET 242 A. Offered: Spring. Course fee: \$25.

**NET 243**  
**Cisco VIII**  
4.00 Credits      Class 2.00      Lab 6.00  
Offered: Spring. Course fee: \$50.

**NET 290**  
**Network Systems Special Topics**  
0.25-5.00 Credits      Class 0.00      Lab 0.00  
Structured exploration of a specific topic(s) by participants in a group.

**NET 294**  
**Network Systems Cooperative Work Experience**  
2.00-5.00 Credits      Class 1.00      Lab 10.00-40.00  
An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must also be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**NET 296**  
**Network Systems Practicum**  
2.00 Credits      Class 1.00      Lab 7.00  
The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**NET 298**  
**Network Systems Internship**  
6.00-9.00 Credits      Class 3.00      Lab 20.00-40.00  
On-the-job training in the workplace of a cooperating agency. Coordinated by an instructor.

## NR Natural Resources

**NR 171**  
**Natural Areas Management**  
 2.00 Credits      Class 2.00      Lab 2.00  
 Studies the basic philosophical need for natural areas and their management, with federal, state and nongovernment organization policies being considered. Includes principles of natural areas management, policies and effects of planning, the role of fire in wilderness areas, site management and visitor utilization and access. Course fee: \$15.

**NR 256**  
**Pesticide Use in Natural Resources**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Studies the role of pesticides in our economy and environment, covering safe and practical use of pesticides in the cultural forestry operation. Course fee: \$15.

**NR 290**  
**Natural Resources Special Topics**  
 0.25-5.00 Credits      Class 0.25-5.00      Lab 0.00  
 A structured exploration of a specific topic(s) by participants in a group.

**NR 291**  
**Natural Resources Individual Study**  
 1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**NR 292**  
**Natural Resources Field Experience**  
 3.00 Credits      Class 0.00      Lab 36.00  
 On-the-job training in a natural resources facility through special arrangement with an instructor.

**NR 297**  
**Natural Resources Observation Hour**  
 1.00-3.00 Credits      Class 0.00      Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**NR 298**  
**Natural Resources Internship**  
 6.00 Credits      Class 0.00      Lab 40.00  
 On-the-job training in the workplace of a cooperating agency. Coordinated by an instructor.

## NRM Natural Resource Management

**NRM 101**  
**Edible and Medicinal Plants**  
 1.50 Credits      Class 1.50      Lab 1.00  
 Study of past and current medicinal, edible and other uses of native plants, including proper identification, preparation and use of each along with associated folklore and tales. Course fee: \$75.

**NRM 110**  
**Chainsaw Operation**  
 1.00 Credit      Class 0.00      Lab 2.00  
 Operation and maintenance of chainsaws are used in the maintenance and management of recreation and wildlife areas. This class is designed for individuals unfamiliar with safety and operation techniques. Offered: Fall, Winter, Spring. Course fee: \$85.

**NRM 112**  
**Advanced Chainsaw Operation**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Designed to bring students to Soren Erriksson Level 2 standards within the logging industry. Topics include reduced down time maintenance, chisel bit fitting, felling wedges, carburetor adjustments, spring poles and side lean and felling accuracy. Prerequisite: NRM 110. Course fee: \$85.

**NRM 113**  
**Watercraft Operation and Maintenance**  
 2.00 Credits      Class 0.00      Lab 4.00  
 Boating safely, legally and competently on inland waters in small craft

such as canoe and outboard motorboat, use of trailers and use of associated safety gear. Offered: Fall, Spring. Course fee: \$75.

**NRM 114**  
**Recreation Employment Seminar**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Speakers from a variety of agencies concerned with the management of natural resources participate in this course, covering education requirements of prospective employees, projection of job opportunities and methods of applying for specific jobs. Job search techniques are stressed. Offered: Winter, Spring.

**NRM 120**  
**Woodshop**  
 1.00 Credit      Class 0.00      Lab 3.00  
 Studies the development of correct safety habits in the use of power equipment and hand tools, placing emphasis on operational safety techniques, daily routine machinery inspections, minor maintenance repairs and personal and group safety rules. The care, use and maintenance of hand tools, power tools and woodworking machinery will be stressed throughout the course. Offered: Fall, Winter. Course fee: \$60.

**NRM 121**  
**Winter Dendrology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Studies the identification of Ohio trees in the winter condition by sight and by using keys, buds, twigs, fruit, bark and growth habitats. Offered: Winter. Course fee: \$10.

**NRM 123**  
**Surveying and Mapping I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Plane surveying procedures and applications for distance, direction and elevation measurements, use and care of surveying instruments including the transit, hand level and engineering level. History, basic applied mathematics, units of measurement and the public land survey system is explored. Basic survey mapping techniques are introduced. Prerequisite: MATH 108. Offered: Fall, Winter, Spring. Course fee: \$15.

**NRM 124**  
**Surveying and Mapping II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 A study of surveying operations used in providing horizontal and vertical control for mapping projects and develops horizontal traversing and trigonometric leveling skills. Appropriate instrument procedures are implemented. Coordinate geometry is used to determine locations of survey control points and data analysis. Prerequisites: NRM 123 and MATH 110. Offered: Summer. Course fee: \$15.

**NRM 125**  
**Map Reading and Interpretation**  
 2.00 Credits      Class 2.00      Lab 2.00  
 Theoretical understanding of maps and map making are combined with technical exercises designed to help the student manipulate, enlarge and transcribe maps for other uses. Offered: Fall, Winter, Spring.

**NRM 130**  
**Recreation Area Equipment**  
 1.00 Credit      Class 0.00      Lab 2.00  
 Studies maintenance and operation of tractors and farm machinery used in wildlife areas. Operational skills are designed for individuals unfamiliar with safety and operational knowledge of tractors and farm machinery use. Offered: Fall, Spring. Course fee: \$65.

**NRM 134**  
**Environmental Issues**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Human influence on the environment including land, water, air, hazardous waste, noise and population is discussed including awareness, observation and evaluation of these problems. Offered: Fall, Spring.

**NRM 138**  
**Art and Science of Herbalism**  
 2.00 Credits      Class 1.00      Lab 3.00  
 Guided study of herbalism including medicinal herbology, herbal preparation and formulation, organ systems, materia medica and herb research, earth ceremony and awareness, herbal first aid and home health care, natural cosmetics and skin care. Field trips and botanical field exploration compliment plant identification and personal herbarium development. Course fee: \$175.

**NRM 163**  
**Foraging Edible and Medicinal Plants**

**1.50 Credits**      **Class 1.50**      **Lab 1.00**  
 Studies forging techniques including proper field identification, preparation and uses of plants for food, emergency first aid, shelter and tools. Prerequisite: NR 101. Course fee: \$80.

**NRM 169**  
**Natural Resource Exposition I**  
**0.50 Credits**      **Class 0.00**      **Lab 1.50**  
 An introduction to operating a natural resources exposition with emphasis on exposition logistics, physical set-up through development of basic work skills and public relations. Offered: Fall.

**NRM 176**  
**Wetlands Determination**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
 Students involved in this class will gain an understanding regarding the functional role of wetlands in both natural and socio-economic settings. Land use and legislative history will frame the students' exploration of wetlands up to their present local/global status. Field techniques will include environmental assessment strategies, delineation and mapping activities as they relate to wetland identification, restoration and management. Course fee: \$30.

**NRM 206**  
**Conservation Management**  
**4.00 Credits**      **Class 2.00**      **Lab 6.00**  
 A capstone experience for students in Natural Resource Management. Students assess the attributes of a land unit through field inventories and develop a conservation plan for the area designed to protect or restore the health of the land into the future. Prerequisites: GEO 100, NRM 210 and WLM 215. Offered: Spring.

**NRM 210**  
**Woodland Ecology**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
 Studies local plant communities, succession and forest types, major North American vegetation types and the ecology of Ohio and analyzes vegetation types in various communities by the use of plot surveys and line transects. Prerequisite: BIOS 109. Offered: Fall.

**NRM 217**  
**Aquatic Ecology**  
**3.00 Credits**      **Class 2.00**      **Lab 3.00**  
 Covers aquatic ecosystems including lakes, rivers and wetlands placing emphasis on hydrology, interrelationships and identification of major communities and community assessment. Prerequisite: MATH 201 or equivalent. Offered: Fall, Spring. Course fee: \$25.

**NRM 222**  
**Recreation Area Maintenance**  
**2.00 Credits**      **Class 0.00**      **Lab 4.00**  
 Studies the planning, development, operation and management of outdoor recreation facilities such as trails, campgrounds, picnic areas and water areas. Prerequisites: NRM 110 and NRM 130. Offered: Fall, Winter, Spring. Course fee: \$65.

**NRM 269**  
**Natural Resource Exposition II**  
**0.50-2.00 Credits**      **Class 0.00-1.00**      **Lab 1.50-3.00**  
 Conducting a natural resource exposition with emphasis on exposition grounds planning, layout, maintenance and restoration of grounds following the exposition. Offered: Fall.

**NRM 290**  
**Natural Resource Management Special Topics**  
**1.00-6.00 Credits**      **Class 5.00**      **Lab 5.00**  
 Structured exploration of a specific topic(s) by participants in a group.

**NRM 291**  
**Natural Resource Management Individual Study**  
**1.00-5.00 Credits**      **Class 1.00-5.00**      **Lab 0.00**  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**NRM 292**  
**Natural Resource Management Field Experience**  
**1.00-3.00 Credits**      **Class 0.00**      **Lab 36.00**  
 On-the-job training in a recreation and wildlife facility through special arrangement with an instructor.

**NRM 294**  
**Natural Resource Management Cooperative Work Experience**  
**6.00 Credits**      **Class 2.00**      **Lab 40.00**  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student

must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**NRM 296**  
**Natural Resource Management Practicum**  
**2.00-7.00 Credits**      **Class 1.00**      **Lab 7.00**  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**NRM 297**  
**Natural Resource Management Observation Hour**  
**1.00-3.00 Credits**      **Class 0.00**      **Lab 15.00-45.00**  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**NRM 298**  
**Natural Resource Management Internship**  
**3.00-6.00 Credits**      **Class 0.00**      **Lab 40.00**  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor.

## NT Nursing

**NT 100**  
**Fundamentals of Gerontology Nursing**  
**3.00 Credits**      **Class 3.00**      **Lab 0.00**  
 Includes an introduction to the principles and practice of nursing fundamentals, basic nursing techniques, gerontology and patient assessment. Prerequisites: NT 101. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

**NT 100 A**  
**Fundamentals of Gerontology Nursing A**  
**1.50 Credits**      **Class 1.50**      **Lab 0.00**  
 Includes an introduction to the principles and practice of nursing fundamentals, basic nursing techniques, gerontology and patient assessment. Completion of NT 100 A and NT 100 B fulfills requirement. Prerequisite: Admission to Level I. Offered: Summer, Fall, Winter, Spring. Course fee: \$4.

**NT 100 B**  
**Fundamentals of Gerontology Nursing B**  
**1.50 Credits**      **Class 1.50**      **Lab 0.00**  
 Includes an introduction to the principles and practice of nursing fundamentals, basic nursing techniques, gerontology and patient assessment. Prerequisite: NT 100 A. Offered: Summer, Fall, Winter, Spring. Course fee: \$6.

**NT 101**  
**Nursing Clinical Experience I**  
**4.00 Credits**      **Class 0.00**      **Lab 13.00**  
 Nursing Clinical Experience I provides the opportunity for students to utilize the nursing process at a beginning level and to apply the principles of nursing fundamentals and gerontology to a culturally diverse population. The lab component of the course correlates with NT 100. Prerequisites: NT 100 and NT 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$100.

**NT 101 A**  
**Nursing Clinical Experience I A**  
**2.00 Credits**      **Class 0.00**      **Lab 6.50**  
 Nursing Clinical Experience I provides the opportunity for students to utilize the nursing process at a beginning level and to apply the principles of nursing fundamentals and gerontology to a culturally diverse population. The lab component of the course correlates with NT 100. Completion of NT 101 A and 101 B completes NT 101. Prerequisites: NT 100 and NT 102. Offered: Summer, Fall, Winter, Spring. Course fee: \$50.

**NT 101 B**  
**Nursing Clinical Experience I B**  
**2.00 Credits**      **Class 0.00**      **Lab 6.50**  
 Nursing Clinical Experience I provides the opportunity for students to utilize the nursing process at a beginning level and to apply the principles of nursing fundamentals and gerontology to a culturally diverse population. The lab component of the course correlates with NT 100. Prerequisite: NT 101 A. Prerequisites: NT 101 A. Offered: Summer, Fall, Winter, Spring. Course fee: \$50.

**NT 102**  
**Nursing Dynamics I**





prioritize and modify the nursing plan of care. Emphasis is placed on nursing skills, therapeutic communication, professional behavior and accountability. The lab component correlates with NT 120. Concurrent with NT 120. Prerequisites: NT 114, NT 113, NT 112, BIOS 113. Offered: Summer, Fall, Winter, Spring. Course fee: \$100.

**NT 121 A**  
**Nursing Clinical Experience III A**  
 2.00 Credits      Class 0.00      Lab 6.50  
 Supervised clinical experience in the care of adult clients with common health alterations. Observations in critical care units and surgery are included as well as nutrition and pharmacology experience. Requires demonstration of the ability to integrate concepts in order to plan, prioritize and modify the nursing plan of care. Emphasis is placed on nursing skills, therapeutic communication, professional behavior and accountability. The lab component correlates with NT 120. The first 5 weeks of clinical will be completed in NT 121 A. After completion of NT 121 B the full 4 credits for Nursing Clinical III will be completed. Prerequisites: NT 110 B, NT 111 B, NT 112, NT 113, NT 114, BIOS 113. Offered: Summer, Fall, Winter, Spring. Course fee: \$50.

