

**Course Descriptions**

- Course Numbering
- Credit Hours
- Prerequisites
- Schedule of Classes
- How to Read the Course Descriptions
- Descriptions, Special Topics
- Descriptions, Independent Study/Research
- Descriptions, Cooperative Education
- Honors Courses
- Descriptions, Transition Courses
- Subject Area Listing
- Course Descriptions

### Course Numbering

To simplify the task of maintaining accurate and complete academic records for all students at the College, an alphabetical numeric code is used to identify all courses. In this code, the alpha digits indicate the subject area (see Subject Area listings on page IX-11). For example, World Regional Geography carries the course number GEOG-1010. The letters GEOG refer to the subject area, Geography. The number 1010 has been assigned to a specific course, World Regional Geography, within that subject area.

Subject areas are listed in alphabetical order by subject title, not by the course Code (see page IX-11). Courses are listed in numerical order within each subject area. The semester course numbering system defines the type of course it is. Courses numbered xxx-09xx generally are designed to provide students with basic skills necessary for freshman studies. ENG-0980, for example, is Language Fundamentals I. Courses that begin with the number "1xxx" normally represent freshman-level courses. Courses that begin with the number "2xxx" are usually sophomore-level courses.

Modular courses may be offered in some subject areas. A modular course is a component of an approved semester course and is identified with a final letter of A,B,C,D or E. The course content of a modular course must be contained in the original course.

A special topics course permits the teaching of a variety of topics not currently contained in its subject area. An 1800 numbered course indicates a freshmen-level special topics course; a 2800 is assigned to a sophomore-level course (see pages IX-4 and IX-5 for a listing of special topics courses in the catalog). Page IX-6 provides a listing of Independent Study/Research courses and Cooperative Education courses. Courses on pages IX-4 through IX-6 carry a common course description, and therefore the specific course number(s) will refer the student to these front pages to obtain the course description.

Transition courses, designated with a final letter code of Z, are listed on pages IX-7 through IX-10. These courses are temporary, special courses which a department offers for a short time so that students can complete a degree requirement by enrolling in part of a semester course. These courses will be available for a maximum of two years after Fall 1998. Transition courses cannot be used to repeat classes completed under the quarter system.

Course numbers do not indicate whether or not a course will be accepted for transfer to other institutions. Students are advised to consult with their counselors regarding transfer of courses and credits to other institutions.

### Credit Hours

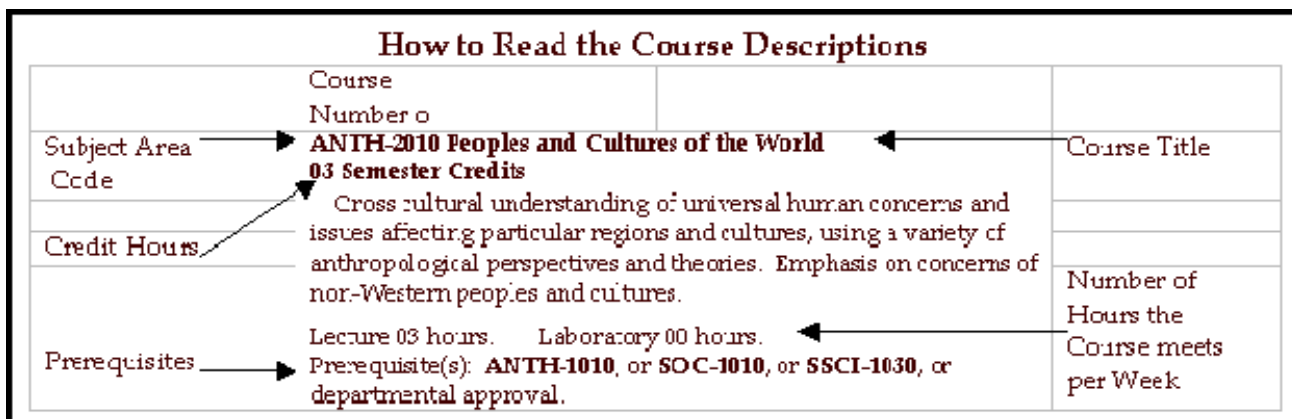
The number of semester credits for each course described in the Catalog is indicated after the course title. For example, three credits are indicated as 03 Semester credits. The number of credits for a course does not necessarily equal the number of hours that the course meets in one week.