**NT 121 B**  
**Nursing Clinical Experience III B**  
 2.00 Credits      Class 0.00      Lab 6.50  
 Supervised clinical experience in the care of adult patients with common health alterations. Observations in critical care units and surgery are included as well as nutrition and pharmacology experiences. Requires demonstration of the ability to integrate concepts in order to plan, prioritize and modify the nursing plan of care. Emphasis is placed on nursing skills, therapeutic communication, professional behavior and accountability. The lab component correlates with NT 120. The completion of this second five weeks of clinical will complete the full 4 credits for Nursing Clinical Experience III. Prerequisite: NT 121 A. Offered: Summer, Fall, Winter, Spring. Course fee: \$50.

**NT 122**  
**Nursing Dynamics III**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Interpersonal relationships and communication within nursing. Investigation of legal aspects of nursing, nursing history, nursing image, holistic health and health care alternatives. Utilizing nursing process theory, the student will also focus on nursing interventions related to depression and suicide. Prerequisite: NT 112. Offered: Summer, Fall, Winter, Spring.

**NT 123**  
**Nutritional Care I**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Background knowledge of routine hospital diets and the special nutritional care indicated in treating disorders of various body systems. Concurrent with NT 120 and NT 121. Prerequisites: NT 110 and NT 113. Offered: Summer, Fall, Winter, Spring.

**NT 124**  
**Pharmacology Drug Classification I**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Covers the principles and techniques of administering oral and parenteral medications; the actions, dosages, adverse reactions and interactions of medications in selected drug classifications. Included in this course are the cardiotonics, anticoagulants, dysrhythmics, vasodilating agents, insulins, oral hypoglycemic agents, thyroid, antithyroid agents, female and male sex hormones, drugs that affect the gastrointestinal function, diuretics, and antihypertensives. Emphasis is placed on patient care and implications of drugs, incorporating information required by a nurse for the appropriate administration of drugs, and for the proper assessment, care, evaluation, and education of the patient. Relationship to the concepts of health and culture are included. Prerequisite: NT 114. Offered: Summer, Fall, Winter, Spring.

**NT 130**  
**Nursing of the Adult and Child**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Care of adults and children through the lifespan. Includes sensory, motor, immune and integumentary functioning as well as pediatric nursing concepts related to cardiovascular, respiratory and gastrointestinal disturbances. Aspects of disease prevention, health maintenance and rehabilitation are also included. Prerequisites: NT 120, NT 121, NT 122, NT 123, NT 124, BIOS 114. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**NT 130 A**  
**Nursing of the Adult and Child A**  
 1.50 Credits      Class 1.50      Lab 0.00

Care of adults and children through the lifespan. Includes sensory, motor, immune and integumentary functioning as well as pediatric nursing concepts related to cardiovascular, respiratory and gastrointestinal disturbances. Aspects of disease prevention, health maintenance and rehabilitation are also included. NT 130 A will cover half of Nursing of the Adult and Child. This section along with NT 130 B is equivalent to the full 3 credit hour course. Prerequisites: NT 120 B, NT 121 B, NT 122, NT 123, NT 124, BIOS 114. Offered: Summer, Fall, Winter, Spring. Course fee: \$9.

**NT 130 B**  
**Nursing of the Adult and Child B**  
 1.50 Credits      Class 1.50      Lab 0.00  
 Care of adults and children through the lifespan. Includes sensory, motor, immune and integumentary functioning as well as pediatric nursing concepts related to cardiovascular, respiratory and gastrointestinal disturbances. Aspects of disease prevention, health maintenance and rehabilitation are also included. NT 130 B along with NT 130 A is equivalent to the full 3 credit hour course. Prerequisite: NT 130 A. Offered: Summer, Fall, Winter, Spring. Course fee: \$11.

**NT 131**  
**Nursing Clinical Experience IV**  
 4.00 Credits      Class 0.00      Lab 13.00  
 Care of adult and pediatric clients with alterations in health and observation of the growth and development of children in various community settings. Requires the ability to integrate concepts in order to plan, prioritize and modify the nursing plan of care. The laboratory component of the course correlates with NT 130. Prerequisites: NT 124, NT 123, NT 122, NT 121, NT 120, BIOS 114. Offered: Summer, Fall, Winter, Spring. Course fee: \$117.

**NT 131 A**  
**Nursing Clinical Experience IV A**  
 2.00 Credits      Class 0.00      Lab 6.50  
 Care of adult and pediatric clients with alterations in health and observation of the growth and development of children in various community settings. Requires the ability to integrate concepts in order to plan, prioritize and modify the nursing plan of care. The laboratory component of the course correlates with NT 130. The first five weeks of clinical will be completed in NT 131 A. After completion of NT 131 B the full 4 credits for Nursing Clinical Experience IV will be completed. Prerequisites: NT 120 B, NT 121 B, NT 122, NT 123, NT 124, BIOS 114. Offered: Summer, Fall, Winter, Spring. Course fee: \$50.

**NT 131 B**  
**Nursing Clinical Experience IV B**  
 2.00 Credits      Class 0.00      Lab 6.50  
 Care of adult and pediatric clients with alterations in health and observation of the growth and development of children in various community settings. Requires the ability to integrate concepts in order to plan, prioritize and modify the nursing plan of care. The laboratory component of the course correlates with NT 130. Concurrent with NT 130. The completion of the second 5 weeks of clinical will complete the full 4 credits for Nursing Clinical Experience IV. Prerequisite: NT 131 A. Offered: Summer, Fall, Winter, Spring. Course fee: \$50.

**NT 132**  
**Nursing Dynamics IV**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Communication skills, interpersonal relationships and attitudinal elements essential to the nursing profession. Focuses on preparing for the transition into the world of nursing. Includes exploration of the special areas of nursing such as child abuse, hospice and the nursing care of the terminally ill child. Prerequisite: NT 122. Offered: Summer, Fall, Winter, Spring.

**NT 133**  
**Nutrition Economics**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Food as a source of essential nutrients, menu planning for adequate nutrition, economical food purchasing and preparation, food additives and community nutrition problems including nutritional deficiencies and excesses and food borne illnesses. Prerequisites: NT 113 and NT 103. Offered: Summer, Fall, Winter, Spring

**NT 134**  
**Pharmacology Drug Classification II**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Actions, dosages, side effects and interactions of medications in selected drug classifications. Includes adrenocorticosteroid drugs, adrenergic and adrenergic blocking agents, cholinergics and cholinergic blocking agents, antibiotics, sulfa drugs, antifungal drugs, antihistamines, sedatives, hypnotics, narcotic analgesics, non-narcotic analgesics, analgesics, antipyretics, antianxiety agents, anti-

inflammatory agents, antipsychotic and antidepressant drugs. Emphasizes patient care implications of drugs, incorporating information required by a nurse for the appropriate administration of drugs and for the proper assessment, care, evaluation and education of the patient. Prerequisite: NT 124. Offered: Summer, Fall, Winter, Spring.

NT 140

**Technical Aspects of Adult Health Nursing**

5.00 Credits Class 4.00 Lab 4.00

Is designed as a review and an enrichment of the students' knowledge of course content related to utilization of the nursing process, medical/surgical conditions and nursing care relevant to disorders of the respiratory, gastrointestinal, musculoskeletal, cardiac, vascular, hematological, male reproductive and genitourinary systems. Includes assessment of the enrichment students' knowledge of medical/surgical nursing. Prerequisite: Admission to Enrichment. Offered: Fall. Course fee: \$70.

NT 142

**Technical Aspects of Nursing Dynamics**

1.00 Credit Class 1.00 Lab 1.00

Communication skills, interpersonal relationships and the role of the nurse on the health care team. Overview of key areas covered in all Level I Nursing Dynamics courses. Investigates concepts related to loss and crisis intervention. Prerequisite: Admission to Enrichment. Offered: Fall.

NT 143

**Technical Aspects of Nutrition**

1.00 Credit Class 1.00 Lab 0.00

This course is designed to review and enrich the student's knowledge of nutrients and nutritional care. Seven topics are included as mandatory components: Macronutrient review, metabolism and weight control, food safety Diabetes Mellitus, cardiovascular disorders, tube feedings, and pregnancy. Several optional topics are offered for independent student review, one of which must be chosen for study. Prerequisites: Admission to Enrichment. Offered: Fall.

NT 144

**Technical Aspects of Pharmacology**

2.00 Credits Class 2.00 Lab 0.00

Review of pharmacology and related nursing care. Selected drug classifications are presented with emphasis on patient care implications of drugs including information required by a nurse for appropriate administration of the drug and the proper assessment, care, evaluation and education of the patient. Prerequisite: Admission to Enrichment. Offered: Fall.

NT 146

**Technical Aspects of Child Health Nursing**

2.00 Credits Class 2.00 Lab 0.00

Review of pediatric nursing, infant through adolescence. Physical, cognitive and psychosocial factors are presented. Emphasis is placed on the study of common health problems and the utilization of the nursing process in caring for children with those conditions. Patient/family teaching, the child's response to hospitalization, communication techniques, utilization of community resources and cultural factors are stressed. Prerequisite: Admission to Enrichment. Offered: Fall.

NT 147

**Technical Aspects of Maternal and Newborn Nursing**

2.00 Credits Class 2.00 Lab 0.00

Review of obstetrical nursing to provide or update information so that the student may proceed into Level II nursing courses with a sound basic theoretical background. Use of the nursing process in the delivery of holistic health care in this setting is emphasized. Prerequisite: Admission to Enrichment. Offered: Fall.

NT 151

**IV Therapy for LPNs**

4.00 Credits Class 4.00 Lab 1.00

Provides the LPN with the knowledge and skills needed to perform limited intravenous therapy procedures on adults at the direction of a registered nurse, licensed physician, dentist or podiatrist as outlined in 4723-17-10 of the Ohio Board of Nursing Administrative Code. Successful completion of this course and the meeting of all criteria confirmed by the Ohio Board of Nursing results in the Ohio Board of Nursing issuing a card of completion. The laboratory component of this course provides the student with the opportunity to practice intravenous therapy procedures. Clinical will be arranged following satisfactory completion of theory and laboratory components. Prerequisite: LPN. Course fee: \$75.

NT 200

**Mental Health Nursing**

3.00 Credits Class 3.00 Lab 1.00

The mental health nursing course addresses the nurse's role with a variety of frequently experienced mental health problems. The course has two major focuses. One major focus is the sensitivity of the student nurse to his/her own needs, the enhancement of communication skills and the therapeutic use of self. The other major emphasis is on the student's increased awareness of and sensitivity to the psychosocial/mental health needs of people across the lifespan and of people experiencing mental health problems. Mental health promotion is included, however, the major emphasis is on building supportive relationships and collaboratively planning care through implementing the nursing process for people experiencing mental health problems. The primary teaching methods include case presentation, informal role-playing, group discussion, guest speakers, computerized review of select topics and use of audio-visual aids to enhance sensitivity to others and psychosocial support skills. Prerequisites: Graduate of Level I or completion of all enrichment courses and admission to Level II. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

NT 201

**Nursing Clinical Experience V**

3.00 Credits Class 0.00 Lab 9.00

The mental health nursing clinical offers the student opportunities to observe and/or provide basic nursing care for people experiencing mental health problems. Includes both inpatient mental health facilities and community experiences. Emphasis is placed on increased awareness of and sensitivity to the needs of self, others and the enhancement of interpersonal skill development. Concurrent with NT 200. Prerequisite: Admission to Level II Nursing. Offered: Summer, Fall, Winter, Spring. Course fee: \$85.

NT 202

**Role Transition LPN to RN**

1.00 Credit Class 1.00 Lab 0.00

Role Transition from LPN to RN is a student-faculty seminar focusing on the role change and professional behaviors appropriate for an LPN in transition to an RN. Role and change theory, stress and stress management related to role change, and professional issues such as: professional organizations, professional commitment, nursing image, the history of the ADN, career planning, and legal and political aspects related to the scope of practice will be discussed. Prerequisites: Must be taken concurrently with NT 200 or special permission from the instructor. Offered: Summer, Fall, Winter, Spring.

NT 210

**Advanced Nursing of the Adult I**

3.00 Credits Class 3.00 Lab 0.00

Care of adult patients with a variety of selected, well defined complex health alterations. The student facilitates the patient and family in achieving and maintaining their highest level of functioning. Prerequisites: NT 202, NT 201, NT 200, BIOS 200. Offered: Summer, Fall, Winter, Spring. Course fee: \$10.

NT 211

**Nursing Clinical Experience VI**

5.00 Credits Class 0.00 Lab 16.00

Clinical experience in acute care settings. Emphasizes providing nursing care to adult patients with a variety of complex health alterations. Opportunity is provided to apply nursing knowledge in the performance of intermediate and advanced nursing skills. The laboratory component of the course correlates with NT 210. Prerequisites: NT 202, NT 201, NT 200, BIOS 200. Offered: Summer, Fall, Winter, Spring. Course fee: \$110.