### Prerequisites

Prerequisites, if any, are listed at the end of each course description. Prerequisites are established by each department, for each course in that department, to ensure that the student has an adequate and sufficient background to enroll in the course and achieve success. It is the student's responsibility to ensure that he or she has met the prerequisites for any course in which he or she enrolls. PREREQUISITES WILL BE CHECKED BY THE COMPUTER AT THE TIME OF REGISTRATION. If the student is unsure that the prerequisite has been met, he or she should consult with the department PRIOR to registering for that course.

### Schedule of Classes

Courses described in this Catalog are those approved by the Cuyahoga Community College Board of Trustees at the time of publication. Inclusion of a course description does not obligate the College to offer the course in any given semester or academic year. A Credit Schedule of classes is published each semester prior to the registration period. The schedule of classes contains a list of classes to be offered and general registration information. Courses approved by the Board of Trustees after the publication of this Catalog are reflected in the Credit Schedule of classes.



**SPECIAL TOPICS**

The College offers a variety of courses in a number of disciplines which carry a common description. The course descriptions and the disciplines offering these specialized courses are listed below. Students should see the current Credit Schedule of classes for specific semester offerings.

- xxxx-1800 Special Topics in xxxx
- xxxx-181S Special Laboratory Topics in xxxx
- xxxx-181T Special Laboratory Topics in xxxx
- xxxx-2800 Special Advanced Topics in xxxx
- xxxx-281S Special Advanced Laboratory Topics in xxxx
- xxxx-281T Special Advanced Laboratory Topics in xxxx

**xxxx-1800 Special Topics in xxxx**

1-3 Credits

Study of selected topics or current issues in xxxx. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

Lecture 1-3 hours.. Laboratory 00 hours.

Other Required Hours: 00.

Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.

The following disciplines have Special Topics 1800 (see current Credit Schedule for semester offerings):

ACCT	CART	EMT	MA	PHM
ART	CHEM	GCMT	MARK	PL
AUTO	CS	GEN	MATH	PSCI
AVIA	DANC	HS	MLT	PTAT
BADM	DAST	HUM	MUS	SSCI
BIO	DENT	JAPN	OADM	THEA
C&CR	ECON	LAWE	PE	

**xxxx-181S Special Laboratory Topics in xxxx**

1-3 Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in xxxx (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

Lecture 00 hours.. Laboratory 2-6 hours

Other Required Hours: 00

Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.

The following disciplines have Special Topics 181S (see current Credit Schedule for semester offerings):

ACCT	BIO	CHEM	GCMT	MA	PE
ART	C&CR	CS	GEN	MLT	THEA
AUTO	CART	DANC	LAWE	OADM	

**xxxx-181T Special Laboratory Topics in xxxx**

1-3 Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in xxxx (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

Lecture 00 hours.. Laboratory 3-9 hours

Other Required Hours: 00

Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.

The following disciplines have Special Topics 181T (see current Credit Schedule for semester offerings):

ACCT	BIO	CHEM	LAWE	PHM
ART	C&CR	CS	MUS	PSCI
AUTO	CART	GCMT	OADM	THEA

**xxx-2800 Special Advanced Topics in xxxx**

1-3 Credits

Study of selected advanced topics or current issues in xxxx. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

Lecture 1-3 hours.. Laboratory 00 hours

Other Required Hours: 00

Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.

The following disciplines have Special Topics 2800 (see current Credit Schedule for semester offerings):

ACCT	CART	ESCI	JMC	PHYS	SOC
ANTH	CHEM	GCMT	LAWE	POL	THEA
ART	CS	HIM	MA	PSCI	VT
AUTO	DANC	HIST	MARK	PST	
AVIA	DENT	HLTH	MATH	PSY	
BADM	DIET	HS	MLT	PTAT	
BIO	ECED	INTD	OADM	REAL	
C&CR	ENG	JAPN	PHIL	REL	

**xxxx-281S Special Advanced Laboratory Topics in xxxx**

1-3 Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in xxxx (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

Lecture 00 hours.. Laboratory 2-6 hours.

Other Required Hours: 00.

Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.

The following disciplines have Special Topics 281S (see current Credit Schedule for semester offerings):

ACCT	C&CR	CS	INTD	MLT
ART	CART	DANC	JMC	OADM
AUTO	CHEM	GCMT	LAWE	THEA
BIO				

**xxxx-281T Special Advanced Laboratory Topics in xxxx**

1-3 Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in xxxx (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

Lecture 00 hours.. Laboratory 3-9 hours

Other Required Hours: 00

Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.

The following disciplines have Special Topics 281T (see current Credit Schedule for semester offerings):

ACCT	C&CR	ESCI	JMC	PSCI
ART	CART	GCMT	LAWE	PST
AUTO	CHEM	INTD	OADM	THEA
BIO	CS			

**INDEPENDENT STUDY/RESEARCH**

**xxxx-1820 Independent Study/Research in xxxx**

01 Credit

Must be taken concurrently with any 1000-level course in xxxx. Specific content arranged between instructor and student. May be repeated for a maximum of six credits.

Lecture 01-03 hours.. Laboratory 00 hours

Other Required Hours: 00

Prerequisite(s): Must be taken concurrently with a 1000-level course in xxxx.

The following disciplines have Independent Study/Research 1820 (see current Credit Schedule for semester offerings):

ANTH	C&CR	ECED	GER	MATH	PST
ART	CHEM	ECON	HIST	MUS	RUSS
BADM	DAST	FREN	INTD	OADM	SOC
BIO	DIET	GEN	MARK	POL	

**xxxx-2820 Independent Advanced Study/Research in xxxx**

01 Credit

Must be taken concurrently with any 2000-level course in xxxx. Specific content arranged between instructor and student. May be repeated for a maximum of six credits.

Lecture 01-03 hours Laboratory 00 hours

Other Required Hours: 00

Prerequisite(s): Must be taken concurrently with a 2000-level course in xxxx.

The following disciplines have Independent Advanced Study/Research 2820 (see current Credit Schedule for semester offerings):

ANTH	C&CR	DIET	INTD	NURS	SOC
ART	CART	ECED	MARK	OADM	UST
BADM	CHEM	ENG	MATH	POL	
BIO	DENT	HIST	MUS	PSY	

**COOPERATIVE EDUCATION**

**xxxx-2830 Cooperative Field Experience**

1-3 Credits

Open to students eligible for the Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued maximum of nine credits.

Lecture 00 hours.. Laboratory 00 hours

Other Required Hours: 180 clock hours of approved work per credit hour

Prerequisite(s): see campus COOP Advisor for the Cooperative Education Program application.

The following disciplines have Cooperative Field Experience 2830 (see current Credit Schedule of classes for semester offerings):

ACCT	CART	FIN	JMC	MET	SOC
ARCH	CS	FIRE	LAWE	MIT	THEA
BADM	EET	GCMT	MARK	OADM	

### HONORS COURSES

The Honors program is based upon student commitment to intellectual pursuits, scholarship and community. The program admits qualified students of high academic potential who wish to join a community of scholars. The collegiate experience is a partnership between faculty and students dedicated to learning and potential growth. The program is designed to provide students to continue their education in four-year institutions and their honors programs.

Students may participate by enrolling in Honors courses and/or arranging contract experiences with a particular faculty member teaching a regular section course. When completing the arrangements for a contract, a student would also enroll in Honors Independent Study (1790) or Honors Advanced Independent Study (2790) in the discipline of the regular section course. These honors course numbers are not listed in the 1999-2000 College Catalog. Consult the current Class Schedule for course offering information in detail. For information about Honors Program admission, contact the Counseling Department or the Faculty Honors Coordinator on each campus.

### Transition Courses

Transition Course is a temporary, special course which a department may offer for a short time so that students can complete a degree requirement by enrolling in part of a semester course. It is intended for students who were unable to complete a sequence of courses on the quarter system. Transition Courses will normally be offered for fewer credits than are given for full semester courses and they will be designated with a final letter code of Z. These courses will be available for a maximum of two years after the conversion to semesters is made. Transition courses cannot be used to repeat classes completed under the quarter system.