NT 213

**Nutritional Care II**

1.00 Credit Class 1.00 Lab 0.00

Nutritional assessment, iatrogenic malnutrition, vegetarian regimens and nutritional needs in thermal injury, cancer and mental illness. Additional discussion areas include cardiovascular disorders, sodium modifications and tube feeding. Concurrent with Quarter VI Nursing. Concurrent with NT 210 and NT 211. Offered: Summer, Fall, Winter, Spring

NT 215

**Leadership in Nursing**

1.00 Credit Class 1.00 Lab 1.00

Leadership and management roles of the nurse are presented. The lab includes case presentations, group discussions and activities designed to assist in the identification and application of leadership and management skills. Prerequisite: NT 202. Offered: Summer, Fall, Winter, Spring.

NT 220

**Advanced Nursing of the Adult II**

3.00 Credits Class 3.00 Lab 1.00

Care of adult patients with a variety of selected well defined complex health alterations. Leadership and management roles of the nurse are presented. The lab component of the course includes activities designed to assist the student in the identification and application of leadership and management skills. Prerequisites: NT 211, NT 210, NT 213, PSYC 151. Offered: Summer, Fall, Winter, Spring. Course fee: \$20.

**NT 221****Nursing Clinical Experience VII**

5.00 Credits Class 0.00 Lab 15.00

Clinical experience in an acute care setting. Emphasizes utilization of the nursing process in the provision of care to adult/child patients with a variety of complex health alterations. The student incorporate roles of leader/manager, patient/ family teacher and professional. Prerequisites: PSYC 151, NT 213, NT 211, NT 210. Offered: Summer, Fall, Winter, Spring. Course fee: \$90.

**NT 222****Nursing Dynamics V**

1.00 Credit Class 1.00 Lab 1.00

Nursing Dynamics V is a student-faculty seminar which focuses on preparing the student for the transition into the world of nursing. The role of the ADN in research, ethical and legal implications for practice, and career development issues are explored. Prerequisites: NT 210 and NT 211. Offered: Summer, Fall, Winter, Spring.

**NT 225****Advanced Maternal and Child Nursing**

1.00 Credit Class 1.00 Lab 1.00

Advanced study and review of maternal-child nursing. Maternal-newborn content includes fetal development, nursing assessment and care during pregnancy, birth and postpartum, and newborn care and complications. Nursing care of the child includes growth and development and health alterations during infancy, toddler, preschool, school age and adolescence. Prerequisites: NT 210 and NT 211. Offered: Summer, Fall, Winter, Spring.

**NT 290****Nursing Special Topics**

0.50-5.00 Credits Class 0.50-5.00 Lab 0.00

Structured exploration of a specific topic(s) by participants in a group.

**NT 291****Nursing Individual Study**

1.00-5.00 Credits Class 1.00-5.00 Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**NT 292****Nursing Field Experience**

1.00-4.00 Credits Class 0.00 Lab 12.00-48.00

On-the-job training in a nursing facility through special arrangement with an instructor. Course fee: \$30.

**NT 293****Nursing Directed Practice**

2.00-8.00 Credits Class 1.00 Lab 5.00-35.00

Directed practice instruction in the performance of a particular function by the instructor. Course fee: \$30.

**NT 294****Nursing Cooperative Work Experience**

2.00-5.00 Credits Class 1.00 Lab 10.00-40.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week. Course fee: \$30.

**NT 296****Nursing Practicum**

2.00-7.00 Credits Class 1.00 Lab 7.00-42.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Course fee: \$30.

**NT 297****Nursing Observation Hour**

1.00-3.00 Credits Class 0.00 Lab 15.00-45.00

Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**NT 298****Nursing Internship**

3.00-6.00 Credits Class 0.00 Lab 40.00

On the job training in the work place of a cooperating agency. Coordinated by an instructor. Prerequisite: Level I graduate. Course fee: \$30.

**OAT****Office Administration****OAT 100**

Information Processing PACE

2.00 Credits Class 1.00 Lab 3.00

Information Processing is designed to teach formats for business correspondence and manuscripts with emphasis on correct techniques, proofreading, and accuracy. Further development of keyboarding speed measured in words per minute and accuracy of one error per minute on five-minute timings is a major component of this course. Numeric keypad instruction is part of this course. Offered: Summer, Fall, Winter, Spring. Course fee: \$35.

**OAT 102****Office Simulation I**

3.00 Credits Class 2.00 Lab 4.00

Through the use of simulations, the course provides realistic experience with a variety of activities representative of the tasks performed by executive secretaries and administrative assistants. Projects are prepared using Corel WordPerfect and Microsoft Word. Some of the work requires composing, prioritizing, and creativity. Prerequisite: OAT 100. Offered: Winter. Course fee: \$37.

**OAT 107****Telephone Skills**

1.00 Credit Class 1.00 Lab 1.00

Aspects of telephone use in an office. Includes single line telephones and multi-button computerized systems, recording messages, long distance procedures, using directory assistance and handling emergency situations. Offered: Fall. Course fee: \$20.

**OAT 110****Office Procedures I**

3.00 Credits Class 3.00 Lab 2.00

Overview of the modern business office. Methods that may be encountered in any size office and professional procedures for carrying out duties including secretarial/ receptionist duties and records management. Opportunities in the secretarial field and various levels of secretarial work are explored. Personal qualifications, proper attitude and conduct are stressed through problem solving situations. Offered: Fall. Course fee: \$5.

**OAT 111****Office Procedures II**

3.00 Credits Class 3.00 Lab 2.00

Gives the executive assistant background to lend administrative support to today's busy executives; to use judgment and make decisions, to work without supervision and to be able to apply word processing principles to process information. Prerequisite: OAT 110. Offered: Winter. Course fee: \$30.

**OAT 113****Office Management Computer Systems**

1.00 Credit Class 1.00 Lab 1.00

Introduction to computer systems, hardware, software, disk operating system, and Windows. Offered: Fall. Course fee: \$30.

**OAT 114****Electronic Communication**

2.00 Credits Class 1.00 Lab 2.00

This course involves all aspects of computer communications in an office. This includes E-mail, faxing, using a scanner, attaching files to e-mail, voice mail boxes, group e-mail, producing Web Pages, and down loading from the Internet. Offered: Winter. Course fee: \$35.

**OAT 121****Speed Building I**

1.00 Credit Class 1.00 Lab 2.00

Intense individualized program to improve the student's speed and accuracy on five minute timings. Prerequisite: OAT 180. Offered: Summer, Fall, Winter, Spring. Course fee: \$35.

**OAT 122****Speed Building II**

1.00 Credit Class 1.00 Lab 2.00

Continuation OAT 121. Prerequisite: OAT 121. Offered: Summer, Fall, Winter, Spring. Course fee: \$35.

**OAT 180**  
**Keyboarding**  
 1.00 Credit      **Class 1.00**      **Lab 1.00**  
 Basic instruction on the alphanumeric keyboard. The student learns to operate a computer keyboard without looking at the keys which allows them to key in information swiftly and efficiently. Offered: Summer, Fall, Winter, Spring. Course fee: \$25.

**OAT 190**  
**Business Communication Skills I**  
 2.00 Credits      **Class 1.00**      **Lab 3.00**  
 Writing, speaking, listening, and reading to prepare for transcription in the modern business office by using a reference manual. Competencies include grammar, punctuation, capitalization, abbreviations, number style, plurals and possessives, spelling word division, editing, and proofreading. Techniques and procedures for proofreading and editing letters, memos, reports and manuscripts. Offered: Fall. Course fee: \$5.

**OAT 195**  
**Business Communication Skills II**  
 2.00 Credits      **Class 1.00**      **Lab 2.00**  
 A continuation and application of Business Communication Skills I, using a reference manual to create business communication. Offers a wide range of communication skills that are used by business people to present ideas clearly and persuasively. Gives specific examples of the communication techniques that lead to sound decision making and effective teamwork. Prerequisite: OAT 190. Offered: Winter. Course fee: \$5.

**OAT 200**  
**Introduction to Transcription**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Introduction to the desktop cassette transcriber. Includes proper care of equipment and transcribing techniques stressed to produce mailable copy. Emphasizes communication and proofreading skills. Prerequisites: OAT 100 and OAT 190. Offered: Spring. Course fee: \$30.

**OAT 211**  
**Word Processing – Word Perfect**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Hands-on experience in word processing using the software COREL WordPerfect. Prerequisite: OAT 100. Offered: Winter. Course fee: \$37.

**OAT 215**  
**Office Database Management – Access**  
 2.00 Credits      **Class 2.00**      **Lab 2.00**  
 Offered: Fall. Course fee: \$30.

**OAT 216**  
**Word Processing – Microsoft Word**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Hands on experience in word processing using the software Microsoft Word. Prerequisite: OAT 100. Offered: Spring. Course fee: \$37.

**OAT 218**  
**Office Budgeting Using Excel**  
 3.00 Credits      **Class 2.00**      **Lab 3.00**  
 Through extensive lab work, students learn to prepare spreadsheets, compile and manipulate databases, and develop graphs using Excel. Through the application of Excel, students read, prepare, and analyze budgets. Offered: Spring. Course fee: \$37.

**OAT 220**  
**Office Procedures III**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 A continuation of office procedures including preparation of documents in administrative, legal, and medical offices. Prerequisites: OAT 111, OAT 211, OAT 216. Offered: Fall. Course fee: \$37.

**OAT 222**  
**Office Presentations – Powerpoint**  
 1.00 Credit      **Class 1.00**      **Lab 2.00**  
 This course introduces Powerpoint presentation graphics program. Students will have hands-on experience with on-screen presentations, paper printouts, overhead transparencies, notes, handouts, outlines, slides, and world wide web documents. Offered: Fall. Course fee: \$30.

**OAT 230**  
**Administrative Transcription**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Development of proficiency in producing mailable copy of dictated letters, memos, reports and material with changes and corrections. Communications involve areas in banking, accounting, government, data/word processing and insurance. Prerequisites: OAT 100 and OAT

200. Offered: Winter. Course fee: \$37.

**OAT 240**  
**Integrated Office Software**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Advanced course in word processing applications. Prerequisites: OAT 102, OAT 211, OAT 216. Offered: Spring. Course fee: \$37.

**OAT 250**  
**Office Publications and Presentations**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Office Publications will introduce the student to various publishing terms and techniques using Publisher 2000. The student will create various types of publications. Prerequisite: OAT 211. Offered: Winter. Course fee: \$37.

**OAT 260**  
**Office Simulation II Capstone**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Develops typing difficult material for acceptability in the business office. Most copy is unarranged and in longhand. Following instructions, implied as well as stated, is required. Simulations provide realistic experiences with various tasks performed by executive and administrative secretaries. Prerequisites: OAT 102, OAT 216, OAT 218, OAT 211, OAT 250. Offered: Spring. Course fee: \$37.

**OAT 280**  
**Legal Transcription**  
 3.00 Credits      **Class 2.00**      **Lab 4.00**  
 Use of the cassette transcriber to type legal documents. Stresses correct spelling, punctuation and placement and accurate proofreading. Prerequisite: OAT 200. Course fee: \$37.

**OAT 290**  
**Office Management Special Topics**  
 0.25-5.00 Credits      **Class 0.25-5.00**      **Lab 0.00**  
 Structured exploration of a specific topic(s) by participants in a group.

**OAT 291**  
**Office Management Individual Study**  
 1.00-5.00 Credits      **Class 1.00-5.00**      **Lab 0.00**  
 Individual study or research. Topics are arranged on an individual basis with instructor permission.

**OAT 292**  
**Office Management Field Experience**  
 1.00-4.00 Credits      **Class 0.00**      **Lab 12.00-48.00**  
 On-the-job training in a secretarial facility through special arrangement with an instructor.

**OAT 294**  
**Office Management Cooperative Work Experience**  
 2.00-5.00 Credits      **Class 1.00**      **Lab 10.00-40.00**  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**OAT 296**  
**Office Management Practicum**  
 3.00 Credits      **Class 1.00**      **Lab 16.00**  
 The student is placed in an office two days a week to gain experience before graduation. Prerequisite: Sixth quarter standing. Prerequisites: OAT 102, OAT 160, OAT 220, OAT 230, OAT 250. Offered: Spring.

**OAT 296 A**  
**Office Management Practicum I**  
 2.00 Credits      **Class 1.00**      **Lab 7.00**  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisites: OAT 107, OAT 110, OAT 111, OAT 113, OAT 190. Offered: Spring.

**OAT 296 B**  
**Office Management Practicum II**  
 2.00 Credits      **Class 1.00**      **Lab 7.00**  
 The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisites: OAT 102, OAT 296, OAT 220, OAT 230, OAT 250. Offered: Spring.

**OAT 297**  
**Office Management Observation Hour**  
 1.00-3.00 Credits      **Class 0.00**      **Lab 15.00-45.00**  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at

times in the actual work activity.

**OAT 298**

**Office Management Internship**  
3.00–6.00 Credits Class 0.00 Lab 20.00–40.00  
On the job training in the work place of a cooperating agency.  
Coordinated by an instructor.

## OPT Opticianry

**OPT 100**

**Introduction to Optical**  
2.00 Credits Class 2.00 Lab 0.00  
An introduction to opticianry in the United States, historically and currently. Provides an overview of the nature of the work of the optician, working conditions, employment opportunities and job outlook. Introduces basic optical principles and concepts of lens design and frame fitting. Offered: Fall.

**OPT 101**

**Geometric Optics I**  
3.00 Credits Class 2.00 Lab 3.00  
The nature of light, the behavior of light when it encounters various refractive and reflective surfaces, lens power, indices and prism. Verification of lenses by hand neutralization, lensometry. Offered: Winter. Course fee: \$35.