BIO-112Z General Biology II: Transition Course  
 BIO-113Z General Biology III: Transition Course  
 BIO-144Z Anatomy and Physiology II: Transition Course  
 BIO-145Z Anatomy and Physiology III: Transition Course  
 ECED-252Z Independent Living Skills for Special Needs Child: Transition Course  
 ECED-253Z Field Experience With Special Needs Child: Transition Course  
 ENG-102Z College Composition II: Transition Course  
 ENG-103Z College Composition III: Transition Course  
 HS-185Z Human Services Principles and Practices I: Transition Course  
 HS-285Z Human Services Principles and Practices II: Transition Course  
 JAPN-113Z Beginning Japanese III: Transition Course  
 NURS-214Z Self-Care Children and Childbearing: Transition Course  
 NURS-215Z Health Deviations II: Transition Course  
 NURS-217Z Self-Care-Children: Transition Course  
 NURS-218Z Health Deviation III: Transition Course  
 OTAT-142Z Fundamentals of Psychosocial Dysfunction: Transition Course  
 OTAT-143Z Techniques for Psychosocial Dysfunction: Transition Course  
 OTAT-186Z Practicum II Psychosocial Dysfunction: Transition Course  
 OTAT-232Z Fundamentals of Physical Disabilities: Transition Course  
 OTAT-233Z Techniques of Physical Disabilities: Transition Course  
 OTAT-286Z Practicum III  
 PSY-102Z General Psychology: Transition Course  
 RADT-268Z Advanced Radiographic Clinical Practicum: Transition Course  
 RADT-269Z Final Radiographic Clinical Practicum: Transition Course  
 RESP-226Z Respiratory Care Directed Practice I: Transition Course  
 SPAN-112Z Beginning Spanish II: Transition Course

### **BIO-112Z General Biology II: Transition Course**

02 Semester Credits

Transition Course. Must have completed BIO-111 General Biology I. Replaces BIO-112 General Biology II. Fulfills prerequisite for BIO-1510 Principles of Biology II. Designed for science majors. Considers genetics, evolution, origin of life, and introduction to biological organization.

Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): BIO-111 General Biology I.

### **BIO-113Z General Biology III: Transition Course**

03 Semester Credits

Transition Course. Must have completed BIO-112 General Biology II. Replaces BIO-113 General Biology III. Completes course sequence. Designed for science majors. Surveys biological diversity, various reproductive processes, considers population, community, and ecosystem levels of organization and animal behavior.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): BIO-111 General Biology I, and BIO-112 General Biology II.



**Transition Courses****BIO-144Z Anatomy and Physiology II: Transition Course**

02 Semester Credits

Transition Course. Must have completed BIO-143 Anatomy and Physiology I. Replaces BIO-144 Anatomy and Physiology II. Fulfills prerequisite for BIO-1440 Anatomy and Physiology II. Study of structure and function of human body. Considers structure, function, and terminology of respiratory and urinary systems. Laboratory experiences include demonstrations, microscopic observations, anatomic models, and videos related to topics.

Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): BIO-143 Anatomy and Physiology I.

**BIO-145Z Anatomy and Physiology III: Transition Course**

03 Semester Credits

Transition Course. Must have completed BIO-144 Anatomy and Physiology II. Replaces BIO-145 Anatomy and Physiology III. Completes course sequence. Study of structure and function of human body. Focus on structure, functions, and terminology of endocrine and reproductive systems. Considers immunology, cellular division, embryological and fetal development, classical genetics and genetic technology. Laboratory experiences include demonstrations, microscopic observations, anatomic models, and videos related to topics.

Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): BIO-144 Anatomy and Physiology II.

**ECED-252Z Independent Living Skills for Special Needs Child: Transition Course**

03 Semester Credits

Transition Course. Replaces ECED-252 Independent Living Skills for the Special Needs Child. Completes a degree requirement. Role of educational assistant in planning, implementing and adopting developmentally appropriate curriculum. Appropriate strategies to meet specific needs of children with disabilities or developmental delays, including use of adaptive and assertive technology.

Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.

**ECED-253Z Field Experience With Special Needs Child: Transition Course**

02 Semester Credits

Transition Course. Must have completed ECED-141 Role of the Special Needs Assistant, and ECED-170 The Special Child. Replaces ECED-253 Field Experience with the Special Needs Child. Completes a degree requirement. Practical experience for educational assistant in setting serving the child with special needs. Participation in planning and implementing developmentally appropriate curriculum and instructional practices based on knowledge of individual children. Function as collaborative team member.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week.

Prerequisite(s): ECED-141 Role of the Special Needs Assistant, and ECED-170 The Special Child.

**ENG-102Z College Composition II: Transition Course**

01 Semester Credit

Transition Course. Must have completed ENG-101 College Composition. Replaces ENG-102 College Composition. Fulfills prerequisite for ENG-1020 College Composition II. Study and practice of good writing, with emphasis on interpretive papers and research papers.

Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): ENG-101 College Composition.

**ENG-103Z College Composition III: Transition Course**

02 Semester Credits

Transition Course. Must have completed ENG-102 College Composition. Replaces ENG-103 College Composition. Completes course sequence. Study and practice in principles of good writing, with emphasis on critical papers about literature.

Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): ENG-102 College Composition.

**Transition Courses****HS-185Z Human Services Principles and Practices I: Transition Course**

03 Semester Credits

Transition Course. Must have completed CMHT-126 Inquiry, Observation, and Assessment; or CMHT-126M Introduction to Human Services Principles and Practices. Replaces CMHT-127 Social Ecology, or CMHT-127M Human Services Principles and Practices I. Fulfills the requirements for HS-1850 Introduction to Human Services Principles and Practices. Continuation of practicum experience. Development of assessment skills. Completion of log writing requirements. Emphasis on managed care essentials and implementation of therapy principles. Assertiveness skills. Class discussion of practicum experience. Practicum site visits.

Lecture 01 hour. Laboratory 00 hours.

Other Required Hours: Practicum: 105 hrs./semester. Seminar: 15 hrs./semester.

Prerequisite(s): CMHT-126 Inquiry, Observation and Assessment; or CMHT-126M Introduction to Human Services Principles and Practices.

**HS-285Z Human Services Principles and Practices II: Transition Course**

03 Semester Credits

Transition Course. Must have completed CMHT-202 Community Mental Health Technology Principles and Practices I. Replaces CMHT-203 Community Mental Health Technology Principles and Practices II. Completes requirements for HS-2850 Human Services Principles and Practices I. Research and practice in development of preventive measures in human service field. Information exchange between field site representative and students.

Lecture 01 hour. Laboratory 00 hours. Other Required Hours: Practicum: 105 hrs./semester.

Seminar: 15 hrs./semester.

Prerequisite(s): CMHT-202 Community Mental Health Technology Principles and Practices I.

**JAPN-113Z Beginning Japanese III: Transition Course**

03 Semester Credits

Transition Course. Must have completed JAPN-112 Beginning Japanese II. Replaces JAPN-113 Beginning Japanese III. Completes course sequence. Continued study of Japanese listening, speaking, reading, writing, and grammar. Appropriate social use of the language within Japanese culture.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): JAPN-112 Beginning Japanese II, or departmental approval.

**NURS-214Z Self-Care Children and Childbearing: Transition Course**

06 Semester Credits

Transition Course. Must have completed NURS-110 Deviations in Mental Health and NURS-111 Self-Care -Elderly. Replaces NURS-214 Self-Care - Childbearing, and NURS-217 Self-Care - Children. Fulfills prerequisite for NURS-2400 Health Management, and NURS-2500 Health Deviations II. Emphasis on the nursing process, developmental self-care needs, and health deviation/self-care needs of patients throughout childbearing cycle, the neonate, the child ages infant through adolescence, and the family. Communication theory including teaching/learning strategies, cultural diversity, human growth and development, and role of the nurse integrated throughout course as related to nursing care of childbearing family, and children and families.

Lecture 03 hours. Clinical 09 hours.

Prerequisite(s): NURS-110 Deviations in Mental Health, and NURS-111 Self-Care Elderly.