**OPT 102**

**Geometric Optics II**  
3.00 Credits Class 2.00 Lab 3.00  
Lens design; decentration of spheres, cylinders and spherocylinders; effects of decentration on oblique cylinders; effects of prism thickness; refraction of multiple light rays; lens form, analysis and verification. Prerequisite: OPT 101. Offered: Spring. Course fee: \$35.

**OPT 103**

**Geometric Optics III**  
3.00 Credits Class 2.00 Lab 3.00  
Optical considerations with increasing lens power. Prism and accommodation at near; calculating vertical imbalance; corrected curve theory; special lens designs to include aspheric, high-plus and high minus lenses; Fresnel prisms; and magnification problems. Prerequisite: OPT 102. Offered: Fall. Course fee: \$35.

**OPT 111**

**Mechanical Optics I**  
3.00 Credits Class 2.00 Lab 3.00  
Study of the finishing process. The edging process is practiced as it relates to single vision and multifocal lens designs in sphere, cylinder and spherocylindrical form, progressive lens designs, and occupational lens designs. Special edge treatments are discussed. Offered: Winter. Course fee: \$50.

**OPT 112**

**Mechanical Optics II**  
3.00 Credits Class 2.00 Lab 3.00  
Theory and application of technical skill related to lens surfacing procedures; manufacturing of prescriptions to include thickness, surface curvature and lens blank selection; surfacing techniques for various lens styles and material are included. Prerequisite: OPT 111. Offered: Spring. Course fee: \$50.

**OPT 121**

**Optical Clinical Experience I**  
3.00 Credits Class 1.00 Lab 6.00  
Experience in a business in the optical field applying practical knowledge gained in the classroom. The seminar includes discussion of job-related concerns and situations faced by the student in their practicum, job requirements and employment opportunities. Offered: Spring. Course fee: \$25.

**OPT 122**

**Optical Clinical Experience II**  
3.00 Credits Class 1.00 Lab 6.00  
Experience in a business in the optical field applying practical knowledge gained in the classroom. The seminar includes discussion of job-related concerns and situations faced by the student in their practicum, job requirements and employment opportunities. Prerequisite: OPT 121. Offered: Fall. Course fee: \$25.

**OPT 123**

**Optical Clinical Experience III**  
3.00 Credits Class 1.00 Lab 6.00

Experience in a business in the optical field applying practical knowledge gained in the classroom. The seminar includes discussion of job-related concerns and situations faced by the student in their practicum, job requirements and employment opportunities. Prerequisite: OPT 122. Offered: Winter. Course fee: \$25.

**OPT 124**

**Optical Clinical Experience IV**  
6.00 Credits Class 1.00 Lab 16.00  
Experience in a business in the optical field applying practical knowledge gained in the classroom. The seminar includes discussion of job-related concerns and situations faced by the student in their practicum, job requirements and employment opportunities. Prerequisite: OPT 123. Offered: Spring. Course fee: \$25.

**OPT 131**

**Ophthalmic Dispensing I**  
3.00 Credits Class 2.00 Lab 3.00  
Ophthalmic frames, styles, materials and frame parts are covered. Frame styling and selection, prescription considerations, standard alignment and adjustment of ophthalmic eyewear are presented. Lens materials and characteristics, as well as multifocal types and interpupillary measurement are covered. Offered: Winter. Course fee: \$50.

**OPT 132**

**Ophthalmic Dispensing II**  
3.00 Credits Class 2.00 Lab 3.00  
Absorptive lenses, reference point placement, multifocal height, and lens blank size determination are discussed. Frame repair and modifications are covered. Includes the ordering of the correct absorptive or tinted lenses, and a discussion of ethics and legal issues. Intermediate dispensing techniques are covered. Prerequisite: OPT 131. Offered: Spring. Course fee: \$50.

**OPT 133**

**Ophthalmic Dispensing III**  
3.00 Credits Class 2.00 Lab 3.00  
Advanced fitting techniques including cataract lens fitting, vertex distance and progressive lenses as well as sports, safety and advanced special dispensing situations. Inventory and frame board management is included. Prerequisite: OPT 132. Offered: Fall. Course fee: \$50.

**OPT 201**

**Contact Lenses I**  
3.00 Credits Class 2.00 Lab 3.00  
Theory, design, optical principles, terminology and history of contact lenses; indications and contraindications for contact lens wear; anatomy and physiology of the eye related to contact lenses; principles and techniques of various verification and diagnostic instrumentation; patient education on care, cleaning, insertion and removal of rigid and hydrogel contact lenses. Offered: Fall. Course fee: \$50.

**OPT 202**

**Contact Lenses II**  
3.00 Credits Class 2.00 Lab 3.00  
Fundamental techniques and fitting procedures of hydrogel and rigid lenses to include spherical and toric lens designs; evaluation of lens fit to include ocular integrity and visual performance. Prerequisite: OPT 201. Offered: Winter. Course fee: \$50.

**OPT 203**

**Contact Lenses III**  
3.00 Credits Class 2.00 Lab 3.00  
Advance techniques of contact lens fitting are examined and practical applications in the fitting process are experienced. Prerequisite: OPT 202. Offered: Spring. Course fee: \$50.

**OPT 204**

**Ophthalmic Assisting**  
2.00 Credits Class 2.00 Lab 0.00  
Refractive status of the eye and its correction. Techniques and diagnostic procedures used to evaluate visual function and ocular health. Preliminary testing, data collection, patient handling, chairside assisting, and blood pressure measurement. Offered: Winter. Course fee: \$50.

**OPT 220**

**Refraction**  
3.00 Credits Class 2.00 Lab 3.00  
Entry-level knowledge of theory and performance of refraction in the eye; study of ocular media, ametropia neutralization, astigmatism, objective and subjective refraction, anomalies of vision, clinical refraction and retinoscopy; pitfalls and aids to refractionist. Offered: Spring. Course fee: \$50.

## PHY Physics

**PHY 106**  
Physics for Radiologic Technology  
5.00 Credits Class 4.00 Lab 2.00  
Concepts of electrical energy, electromagnetic energy, production of x-radiation, interaction with matter, and the x-ray tube, circuitry and special equipment. Offered: Fall.

## PHYS Physics

**PHYS 103**  
Physics  
3.00 Credits Class 3.00 Lab 2.00  
Introduces basic physics principles applied to mechanics (force and motion, friction, leverage, kinetic and potential energy, work), heat light and sound (heat transfer, electromagnetic radiation, lasers, sound propagation) and electricity. Prerequisite: MATH 108. Offered: Fall, Spring.

**PHYS 201** PACE  
Physics – Motion  
3.00 Credits Class 3.00 Lab 2.00  
Introduction to physics for engineering technologies. Covers the study of forces, Newton's laws of force and motion; harmonic motion; work, energy and power; basic machines; properties of gases, liquids and solids. Prerequisite: MATH 108. Offered: Summer, Fall, Winter, Spring. Course fee: \$30.

**PHYS 202** PACE  
Physics – Heat, Light, and Sound  
3.00 Credits Class 3.00 Lab 2.00  
Heat transfer, energy transformation, heat engines, air conditioning, wave motion and vibration, sound and hearing, light wave motion, mirrors and lenses, reflections, refraction, absorption and dispersion of light, diffraction and interference and optical instruments. Prerequisite: MATH 108. Offered: Summer, Fall, Winter, Spring. Course fee: \$30.

## PSCI Police Science

**PSCI 105**  
Tactical Patrol Procedures  
3.00 Credits Class 2.00 Lab 4.00  
Study and practice of duties for the police officer on the street including the tactics, procedures and guidelines for safely and legally answering all types of calls. Prerequisite: OPOTA Blend student. Course fee: \$10.

**PSCI 106**  
Police Communication Operations  
2.00 Credits Class 2.00 Lab 2.00  
Procedures of public safety dispatching including LEED's operation. APCD certification. Prerequisite: OPOTA Blend student. Offered: Winter. Course fee: \$67.

**PSCI 108**  
Defensive Driving and Cruiser Operations  
1.00 Credit Class 1.00 Lab 2.00  
Public safety vehicle operation as well as development of driver skills in a vehicle driving range. Prerequisite: OPOTA Blend student. Course fee: \$75.

**PSCI 110**  
Cultural Sensitivity in Law Enforcement  
1.00 Credit Class 1.00 Lab 0.00  
Includes OPOTC student performance objectives and OPOTC emphasis regarding cultural diversity and sensitivity.

**PSCI 160**  
Computer Applications in Law Enforcement  
2.00 Credits Class 1.00 Lab 3.00  
Computers and software for law enforcement, computer security needs, preventing computer abuse, and applications to investigation, evidence control, crime scene reconstruction and records management. Offered: Winter. Course fee: \$40.

**PSCI 180**  
Criminalistics I

3.00 Credits Class 1.00 Lab 5.00  
Fingerprint systems used in the criminal justice systems. Includes the Henry and the N.C.I.C. methods of fingerprint classification and methods used to take major crime prints and rolled fingerprints. Offered: Fall. Course fee: \$100.

**PSCI 205**  
Advanced Patrol Procedures  
3.00 Credits Class 2.00 Lab 4.00  
Practical, safe and professional techniques in dealing with problems encountered by police. Includes a comprehensive examination of traffic and crowd control functions and techniques. Prerequisites: PSCI 105 and OPOTA Blend student. Offered: Spring. Course fee: \$25.

**PSCI 210**  
Crime Prevention and Community Relations  
2.00 Credits Class 1.00 Lab 4.00  
Methods used by criminal justice personnel in crime prevention and community relationships including programs and systems. Offered: Fall.

**PSCI 216**  
Police Firearms  
4.00 Credits Class 2.00 Lab 7.00  
Introduction to modern police firearms nomenclature, weapons maintenance, usage, restrictions, civil and criminal liability and safety procedures. Prerequisite: OPOTA Blend student. Course fee: \$200.

**PSCI 219**  
Point Combat Firearms Instructor  
0.25–5.00 Credits Class 0.25–5.00 Lab 0.00  
Provides the practicing firearms instructor with an in-depth view of Instinctive Point Shooting Concepts and provides procedural recommendations for teaching this method of shooting. Course fee: 150.

**PSCI 235**  
Police Report Writing  
2.00 Credits Class 1.00 Lab 3.00  
Writing effective police reports. The participant learns to find and record all relevant facts, analyze and organize findings as well as distinguish fact from hearsay, conclusion and opinion and communicate all relevant findings in a well-written report. Prerequisite: COMM 122. Offered: Fall. Course fee: \$30.

**PSCI 240**  
Advanced Investigation  
3.00 Credits Class 2.00 Lab 5.00  
Major case preparation and analysis including homicide investigation procedures and forensic techniques. Prerequisites: PSCI 140, PSCI 250 A, PSCI 250 B, PSCI 250 C, PSCI 250 D. Offered: Spring. Course fee: \$50.

**PSCI 245**  
Accident Investigation  
3.00 Credits Class 3.00 Lab 2.00  
Techniques used in vehicle traffic accident investigation including report writing, scene reconstruction and analysis of causes.

**PSCI 250**  
Peace Officer Basic Training  
24.00 Credits Class 12.00 Lab 18.00  
Prepares the individual for a career in law enforcement. Introduction to performance objectives outlined by the Ohio Peace Officer Training Council. Upon successful completion the student will be eligible for the Ohio Peace Officer certification exam. Course fee: 844.

**PSCI 250 A**  
Law Enforcement – OPOTA  
4.00 Credits Class 3.00 Lab 5.00  
Administration and legal aspects of law enforcement. Offered: Fall. Course fee: \$180.

**PSCI 250 B**  
Law Enforcement II – OPOTA  
4.00 Credits Class 3.00 Lab 5.00  
Human relations and prisoner booking and handling. Prerequisite: PSCI 250 A. Offered: Fall, Winter. Course fee: \$141.

**PSCI 250 C**  
Law Enforcement III – OPOTA  
4.00 Credits Class 3.00 Lab 5.00  
Investigation and driving. Prerequisite: PSCI 250 B. Offered: Fall, Spring. Course fee: \$141.

**PSCI 250 D**

**Law Enforcement IV – OPOTA**

4.00 Credits      Class 3.00      Lab 5.00

Traffic accident investigation, traffic enforcement, civil disorders and unarmed self-defense. Prerequisite: PSCI 250 C. Offered: Fall. Course fee: \$180.

**PSCI 250 E****Law Enforcement V – OPOTA**

4.00 Credits      Class 3.00      Lab 5.00

Patrol unit and physical conditioning. Prerequisite: PSCI 250 D. Offered: Fall, Winter. Course fee: \$141.

**PSCI 250 F****Law Enforcement VI – OPOTA**

4.00 Credits      Class 3.00      Lab 5.00

Firearms and first aid. Prerequisite: PSCI 250 E. Offered: Fall, Spring. Course fee: \$141.

**PSCI 251****Semi-Automatic Instructor – OPOTC**

0.25–5.00 Credits      Class 0.25–5.00      Lab 0.00

Directed to officers having training assignments. The course will meet part of the OPOTC requirements for both basic training instructors and requalification instructors and includes semi-auto pistol operation and handling, pistol design and function, safety operation, cycle failure and recovery, target engagement, shooter problems and correction and pistol maintenance. Course fee: \$115.