**NURS-215Z Health Deviations II: Transition Course**

04 Semester Credits

Transition Course. Must have completed NURS-109 Health Deviations I. Replaces NURS-215 Health Deviations II. Fulfills prerequisite for NURS-2300 Specialized Health Care Needs. Focuses on health promotion and selected self-care deficits of patients and families from onset of puberty through adulthood. Additional content includes reproductive disorders, fertility, infertility, and family planning, infectious disorders, family violence, chronic congestive heart failure, and chronic essential hypertension.

Lecture 02 hours. Clinical 06 hours. Prerequisite(s): NURS-109 Health Deviations I.

**Transition Courses****NURS-217Z Self-Care-Children: Transition Course**

03 Semester Credits

Transition Course. Must have completed NURS-214 Self-Care - Childbearing, and NURS-215 Health Deviations II. Replaces NURS-217 Self-Care - Children. Fulfills prerequisite for NURS-2400 Health Management, and NURS-2500 Health Deviations II. Emphasis on the nursing process, developmental self-care needs, and health deviation/self-care needs of the child ages infant through adolescence, and the family. Communication theory including teaching/learning strategies, cultural diversity, human growth and development, and role of the nurse integrated throughout course as related to nursing care of child and family.

Lecture 01 hour. Clinical 06 hours.

Prerequisite(s): NURS-214 Self-Care - Childbearing, and NURS-215 Health Deviations II.

**NURS-218Z Health Deviation III: Transition Course**

05 Semester Credits

Transition Course. Must have completed NURS-216 Health Deviations III, NURS-217 Self-Care - Children, and concurrent enrollment in NURS-2400 Health Management. Replaces NURS-218 Health Deviations IV. Focuses on the acute and critically ill patient. Utilizes Orem's principles of self-care and the nursing process for provision of care to culturally diverse patients and groups of patients. Emphasis on care required to meet preventive, therapeutic and rehabilitative self-care deficits. Principles of management applied through a nursing leadership course.

Lecture 02 hours. Laboratory 01 hours on campus. Clinical 08 hours.

Prerequisite(s): NURS-216 Health Deviations III, NURS-217 Self-Care - Children, and concurrent enrollment in NURS-2400 Health Management.

**OTAT-142Z Fundamentals of Psychosocial Dysfunction: Transition Course**

01 Semester Credit

Transition Course. Must have completed PSY-102 General Psychology, and OTAT-123 Fundamentals of Physical Dysfunction, and obtain departmental approval. Replaces OTAT-213 Fundamentals of Psychosocial Dysfunction. Fulfills prerequisite for OTAT-232Z Fundamentals of Physical Disabilities, OTAT-233Z Techniques of Physical Disabilities, and OTAT-286Z Practicum III. Overview of psychosocial dysfunctions commonly seen in adults referred to occupational therapy for treatment.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): PSY-102 General Psychology; OTAT-123 Fundamentals of Physical Dysfunction; and departmental approval.

**OTAT-143Z Techniques for Psychosocial Dysfunction: Transition Course**

03 Semester Credits

Transition Course. Must have completed PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and obtain departmental approval. Replaces OTAT-215 Techniques in Psychosocial Dysfunction. Fulfills prerequisite for OTAT-232Z Fundamentals of Physical Disabilities, OTAT-233Z Techniques of Physical Disabilities, and OTAT-286Z Practicum III. Application of skills and techniques used in treatment programs for patients with psychosocial dysfunction.

Lecture 01 hour. Laboratory 04 hours.

Prerequisite(s): PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and departmental approval.

**OTAT-186Z Practicum II Psychosocial Dysfunction: Transition Course**

02 Semester Credits

Transition Course. Must have completed PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and obtain departmental approval. Replaces OTAT-217 Psychosocial Field Practice. Fulfills prerequisite for OTAT-232Z Fundamentals of Physical Disabilities, OTAT-233Z Techniques of Physical Disabilities, and OTAT-286Z Practicum III. Practice of knowledge and techniques learned in concurrent courses at clinical sites under supervision of health care personnel.

Lecture 00 hours. Laboratory 00 hours. Other Required Hours: Practicum: 105 hrs./semester.