**PSCI 252****Revolver Instructor – OPOTC**

0.25–5.00 Credits      Class 0.25–5.00      Lab 0.00

Designed to provide the firearms instructor candidate with an in-depth view of instructional methods and procedures for teaching various methods of revolver shooting. The majority of this course will be conducted at an outdoor lab site. Students should be prepared for extended outdoor activities in a variety of weather conditions. Prerequisite: OPOTC instructor. Course fee: \$115.

**PSCI 253****Shotgun Instructor – OPOTC**

0.25–5.00 Credits      Class 0.25–5.00      Lab 0.00

Designed to meet a portion of the OPOTC requirements to instruct the shotgun in basic training or in-service. Course fee: \$110.

**PSCI 254****Police Instructor**

0.25–5.00 Credits      Class 0.25–5.00      Lab 0.00

Theories of adult education, teaching techniques, lesson plan development, behavioral objectives, the proper use of training aids and objectives, evaluation and measurement.

**PSCI 255****Peace Office Basic – Theory**

12.00 Credits      Class 4.00      Lab 24.00

A detailed course of study in criminal justice administration, legal, human relations, traffic enforcement and investigation. This course is conducted under the direction of the Ohio Peace Officer Training Commission. Offered: Fall. Course fee: \$390.

**PSCI 256****Peace Office Basic – Physical Skills**

12.00 Credits      Class 4.00      Lab 24.00

This course addresses physical skills required in the Ohio Peace Officer Training Commission Basic Peace Officer Training curriculum. Topics addressed are firearms, driving, subject control, first-aid, patrol, civil disorder and physical conditioning. Includes APCO, Kubaton, OC spray certification. Offered: Fall. Course fee: \$500.

**PSCI 260****Interviewing and Interrogation**

2.00 Credits      Class 2.00      Lab 2.00

Tactics and techniques of the art of interrogation. Emphasizes methods to properly and adequately solicit information to solve crime. Offered: Spring. Course fee: \$10.

**PSCI 265****Crime Scene Management**

4.00 Credits      Class 2.00      Lab 5.00

This course is designed to provide an overview of managing traditional and non-traditional crime scene's from critical incident characteristics; incident command concepts; command post operations; hazardous incidents; major multi-scene operations; team work; working with fire, emergency medical services, multi law enforcement agencies, local and state emergency management agencies (EMA) and problems encountered by the incident commander. Offered: Spring. Course fee: \$50.

**PSCI 270****Police Administration and Supervision**

2.00 Credits      Class 1.00      Lab 2.00

Introduction to the administration of policing agencies. Basic organizational and management principles and individual line and staff elements in terms of their purpose, organization and administration. Offered: Spring. Course fee: \$25.

**PSCI 280****Criminalistics II**

3.00 Credits      Class 1.00      Lab 5.00

Scientific methods of investigation. Recognizing, gathering, preserving, evaluation and processing evidence. Includes the physical technologies used. Offered: Winter. Course fee: \$50.

**PSCI 281****Criminalistics III**

3.00 Credits      Class 2.00      Lab 5.00

Procedures used to analyze evidence in the police laboratory. Practical application is used to study the procedures of taking evidence from the crime scene, processing evidence to establish association with known standards and applying results to the criminal justice system. Offered: Spring. Course fee: \$50.

**PSCI 282****Police Science Current Topics**

0.25–5.00 Credits      Class 0.25–5.00      Lab 0.00

Current topics and issues as well as new developments in the field of law enforcement are reviewed, studied and discussed.

**PSCI 283****Special Operations in Law Enforcement**

5.00 Credits      Class 5.00      Lab 5.00

Concepts and practices of special operations including communications, team management, team movement and tactics, close quarter firing techniques, and first aid. Prerequisites: PSCI 250 A, PSCI 250 B, PSCI 250 C. Course fee: \$100.

**PSCI 290****Police Science Special Topics**

0.25–9.00 Credits      Class 5.00      Lab 5.00

Structured exploration of a specific topic(s) by participants in a group.

**PSCI 291****Police Science Individual Study**

1.00–5.00 Credits      Class 1.00–5.00      Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

**PSCI 292****Police Science Field Experience**

1.00–4.00 Credits      Class 0.00      Lab 12.00–48.00

On-the-job training in a police facility through special arrangement with an instructor.

**PSCI 294****Police Science Cooperative Work. Experience**

2.00–5.00 Credits      Class 1.00      Lab 10.00–40.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**PSCI 296****Police Science Practicum**

2.00–4.00 Credits      Class 1.00–2.00      Lab 7.00–14.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisites: CJ 263, PSCI 106, PSCI 210, PSCI 235. Course fee: \$50.

**PSCI 296 A****Police Science Practicum – Communication**

2.00 Credits      Class 1.00      Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Offered: Summer. Course fee: \$25.

**PSCI 296 B****Police Science Practicum – Patrol**

2.00 Credits      Class 1.00      Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation. Prerequisite: PSCI 296 A. Offered: Summer. Course fee: \$25.



**PSCI 297**  
**Police Science Observation Hour**  
 1.00-3.00 Credits    Class 0.00    Lab 15.00-45.00  
 Participation in an educational experience as observers of practitioners representative of the occupational area. The student may participate at times in the actual work activity.

**PSCI 298**  
**Police Science Internship**  
 3.00-6.00 Credits    Class 0.00    Lab 40.00  
 On the job training in the work place of a cooperating agency. Coordinated by an instructor. Course fee: \$20.

## PSYC Psychology

**PSYC 101**  
**General Psychology**  
 5.00 Credits    Class 5.00    Lab 0.00  
 A comprehensive and in-depth study of the theories and applications of psychology. The course consists of an overview of topics in the areas of both clinical and experimental psychology including memory, personality, consciousness, psychological bases of behavior, sensation and perception, motivation and emotion, human development, learning, abnormal behaviors and social processes. Offered: Fall. Course fee: \$7.

**PSYC 115**  
**Educational Psychology**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Offered: Winter. Course fee: \$7.

**PSYC 119**  
**Women's Issues**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Issues in the personal and professional growth of women. Each participant will explore individual feelings and attitudes toward these issues. Course fee: \$7.

**PSYC 120**  
**Women's Retreat**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Addresses personal growth issues pertaining to women. With activities, films and literary reflections as components of the course, each woman has the opportunity to share as individuals and as group members. Course fee: \$7.

**PSYC 123**  
**Women's Lives Around the World**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Themes and diversities in the lives of women in other parts of the world. Guest speakers from other cultural backgrounds will share their experience and knowledge on what it means to be women in their corners of the world. Course fee: \$7.

**PSYC 140**  
**Issues in Child Development**  
 4.00 Credits    Class 4.00    Lab 0.00  
 Child development issues are explored within four separate class modules: special needs children, developmentally appropriate discipline, communicating with children and adolescents and infancy. Offered: Spring. Course fee: \$7.

**PSYC 140 A**  
**Special Needs Children**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Explores a sample of handicapping conditions, children's differences and the practices related to meeting their special needs. Course fee: \$2.

**PSYC 140 B**  
**Developing Appropriate Discipline**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Principles and theories of child discipline based on developmentally appropriate practices. Course fee: \$2.

**PSYC 140 C**  
**Communicating with Children and Adolescents**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Techniques for communicating with children and adolescents to enhance social and emotional development. Theories of language development will be integrated. Course fee: \$2.

**PSYC 140 D**  
**Infancy**

1.00 Credit    Class 1.00    Lab 0.00  
 Physical, emotional, social and cognitive development in infancy. Course fee: \$2.

**PSYC 150**  
**Introduction to Psychology**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Background, development and current thinking in the field of psychology. Overview of the major areas of psychology including both the theoretical and applied aspects of the following areas: memory, consciousness, intelligence, stress and coping, biological influences, and abnormal behavior. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**PSYC 150 A**  
**Introduction to Psychology Module A**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Basic concepts in psychology including an introduction to the field of psychology, research methods, memory, personality theories and assessment. Provides a broad overview of key terms, concepts and theoretical approaches which provide the groundwork for further study in the field of psychology. This module along with PSYC 150 B and PSYC 150 C is equivalent to the full 3 credit hour course, Introduction to Psychology. Offered: Summer, Fall, Winter, Spring. Course fee: \$2.

**PSYC 150 B**  
**Introduction to Psychology Module B**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Basic concepts of psychology including consciousness and physiological psychology, motivation and emotion, and human development. Provides an overview of key terms, concepts and theoretical approaches. This module along with PSYC 150 A and PSYC 150 C is equivalent to the full 3 credit hour course, Introduction to Psychology. Offered: Summer, Fall, Winter, Spring. Course fee: \$2.

**PSYC 150 C**  
**Introduction to Psychology Module C**  
 1.00 Credit    Class 1.00    Lab 0.00  
 Basic concepts in psychology including learning theories, psychological disorders, health, stress and coping. Provides an overview of key terms, concepts and theoretical approaches. This module along with PSYC 150 A and PSYC 150 B is equivalent to the full 3 credit hour course, Introduction to Psychology. Offered: Summer, Fall, Winter, Spring. Course fee: \$2.

**PSYC 151**  
**Developmental Psychology**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Physical, emotional, social and intellectual development of an individual from conception to death. Emphasizes normal growth and development of the individual with discussion of genetic and environmental factors that can cause developmental abnormalities. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**PSYC 152**  
**Abnormal Psychology**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Characteristics of emotional disturbances, mental illnesses and related social deviance in the United States. Includes identification, diagnosis and treatment of mental disturbances. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**PSYC 154**  
**Interpersonal Relationships**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Familiarizes the student with interpersonal processes. Aimed at personal and professional growth and development leading to enhanced relationships in one's life and work. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**PSYC 160**  
**Behavioral Sciences Statistics**  
 5.00 Credits    Class 5.00    Lab 0.00  
 Introduces basic statistical measures employed in the behavioral sciences. Emphasis will be on core concepts and calculation of specific measures as well as appropriate application of those measures. Topics include measures of central tendency and dispersion, the normal distribution and confidence intervals, correlation and regression, sampling and hypothesis testing using t-test, ANOVA, Chi Square and various nonparametric tests. Course fee: \$7.

**PSYC 162**  
**Child and Adolescent Development**  
 4.00 Credits    Class 4.00    Lab 0.00  
 Explores physical, emotional, social and intellectual development of an

individual from conception through adolescence. Emphasis on normal growth and development with discussion of biological and environmental factors that influence development. Prerequisite: PSYC 150. Offered: Winter. Course fee: \$7.

**PSYC 290**  
**Psychology Special Topics**  
 1.00–5.00 Credits    Class 1.00–5.00    Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group. Course fee: \$7.

**PSYC 291**  
**Psychology Individual Study**  
 1.00–5.00 Credits    Class 1.00–5.00    Lab 0.00  
 Individual study or research. Topics are arranged on an individual basis with instructor permission. Course fee: \$7.

## PTA Physical Therapist Assistant

**PTA 100**  
**Introduction to Physical Therapy**  
 2.00 Credits    Class 2.00    Lab 0.00  
 An introduction to health care in the United States, historically and currently, particularly as it relates to physical therapy and the roles of the physical therapist and physical therapist assistant. Provides an overview of the various health professionals and health care systems. Offered: Fall.

**PTA 200**  
**Fundamentals of Physical Therapy**  
 4.00 Credits    Class 3.00    Lab 4.00  
 Basic patient handling skills including vital signs and pertinent emergency procedures, draping, positioning, bed mobility, transfers, body mechanics, assistive devices, wheelchair mobility and range of motion exercises. Includes bandages, dressings, wrapping, sterile and isolation techniques. Legal and ethical responsibilities and documentation are introduced. Prerequisite: Admission to PTA. Offered: Summer. Course fee: \$75.

**PTA 203**  
**Physical Therapy Procedures**  
 4.00 Credits    Class 3.00    Lab 4.00  
 The body's mechanisms for inflammation and repair and the physiologic and therapeutic effects of physical agents including superficial and deep heat, cryotherapy, hydrotherapy, topical agents, compression pump, continuous passive motion, massage and electrical stimulation. Includes the assessment of pain, sensation, and segmental length, girth and volume. Prerequisite: Admission to PTA. Offered: Summer. Course fee: \$75.

**PTA 204**  
**Musculoskeletal Problems**  
 4.00 Credits    Class 3.00    Lab 4.00  
 Injury, disease and treatment of the musculoskeletal systems emphasizing orthopedic dysfunctions. Physiological and therapeutic effects of electrotherapy and traction. Principles are applied across age and diagnoses lines including pediatric and geriatric populations. Pharmacological interventions and actions are addressed. Prerequisites: PTA 200, BIOS 201, BIOS 202, PTA 203. Offered: Fall. Course fee: \$55.

**PTA 206**  
**PTA Clinical Experience I**  
 5.00 Credits    Class 1.00    Lab 16.00  
 Skills acquired are applied in a clinical setting under the supervision of an instructor. Prerequisites: PTA 200, BIOS 201, BIOS 202, PTA 203. Offered: Fall. Course fee: \$25.

**PTA 207**  
**PTA Clinical Issues and Role Transition**  
 2.00 Credits    Class 2.00    Lab 0.00  
 Preparation for the transition from student to professional and review of the licensure exam. Prerequisites: PTA 210, PTA 214, PTA 216. Offered: Spring

**PTA 210**  
**Cardiopulmonary Function**  
 3.00 Credits    Class 2.00    Lab 3.00  
 Physiology of exercise, energy metabolism and principles of aerobic conditioning. Includes cardiorespiratory physiology, cardiac rehabilitation and pulmonary diseases and treatment. Methods of exercise training are reviewed. Pharmacological interventions and actions are included. Prerequisites: PTA 204, PTA 206, PTA 211. Offered: Winter. Course fee: \$35.

**PTA 211**  
**Pathophysiology of Disease**  
 3.00 Credits    Class 3.00    Lab 0.00  
 Various disease processes, particularly those seen in the physical therapy setting. Includes related pharmacology. Prerequisites: PTA 200, BIOS 201, BIOS 202, PTA 203. Offered: Fall.

**PTA 214**  
**Rehabilitation Procedures**  
 5.00 Credits    Class 4.00    Lab 4.00  
 Neuromuscular physiology, injury, disease and rehabilitation. Includes patient treatment following amputation. Principles are applied across age and diagnoses lines and include pediatric and geriatric populations. Pertinent pharmacological interventions and actions are discussed. Prerequisites: PTA 204, PTA 206, PTA 211. Offered: Winter. Course fee: \$55.

**PTA 216**  
**PTA Clinical Experience II**  
 5.00 Credits    Class 1.00    Lab 16.00  
 Skills acquired to date are applied in a clinical setting under the supervision of a licensed physical therapist or physical therapist assistant. In the seminar, clinical experience and issues in physical therapy are discussed. Prerequisites: PTA 204, PTA 206, PTA 211. Offered: Winter. Course fee: \$25.

**PTA 226**  
**PTA Clinical Experience III**  
 12.00 Credits    Class 0.00    Lab 36.00  
 Full time clinical affiliation under the supervision of a licensed physical therapist or physical therapist assistant. Prerequisites: PTA 210, PTA 214, PTA 216. Offered: Spring. Course fee: \$25.

**PTA 290**  
**Physical Therapist Assistant Special Topics**  
 0.25–5.00 Credits    Class 0.00    Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

## RAT Radiologic Technology

**RAT 111**  
**Clinical Education I**  
 4.00 Credits    Class 0.00    Lab 16.00  
 Orientation to hospital and radiology organization, radiographic procedures involved with the skeletal system, respiratory tract, and abdomen; introduction to competency performances, film analysis and presentation. Offered: Spring.

**RAT 112**  
**Clinical Education II**  
 4.00 Credits    Class 0.00    Lab 16.00  
 Radiographic positioning of gastrointestinal, biliary, and urographic procedures. Offered: Fall.

**RAT 121**  
**Introduction to Radiology and Positioning**  
 4.00 Credits    Class 3.00    Lab 2.00  
 Orientation to the field of radiography, history, x-ray production, image production, positioning upper extremities and chest. Offered: Winter.

**RAT 122**  
**Radiographic Positioning**  
 4.00 Credits    Class 3.00    Lab 2.00  
 Radiographic positioning of the lower extremities and axial skeleton; patient interactions and film analysis. Offered: Spring.

**RAT 123**  
**Fluoroscopy for Radiology**  
 5.00 Credits    Class 4.00    Lab 2.00  
 Positioning and procedures involved in gastrointestinal, genitourinary systems; fluoroscopy; use of contrast medias, reactions and technical considerations. Offered: Fall.

**RAT 131**  
**Patient Care in Radiology**  
 2.00 Credits    Class 1.00    Lab 2.00  
 Legal and professional aspects, infection control, patient safety and assessment techniques related to care of the patient in radiography department. Offered: Winter.

**RAT 199**  
**Computers in Medical Imaging**  
 2.00 Credits    Class 2.00    Lab 0.00

Overview of computers in medical imaging including hardware, software, peripheral devices. Its use in CT, MRI, digital imaging, computer-aided diagnosis, plus information and image management. Offered: Spring.

**RAT 211**  
Clinical Education III  
4.00 Credits      Class 0.00      Lab 24.00

Continuation of clinical exposure to procedures involved with the gastrointestinal, genitourinary, skeletal, and respiratory systems with emphasis in disease; begin minor affiliate rotations, film analysis and presentation.

**RAT 212**  
Clinical Education IV  
6.00 Credits      Class 0.00      Lab 24.00

Special radiographic procedures including tomography, angiography, myelography, mammography, CT scans and quality control measures; formulating technique; film critique and presentations. Offered: Winter.

**RAT 213**  
Clinical Education V  
6.00 Credits      Class 0.00      Lab 24.00

Clinical exposure to sub-specialties and other career opportunities; continuation of routine and special radiographic procedures; film analysis and presentation. Offered: Spring.

**RAT 214**  
Clinical Education VI  
4.00 Credits      Class 0.00      Lab 24.00

Total exposure to the hospital environment and performance of all functions of the radiographer in fluoroscopy, general and mobile radiography; completion of final competency assessments.

**RAT 215**  
Pathology for Radiographers  
2.00 Credits      Class 2.00      Lab 0.00

Radiographic appearance of diseases and technique adjustments for both additive and destructive pathologies.

**RAT 217**  
Special Procedures in Radiography  
1.00 Credit      Class 1.00      Lab 0.00

Procedures, supplies, and protocols involved with sub-specialty radiographic exams and angiography.

**RAT 218**  
Advanced Radiographic Practice  
2.00 Credits      Class 2.00      Lab 0.00

Specialty practice considerations related to geriatrics, pediatrics, mobile, surgical and trauma radiography, and mammography. Offered: Winter.

**RAT 219**  
Pharmacology for Radiography  
1.00 Credit      Class 1.00      Lab 0.00

General pharmacological principles as they pertain to the practice of radiography. Emphasis placed on major drug classes prescribed medically as well as those having specific indications in radiology. Offered: Winter.

**RAT 222**  
Principles of Radiographic Technique  
5.00 Credits      Class 4.00      Lab 2.00

Principles of exposure formulation, image quality factors and variables, quality assurance and testing, film and image processing. Offered: Winter.

**RAT 226**  
Synopsis in Radiography  
2.00 Credits      Class 2.00      Lab 0.00

Testing and preparation for the national registry examination. Synthesizing current knowledge in radiologic technology applicable to fluoroscopic, general and mobile radiography.

**RAT 231**  
Sectional Anatomy  
3.00 Credits      Class 2.00      Lab 2.00

Human gross anatomy analyzing structures in the transverse (axial), sagittal, and coronal planes, with applications in modern medical imaging. Offered: Spring.

**RAT 232**  
Radiation Biology  
2.00 Credits      Class 2.00      Lab 0.00

Fundamental principles of molecular and cellular effects of x-ray interaction, health physics and radiation protection.

**RAT 261**  
Radiography Practicum  
2.00-8.00 Credits      Class 1.00      Lab 8.00-40.00

**RAT 265**  
Seminar in Radiology  
1.00 Credit      Class 1.00      Lab 0.00

Current issues and developments in radiologic technology. Case studies of selected topics. Offered: Spring.

## RE Real Estate

**RE 101**  
Real Estate Principles  
4.00 Credits      Class 4.00      Lab 0.00

Introduction to real estate as a business and profession. Includes license, law, ethics, purchase agreements, escrow and title work, advertising, appraisals, sales, market trends, taxes, assessments and the role and influence of real estate in the economy. Course fee: \$40.

**RE 102**  
Real Estate Law  
4.00 Credits      Class 4.00      Lab 0.00

Legal phase of realty transactions from the listing of the property to the closing of the escrow. Review for owners, brokers, salesmen, mortgage and escrow officers. Course fee: \$40.

**RE 103**  
Real Estate Finance  
2.00 Credits      Class 2.00      Lab 0.00

Financial instruments, availability of mortgage credit, risk analysis and federal agencies influencing real estate transactions. Course fee: \$40.

**RE 104**  
Real Estate Appraisal  
2.00 Credits      Class 2.00      Lab 0.00

Real estate appraisal concerns in estimating the value of property. Includes salvage, book, investment, aesthetic, sentimental, cash, replacement and market values; how these values are related to real property values and how appraisal values can then be used. Course fee: \$40.

**RE 290**  
Real Estate Special Topics  
1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00

Structured exploration of a specific topic(s) by participants in a group.

**RE 291**  
Real Estate Individual Study  
1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission.

## RECL Reclamation

**RECL 222**  
Reclamation I  
3.00 Credits      Class 2.00      Lab 3.00

Covers the accepted and prescribed techniques of land reclamation, regulations, pre-reclamation planning, measuring impacted areas, water management and revegetation. Offered: Fall.

**RECL 223**  
Reclamation II  
3.00 Credits      Class 1.00      Lab 6.00

Completion of a reclamation project including site analysis, obtaining permits and implementing the plan. Prerequisite: RECL 222. Offered: Winter. Course fee: \$30.

## RNGR Ranger

**RNGR 100**  
Focus on Ranger Services  
1.00 Credits      Class 0.00      Lab 3.00

An overview of the natural resources emergency services field. Addresses agency identities and roles. Differentiates between Ranger

and Police, compares and contracts. Examines unique issues in field such as ARPA, environmental crimes, game law enforcement, and generalist/multiple role of rangers.

**RNGR 103****Introduction to Resource Protection**

3.00 Credits Class 2.00 Lab 2.00

Examines the protection and stewardship of natural and cultural resources. May vary from insect infestation of timber stands to wastewater management to historic site preservation. Offered: Winter.

**RNGR 107****NR Information Technology and Equipment Operation**

3.00 Credits Class 2.00 Lab 3.00

Overview of technology in field such as computerized reporting, GIS/GPS, advanced radio and data systems, videography, digital photography, environmental and criminal surveillance equipment, and data management. Offered: Fall.

**RNGR 109****NR Administration and Management**

3.00 Credits Class 3.00 Lab 0.00

Reviews the administrative to monitoring subcontractors and for-fee users. Emphasis on permits as a management tool. Offered: Fall.

**RNGR 113****How to Get Government Jobs**

1.00 Credit Class 1.00 Lab 0.00

How to accurately complete U.S. government employee application form 171, with related forms, and National Park Service seasonal employment application form 10-139, with related forms. Includes basic principles for filling out various state and metropolitan park employment applications. Course fee: \$30.

**RNGR 123****Rappelling and Rope Techniques**

1.50 Credits Class 0.75 Lab 2.25

Familiarization with the principles of rappelling. Includes lab experience. Offered: Spring. Course fee: \$55.

**RNGR 126****Search and Rescue Introduction**

1.00 Credit Class 1.00 Lab 0.00

Introduction to Search and Rescue course is a National Association for Search and Rescue (NASAR) course designed to provide knowledge concerning the general responsibilities, the skill and abilities, and the equipment needed by persons who would be participating in a search or rescue mission. The course content includes topics in three major areas: Searcher survival, search, and rescue. The course is based around the rural and wilderness environments but the material is recommended as a basis for all Search and Rescue (SAR) environments. The Introduction to Search and Rescue is a stepping stone to higher level courses of training for emergency personnel. It provides a common starting point in training for the new person to SAR and in many cases, an excellent refresher course for the more experience SAR worker. This common starting point provides continuity during SAR operations and future training of all team members. The course is also designed to prepare the student for certification, according to the knowledge objectives defined in the NASAR standards for SAR Technician III. Offered: Winter. Course fee: \$90.

**RNGR 160****Survival Techniques for Wilderness Areas**

3.00 Credits Class 2.00 Lab 3.00

An introduction to wilderness survival techniques, including compass and map reading, construction of emergency shelters, controlled fires, personal hygiene in the wilderness setting, preparation of native foods, survival medical treatment and health care techniques. Course fee: \$120.

**RNGR 161****Impact Weapons**

0.50-1.00 Credits Class 0.00 Lab 3.00

This 40 clock hour course will expose the particulars of the tactically and socially acceptable application of the Kubotan, Side Handle Baton (PR-24), Straight Baton, and Expandable Baton (ASP) in law enforcement usage. Classroom practice sessions and individual study will be conducted to develop and refine within the participant the requisite the hand and eye coordination and to begin the development of muscle memory lock. A written examination and practical assessment will follow instructor demonstrates and individual practice for each of the impact weapons to be addressed. This program is competency-based. Mere participation does not automatically assure successful completion. The Force Continuum, Relative Positioning, Danger Zones and Target Areas will be presented. Safety and liability

issue will be discussed and adhered to throughout this program. Course fee: \$85.

**RNGR 210****Defensive Pistolcraft**

0.50 Credit Class 0.50 Lab 0.00

Covers modern techniques of the handgun including grip, stance and position, sighting, and trigger control with emphasis on proper technique of the presentation stroke. Proper weapon handling including administrative loading, down loading, immediate actions and tactical manipulation of the handgun are discussed, demonstrated and drilled. Develops skill, knowledge, and a practical experience necessary to become safe, responsible, and effective in the use of the handgun for self-defense. Course fee: \$200.

**RNGR 212****Advanced Defensive Pistolcraft**

1.00 Credit Class 1.00 Lab 0.00

A defensive application of the handgun, shotgun and urban rifle with evaluation and development of handgun and shotgun skills, including live-fire steel plate precision shooting, discretionary shooting and tactical drills. Prerequisite: CJ 211. Course fee: \$200.

**RNGR 213****Urban Defensive Rifle and Shotgun**

0.75 Credit Class 0.75 Lab 0.00

A defensive application of the shotgun and urban rifle with live-fire steel plate precision shooting, discretionary shooting and tactical drills employ the Duellatron Electronic Targeting System and Action Target's Mover. Rifle poppers and reactionary plates are employed at urban ranges. Action Target's 3-D Balloon Targets are used throughout the program. Attention is placed on low light shooting with all three weapon systems. Provides the student with the skills, knowledge and practical experience necessary to become safe, responsible and effective in the use of the shotgun and urban rifle for self-defense. Prerequisite: Instructor permission. Course fee: \$290.

**RNGR 226****Vertical Rope Rescue**

1.25 Credits Class 0.75 Lab 1.50

Examination of training exercises in rope rescue techniques. Covers rescue of persons injured and/or stranded on ledges, over cliffs, etc. Emphasizes teamwork, proper use, care and storage of equipment and safety procedures. Includes Z drags, high lines and tyrolean traverses for the raising and lowering of victims, equipment and the rescuer. Prerequisite: RNGR 123. Offered: Spring. Course fee: \$85.

**RNGR 230****Intermediate Rescue Rigging**

1.00 Credit Class 0.50 Lab 2.00

In-depth examination of rope rescue technique and equipment with the rescue of persons injured or stranded on ledges, over cliffs, buildings, water towers or hanging from any height from rope or fall protection, etc. Teamwork is emphasized throughout. Includes lower/haul systems, belay systems, a-frames, gin poles, load vectoring on guiding lines and highlines for the extraction and manipulation of victims, equipment the rescuer. Proper selection, use, care and storage of the equipment is stressed. Safety procedures and practices are included. Prerequisite: RNGR 226. Course fee: \$65.

**RNGR 238****Ranger Academy**

24.00 Credits Class 0.00 Lab 0.00

Prepares the learner for law enforcement positions with natural resources agencies in Ohio and for seasonal positions with the National Park Service and U.S. Fish and Wildlife Service. Successful completion certifies the student as having completed both the Ohio Peace Officer Basic Training and the Seasonal Officer Training curriculum. Course fee: \$2354.

**RNGR 238 A****Ranger Academy - Theory**

12.00 Credits Class 0.00 Lab 0.00

Offered: Fall, Winter. Course fee: \$522.

**RNGR 238 B****Ranger Academy - Skills**

12.00 Credits Class 0.00 Lab 0.00

Offered: Fall, Spring. Course fee: \$521.

**RNGR 270****Land Navigation**

1.00 Credit Class 1.00 Lab 0.00

Provides an opportunity to learn and practice skills necessary to navigate from point to point on the earth's surface. Course fee: \$30.

**RNGR 275****Advanced Survival Techniques**

3.00 Credits      Class 2.00      Lab 3.00

Covers natural environments, including mountains, desert, arctic, tropic and ocean as well as required equipment of human survival for each. The student develops a survival kit and uses that kit for several days in mountainous back country or at a local site. Prerequisites: INTP 250, INTP 258, RNGR 160. Course fee: \$25.

**RNGR 294****Ranger Services Cooperative Work Experience**

6.00 Credits      Class 2.00      Lab 40.00

An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**RNGR 296****Ranger Services Practicum**

2.00-7.00 Credits      Class 1.00      Lab 7.00

The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**RNGR 298****Ranger Services Internship**

6.00-9.00 Credits      Class 3.00      Lab 20.00-40.00

**SEPS****Security****SEPS 201****VIP Protection**

1.00 Credit      Class 1.00      Lab 2.00

Executive protection functions and responsibilities. Includes special areas of security procedures, terrorism, authority, communication, emergency procedures, post, patrols, advances and travel. Course fee: \$25.

**SEPS 205****Correctional Security**

3.00 Credits      Class 3.00      Lab 0.00

Maintaining security in a criminal justice setting. Focus on the relationship between security and treatment, various roles of security within criminal justice agencies and security technology. Security practices to be studied include theory of searches, restraining procedures and offender supervision. Prerequisite: CORR 100. Offered: Winter. Course fee: \$15.

**SOCI****Sociology****SOCI 101****General Sociology**

5.00 Credits      Class 5.00      Lab 0.00

Comprehensive introduction to sociology as a •••. Includes an analysis of the impact of social forces on society and on human behavior. Major theoretical perspectives are applied to an analysis of culture, socialization, social organizations, groups, social interaction, and deviance. Traditional textbook material is supplemented by sociological readings. Offered: Fall. Course fee: \$7.

**SOCI 120****Parenting Issues**

1.00 Credit      Class 1.00      Lab 0.00

Focus on issues in parenting. Attention is given to acquiring skills to improve parent-child relationships. Course fee: \$7.

**SOCI 152****Comparative Cultural Studies**

3.00 Credits      Class 2.00      Lab 2.00

Compares cultures of America and other countries including essential cultural information to travel and do research in another country. By going abroad, students experience the similarities and differences in national cultures and increase skills in relating effectively to people from diverse backgrounds. Course fee: \$7.

**SOCI 153****Social and Cultural Awareness**

4.00 Credits      Class 4.00      Lab 0.00

Exploration, development, and understanding of social science skills and the different kinds of human interactions within various cultural

contexts and global settings. Offered: Fall, Spring. Course fee: \$7.

**SOCI 160****Introduction to Sociology**

3.00 Credits      Class 3.00      Lab 0.00

Overview of sociology and its contributions to our understanding of human behavior and human society. Topics include a consideration of culture, the socialization process, social structure, and social interaction as well as an overview of major social institutions. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**SOCI 161****Sociology of Family Living**

3.00 Credits      Class 3.00      Lab 0.00

Examines marriage and family as social institutions in American society. Topics emphasized are family composition, gender roles, foundations of marriage, mate selection, communication, life cycles of the family, parenting and family dysfunctions. Also includes some cultural comparisons of various family and marriage forms. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**SOCI 165****Cross Cultural Studies**

3.00 Credits      Class 3.00      Lab 0.00

Introduces the student to similarities and differences of people of various racial and cultural heritages. Provides the student with the knowledge of how to relate to people of diverse cultural backgrounds. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**SOCI 169****Human Relations in Organizations**

3.00 Credits      Class 3.00      Lab 0.00

Develops concepts, skills and techniques essential to workplace relations from perspective of the employee. Emphasizes effective communication skills, personal behavior development techniques, cultural, ethical and legal issues in the changing environment. Offered: Summer, Fall, Winter, Spring. Course fee: \$7.

**SOCI 290****Sociology Special Topics**

0.50-5.00 Credits      Class 1.00-5.00      Lab 0.00

Structured exploration of a specific topic(s) by participants in a group. Course fee: \$7.

**SOCI 291****Sociology Individual Study**

1.00-5.00 Credits      Class 1.00-5.00      Lab 0.00

Individual study or research. Topics are arranged on an individual basis with instructor permission. Course fee: \$7.

**ST****Surgical Technology****ST 100****Fundamentals of Surgical Technology Lab**

2.00 Credits      Class 0.00      Lab 4.00

This course will provide an in-depth introduction of the roles and responsibilities of the Surgical Technologist as an important professional in the delivery of surgical services. Introduction to the surgical environment will include professional, legal and ethical considerations, interpersonal relationships, communication skills, and basic operating room safety. This course will also provide introduction to the principles of aseptic techniques, scrubbing, gowning, gloving, sterilization, disinfection and operating room sanitation. Peri-operative intervention discussions include positioning, draping techniques and related surgical technologist procedures. The surgical use of instrumentation, sutures, needles, sponges, syringes, and hypodermic needles will be investigated while specifying the duties and responsibilities of the surgical technologist. Offered: Fall. Course fee: \$50.

**ST 101****Patient Care Concepts Laboratory**

2.00 Credits      Class 0.00      Lab 4.00

This course is designed to enable the student to become skilled in assisting with the preparation, transporting, positioning, and anesthesia of the surgical patient. Skills included in this course are: aseptic technique, positioning, skin preparation, care of specimens, use of thermo-regulatory devices, vital signs, handling of blood replacement components, urinary catheterization, and emergency procedures. Offered: Fall. Course fee: \$50.

**ST 110****Basic Preparation- Lab**

1.00 Credit      Class 0.00      Lab 2.00

This laboratory course is designed to build on the student's knowledge of basic surgical technology skills, professionalism, and ethics. The role of the surgical technologist is developed and applied in laboratory procedures. Prerequisites: STCT 4633 and STCT 4631. Offered: Winter.

**ST 111****Surgical Procedures I – Clinical**

3.00 Credits      Class 0.00      Lab 15.00

This course is designed to build on the student's knowledge of basic surgical techniques, professionalism and ethics. The role of the surgical technologist is developed and applied in basic surgical procedures. The principles of asepsis and patient care concepts of positioning, prepping, draping, and procedural techniques are applied directly to the investigation of general, gastrointestinal, obstetrics, gynecological and orthopedical surgical procedures. Maintaining the integrity, safety and efficiency of the sterile and non-sterile areas throughout surgical procedures will be emphasized. Prerequisites: STCT 4633 and STCT 4631. Offered: Winter. Course fee: \$25.

**ST 120****Surgical Procedures II – Clinical**

3.00 Credits      Class 0.00      Lab 15.00

This course is designed to build on the student's knowledge of surgical technology with emphasis on clinical surgical applications in ophthalmic, ear/nose/throat, dental/oral/maxillofacial, plastic and reconstructive and neurological surgical procedures. Emphasis is on further development of surgical skills. Prerequisites: STCT 4639 and ST 111. Offered: Spring. Course fee: \$25.

**ST 200****Surgical Procedures III – Clinical**

3.00 Credits      Class 0.00      Lab 15.00

This course is designed to build on the student's knowledge of surgical technology with emphasis on clinical surgical applications in thoracic, cardiovascular, peripheral vascular, and urologic surgical procedures. Emphasis is on further development of surgical skills. Prerequisites: STCT 4639 and ST 120. Offered: Summer. Course fee: \$25.

**ST 201****Pediatric Surgery – Clinical**

1.00 Credit      Class 0.00      Lab 5.00

This course is designed to build on the student's knowledge of surgical technology with emphasis on clinical surgical applications. Clinical experiences will emphasize adapting pediatric concepts in the surgical setting. Students will be given the opportunity to scrub in these pediatric specialty surgeries: general surgery, urology, orthopedic, neurosurgery, thoracic surgery, cardiovascular surgery, ophthalmology, plastic surgery, and ENT surgery. Prerequisites: STCT 4639 and ST 200. Offered: Summer. Course fee: \$25.

**ST 210****Advanced Surgical Technologist Practicum – Clinical**

3.00 Credits      Class 0.00      Lab 15.00

This course is designed to build on the student's knowledge of surgical technology with emphasis on clinical surgical applications. Students are expected to work with on preceptor during this course, and are expected to perform in the clinical practice with minimal assistance. Prerequisite: STCT 4643, ST 201, STCT 4641, ST 200. Offered: Fall. Course fee: \$25.

**ST 220****Specialty Surgical Practice – Clinical**

3.00 Credits      Class 0.00      Lab 15.00

This course is designed to build on the student's knowledge of surgical technology with emphasis on two specialty clinical surgical applications. Students are expected to select two specialty areas and focus on those surgical areas. Prerequisites: STCT 4647, STCT 4645, ST 210. Offered: Winter. Course fee: \$25.

**STCT****Surgical Technology****STCT 4016****Human Anatomy and Physiology I – Theory (COTC 4016)**

5.00 Credits      Class 5.00      Lab 0.00

Introduction to the study of the anatomy and physiology of the human, including standard terminology, chemistry review, cells and tissues, with the structure and function of the integumentary system, skeletal system, muscular system, nervous system, excretory system, and reproductive system. Laboratory includes the study of human cadavers. Offered: Fall.

**STCT 4026****Human Anatomy and Physiology II – Theory (COTC 4026)**

5.00 Credits      Class 5.00      Lab 0.00

Continued study of the anatomy and physiology of the human, including the structure and functions of the gastrointestinal system, cardiovascular system, lymphatic system, respiratory system, endocrine system, genetics, and embryology. Laboratory includes the study of human cadavers. Prerequisites: STCT 4016 and BIOS 110. Offered: Winter.

**STCT 4601****Pharmacology for Surgical Assistants (COTC 4601)**

3.00 Credits      Class 3.00      Lab 0.00

Prerequisites: STCT 4635 and STCT 4637. Offered: Spring.

**STCT 4631****Fundamentals of Surgical Technology – Theory (COTC 4631)**

3.00 Credits      Class 3.00      Lab 0.00

This course is an introduction to Surgical Technology. Different types of health care facilities, the roles of the different surgical team members and aspects of the physical environment of the surgical suite are studied. The history of the development of surgery as well as ethical, moral, and legal responsibilities is discussed. In this course, the student will also discuss communication skills, interpersonal and interdepartmental relationship skills needed. Offered: Fall. Course fee: \$26.

**STCT 4633****Patient Care Concepts – Theory (COTC 4633)**

3.00 Credits      Class 3.00      Lab 0.00

The students will be introduced to the layout of the operating room suite, sterile and sub-sterile areas. The importance of skin preparation, positioning and anesthesia of surgical patients will be discussed. The students will also be introduced to aseptic technique, care of specimen, use of thermoregulatory devices, vital signs handling of blood replacement components, urinary catheterization, and emergency procedures. Offered: Fall. Course fee: \$26.

**STCT 4635****Basic Case Preparation – Theory (COTC 4635)**

2.00 Credits      Class 2.00      Lab 0.00

This course builds on the previously acquired knowledge of human anatomy and physiology, introduction to surgical technology, basic instrumentation, surgical equipment and supplies; sutures and stapling devices will be discussed and demonstrated. Students will learn the proper care, handling, use and assembly of instruments and equipment. Also discussed during this course will be draping techniques and maintenance of the sterile field. Prerequisites: STCT 4633 and STCT 4631. Offered: Winter.

**STCT 4637****Surgical Procedures I – Theory (COTC 4637)**

2.00 Credits      Class 2.00      Lab 0.00

This course is designed to acquaint the student with the operating room procedures and techniques necessary to function as an assistant in the operating room. Discussed during this course will be relevant anatomy, indications for surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialties: general and gastrointestinal, obstetric and gynecologic and orthopedic. Students will have clinical experiences in the above areas, functioning as a second scrub, first scrub or assistant circulator under the supervision of a certified surgical technologist or registered nurse. Prerequisites: STCT 4633 and STCT 4631. Offered: Winter.

**STCT 4639****Surgical Procedures II – Theory (COTC 4601)**

2.00 Credits      Class 2.00      Lab 0.00

This course is an extension of Surgical Procedures I. Discussed during this course will be the relevant anatomy, indications for surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialties: ophthalmic, ear/nose/throat, dental/oral/maxillofacial, plastic and reconstructive and neurological surgery. Prerequisites: STCT 4637 and ST 111. Offered: Spring.

**STCT 4641****Surgical Procedures III – Theory (COTC 4641)**

2.00 Credits      Class 2.00      Lab 0.00

This course is an extension of Surgical Procedures II A and B. Discussed during this course will be the relevant anatomy, indications of surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialties: thoracic cardiovascular, peripheral vascular, and urologic. Students will have clinical experience in the above areas, functioning as a second scrub, first scrub, or assist circulator under the supervision of a certified surgical technologist or registered nurse. Prerequisites: STCT 4639 and ST 120.

**STCT 4643**  
**Pediatric Surgery – Theory (COTC 4643)**  
 2.00 Credits      Class 2.00      Lab 0.00  
 This a full-term course designed to acquaint the student with the pediatric patients and a variety of surgical procedures unique to the pediatric patients. Prerequisites: STCT 4639 and ST 120.

**STCT 4645**  
**Advanced Surgical Technologist Practicum (COTC 4645)**  
 2.00 Credits      Class 2.00      Lab 0.00  
 This a full-term course focusing on continuing surgical theory. It provides study of special problems that correlate with the individual needs and interests of the students during clinical practice. Clinical supervised practice is an integral part of this course. Prerequisites: STCT 4643, ST 201, STCT 4641, ST 200. Offered: Fall.

**STCT 4647**  
**Professional Trends and Issues in Surgical Technology (COTC 4647)**  
 3.00 Credits      Class 3.00      Lab 0.00  
 This course is designed to prepare the student for the workplace. Topics discussed will be: factors that affect the student's personal life, professional relations and organizations, preparation for the national certification examination, type of health care delivery agencies, accrediting agencies and job-seeking skills. Prerequisites: STCT 4641 and STCT 4643. Offered: Fall.

**STCT 4649**  
**Surgical Technology Seminar (COTC 4649)**  
 2.00 Credits      Class 2.00      Lab 0.00  
 This course is designed to provide the correlation between previously learned concepts and clinical application. It is designed to aid in transition from surgical technology student to entry level surgical technologist. Topics discussed in this course include general, OB/GYN, vascular, GU, cardiothoracic, plastic and ophthalmology surgeries. Requirements for ethical and legal practice as defined by the National Association of Surgical Technologists will be reviewed and discussed. Prerequisite: STCT 4647. Offered: Winter.

**STCT 4651**  
**Speciality Surgical Practice Theory (COTC 4651)**  
 2.00 Credits      Class 2.00      Lab 0.00  
 This course is a continuation of 4647 with additional surgical specialties presented. For example: Transplant surgery, trauma, ophthalmology, cardiac surgery, orthopedic, plastic and neurology surgery. The student will select two specialty areas and specialize in those areas. The student will be expected to transfer and build on previous content and experiences. Prerequisite: STCT 4647. Offered: Winter.

## **SUPR** **Supervision**

**SUPR 117**      PACE  
**Hospitality Supervision**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Effective supervision of employees. Focuses on basic principles such as recruiting, interviewing, discipline, motivation and leadership styles. Offered: Summer, Fall, Winter, Spring.

**SUPR 136**  
**Outdoor Leadership Development**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Interpersonal aspects of field station operation and cross-cultural experiences. Emphasis is on outdoor leadership skills, cultural interactions, and interpretive methods as they apply to ecotourism and adventure travel. Offered: Fall. Course fee: \$361.

**SUPR 212**  
**Industrial Supervision**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Working relationships among personnel involved in production areas of manufacturing including qualifications and characteristics expected for various positions. Offered: Spring. Course fee: \$5.

**SUPR 235**  
**Supervision and Leadership**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Designed for managers and supervisors who enter at the first line of management and supervision. Introduces the managerial processes of planning, organizing, staffing, directing and controlling. Offered: Winter, Spring.

**SUPR 236**

**Outdoor Leadership Skills**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Designed for the outdoor leader, this class enables both the experienced and inexperienced leader to identify, develop and successfully incorporate leadership skills into the leader's own style of leadership. Focuses on definable leadership skills and how they are interrelated to develop a practical leadership style. Course fee: \$25.

**SUPR 290**  
**Supervision and Leadership Special Topics**  
 1.00–5.00 Credit      Class 1.00–5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

## **THS** **Timber Harvesting**

**THS 290**  
**Timber Harvesting Special Topics**  
 1.00–5.00 Credit      Class 1.00–5.00      Lab 0.00  
 Structured exploration of a specific topic(s) by participants in a group.

## **THTC** **Timber Harvesting/Tree Care**

**THTC 100**  
**Timber Harvesting and Tree Care I**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Offered: Fall. Course fee: \$135.

**THTC 101**  
**Timber Harvesting and Tree Care II**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Prerequisites: THTC 100. Offered: Fall. Course fee: \$135.

**THTC 102**  
**Timber Harvesting and Tree Care III**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Prerequisite: THTC 101. Offered: Fall. Course fee: \$135.

**THTC 200**  
**Timber Harvesting and Tree Care IV**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Prerequisite: THTC 102. Course fee: \$135.

**THTC 201**  
**Timber Harvesting and Tree Care V**  
 6.00 Credits      Class 2.00      Lab 12.00  
 Prerequisite: THTC 200. Course fee: \$135.

**THTC 202**  
**Timber Harvesting and Tree Care VI**  
 12.00 Credits      Class 4.00      Lab 24.00  
 Prerequisite: THTC 201. Course fee: \$135.

## **TRAV** **Travel**

**TRAV 294**  
**Travel and Tourism Cooperative Work Experience**  
 1.00–4.00 Credits      Class 0.00      Lab 10.00–40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**TRAV 295**  
**Travel and Tourism Practicum**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Consists of a minimum of nine hours and maximum of 40 hours per week internship working in a travel agency.

## **TRC** **Tree Care**

**TRC 110**  
**Climbing I**  
 3.00 Credits      Class 1.00      Lab 6.00  
 An orientation to basic climbing equipment and its proper use in tree forestry, including saddles, climbing ropes and knots for the beginning climber. Concurrent with TRC 112, TRC 113 and TRC 115. Course fee: \$

85.

**TRC 112**  
**Mechanics of Tree Care**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers common problems affecting trees and treatments of these problems including tree surgery. Concurrent with TRC 110, TRC 113 and TRC 115. Course fee: \$ 50

**TRC 113**  
**Tree Care Equipment**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers selection, use and maintenance of hand tools used in tree surgery and arboriculture and operation and maintenance of power equipment including chainsaws, chipper trucks, chipper, spray rig and stump grinder. Concurrent with TRC 110, TRC 112 and TRC 115. Course fee: \$75.

**TRC 115**  
**Climbing II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Covers development of climbing skills with an emphasis on efficient movement in the trees, rigging and lowering techniques for pruning, topping and tree removal and use of chainsaw in trees. Concurrent with TRC 110, TRC 112 and TRC 113. Course fee: \$ 75.

**TRC 120**  
**Landscaping Fundamentals**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Studies the horticultural requirements of residential and recreational areas and analyzes the landscape to fit an individual's needs, whether to aesthetically enhance the area or to solve a problem. Investigation involving soils, lawn establishment, site modification, cost estimation for landscape construction, principles of landscape design, maintaining the landscape design and ornamentals are covered.

## WLM Wildlife Management

**WLM 139**  
**Field Ecology**  
 3.00 Credits      Class 2.00      Lab 3.00  
 The fundamental concepts of ecology are illustrated by the study of various plant communities. Analysis of oligotrophic lake systems is by invertebrate sampling and water testing. Prerequisites: BIOS 132, BIOS 109, NRM 121. Course fee: \$660.

**WLM 156**  
**Wildlife Investigative Techniques I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Life history, habitat, and distribution of common animals of the east central United States, including sexing and aging techniques, waterfowl identification, track and scat identification, and mammal identification. Offered: Fall, Winter, Spring. Course fee: \$35.

**WLM 162**  
**Winter Weeds**  
 1.00 Credit      Class 1.00      Lab 0.00  
 Studies winter identification techniques for common plants, with emphasis on herbaceous and shrubby species. Course fee: \$15.

**WLM 163**  
**Black Bear Management II**  
 1.00 Credit      Class 1.00      Lab 2.00  
 A field experience to assist bear biologists with their winter bear den work, this course introduces students to current management and research techniques. Prerequisite: WLM 170. Course fee: \$105.

**WLM 170**  
**Black Bear Management I**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Studies black bear evolution, distribution, taxonomy, life history, habitat and population management and presents techniques for capture and handling of bears, and investigation and resolution of bear-human conflicts. Course fee: \$60.

**WLM 171**  
**White Tail Deer Management I**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Studies biology and management of the white tail deer in the United States and details the difference between quantity, quality and trophy management systems. Course fee: \$60.

**WLM 172**

**White Tail Deer Management II**  
 1.00 Credit      Class 1.00      Lab 0.00  
 A hands-on field application course in which students describe and implement deer management plans including habitat manipulation and quality deer management. Prerequisite: WLM 171. Course fee: \$60.

**WLM 200**  
**Wildlife Field Research**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Participants function as a team while collecting data for wildlife research projects. Field work may include radiotelemetry, live trapping, raptor hacking, plant species inventories and migratory bird banding. Prerequisites: REC 122 and REC 136 or instructor permission. Course fee: \$60.

**WLM 208**  
**Aquatic Field Sampling of Southeast Ohio**  
 1.00 Credit      Class 0.00      Lab 3.00  
 Studies field sampling techniques for aquatics systems in Southeast Ohio including sampling using seines and electroshocking. Prerequisite: REC 161. Course fee: \$5.

**WLM 215**  
**Wildlife Management I**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Cover the theory and techniques of wildlife management with emphasis on forest game, including habitat evaluation, habitat management planning, species management, censusing, population dynamics, aging and sexing, wildlife and waterfowl identification. Offered: Fall, Winter. Course fee: \$10.

**WLM 239**  
**Wildlife Management II**  
 4.00 Credits      Class 2.00      Lab 6.00  
 Discusses techniques of manipulating wildlife populations through management including field work in public wildlife areas. Prerequisites: NRM 110, NRM 130, WLM 215. Offered: Spring. Course fee: \$50.

**WLM 241**  
**Ohio Birds of Prey**  
 1.00 Credit      Class 1.00      Lab 1.00  
 Emphasis on the life histories of identification characters, habitat, typical prey and general breeding biology. Applicable aging and sexing techniques, basic census methods and the distribution of selected species are discussed. Lab work includes an auditory census of owls and field identification of local raptors using field marks, silhouettes, flight patterns and pellet analysis. Course fee: \$40.

**WLM 245**  
**Wildlife Investigative Techniques II**  
 3.00 Credits      Class 2.00      Lab 3.00  
 Offered to those who completed REC 136 and have completed field data collection techniques and seek to enhance supervisory skills. Offered: Spring. Course fee: \$35.

**WLM 249**  
**Western Game Animals**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Covers the life history, habitats and distribution of western North American game birds and mammals. A few non-game mammals are included to represent that segment of the western fauna.

**WLM 251**  
**Ecology and Management of Waterfowl**  
 3.00 Credits      Class 3.00      Lab 0.00  
 Habitat requirements, management techniques, ranges and migration patterns, management history and problems, diseases and identification of the waterfowl resources of North America are discussed. Course fee: \$10.

**WLM 270**  
**Field Ichthyology – Lentic Investigation**  
 3.00 Credits      Class 1.00      Lab 6.00  
 Covers field operations, including sampling of oligotrophic (cold water) systems of northern environments. Field work will include: fish identification and population dynamics. Assignments will be through the use of electro-shocking, gill netting, trap netting, water chemistry, habitat evaluation and biostatistics. Prerequisites: REC 161, REC 238 or with instructor permission. Course fee: \$60.

**WLM 294**  
**Wildlife Management Cooperative Work Experience**  
 6.00 Credits      Class 2.00      Lab 40.00  
 An on- or off-campus paid work experience coordinated by a faculty member with at least one on-site visit during the quarter. Each student



must be enrolled in an on-campus seminar. One credit is awarded for a minimum of ten clock hours of work experience scheduled during a standard work week.

**WLM 296****Wildlife Management Practicum****2.00-7.00 Credits    Class 1.00            Lab 7.00**

The student is placed in a work environment for a minimum amount of time to gain experience before graduation.

**WLM 298****Wildlife Management Internship****6.00-9.00 Credits    Class 3.00            Lab 20.00-40.00**

Offered: Summer.