Seminar: 15 hrs./semester.

Prerequisite(s): PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and departmental approval.

## Transition Courses

### **OTAT-232Z Fundamentals of Physical Disabilities: Transition Course**

01 Semester Credit

Transition Course. Must have completed OTAT-215 Techniques in Psychosocial Dysfunction, and obtain departmental approval. Replaces OTAT-223 Fundamentals of Long Term Care. Completes a degree requirement. Overview of clinical conditions of geriatric patients and those in long-term care who are commonly referred to occupational therapy for treatment.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): OTAT-215 Techniques in Psychosocial Dysfunction, and departmental approval.

### **OTAT-233Z Techniques of Physical Disabilities: Transition Course**

02 Semester Credits

Transition Course. Must have completed OTAT-213 Fundamentals of Psychosocial Dysfunction, and obtain departmental approval. Replaces OTAT-225 Techniques in Long-Term Care. Completes a degree requirement. Overview of occupational therapy treatment strategies and techniques for physically disabled adults from late adolescence to the end of life. Emphasis on current, authentic and effective occupational therapy practice.

Lecture 01 hours. Laboratory 03 hours.

Prerequisite(s): OTAT-213 Fundamentals of Psychosocial Dysfunction, and departmental approval.

### **OTAT-286Z Practicum III**

02 Semester Credits

Transition Course. Must have completed OTAT-217 Psychosocial Field Practice, and obtain departmental approval. Replaces OTAT-227 Long-Term Care Field Practice. Completes a degree requirement. Application of skills and techniques in treatment programs planned for patients and those in long-term care facilities.

Lecture 00 hours. Laboratory 00 hours. Other Required Hours: Practicum: 105 hrs./semester.

Seminar: 15 hrs./semester.

Prerequisite(s): OTAT-217 Psychosocial Field Practice, and departmental approval.

### **PSY-102Z General Psychology: Transition Course**

02 Semester Credits

Transition Course. Must have completed PSY-101 General Psychology. Replaces PSY-102 General Psychology. Completes the course sequence. Introduction to psychological concepts and principles derived from a scientific study of behavior. Topics include: motivation and emotion, personality, abnormal behavior, human development, social psychology and diversity.

Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): PSY-101 General Psychology.

### **RADT-268Z Advanced Radiographic Clinical Practicum: Transition Course**

04 Semester Credits

Transition Course. Must have completed RADT-267 Intermediate Radiologic Clinical Experience or have departmental approval. Replaces RADT-268 Advanced Radiological Clinical Experience. Fulfills prerequisite for RADT-269Z Final Radiographic Clinical Practicum: Transition Course. Clinical experience emphasizing selected radiographic procedures. Includes use of specialized equipment.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Practicum: 405 hrs./semester. Seminar: 15 hrs./semester.

Prerequisite(s): RADT-267 Intermediate Radiologic Clinical Experience, or departmental approval.

### **RADT-269Z Final Radiographic Clinical Practicum: Transition Course**

04 Semester Credits

Transition Course. Must have completed RADT-268 Advanced Radiological Clinical Experience, or RADT-268Z Advanced Radiographic Clinical Practicum: Transition Course, or departmental approval. Replaces RADT-269 Final Radiological Clinical Experience. Completes the course sequence. Supervised clinical practice emphasizing surgical procedures and adjunct departmental rotations.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Practicum: 405 hrs./semester. Seminar: 15 hrs./semester.

Prerequisite(s): RADT-268 Advanced Radiological Clinical Experience, or RADT-268Z Advanced Radiological Clinical Practicum: Transition Course, or departmental approval.

### Transition Courses

#### **RESP-226Z Respiratory Care Directed Practice I: Transition Course**

03 Semester Credits

Transition Course. Must have completed RESP-155 Assessment of the Cardiopulmonary System. Replaces RESP-226 Respiratory Care Clinicals I. Fulfills prerequisite for RESP-2920 Respiratory Care Directed Practice II. Directed practice in clinical setting on respiratory care equipment, policies, and procedures. Emphasis on patient assessment, bedside pulmonary function testing, aerosol therapy, incentive spirometry and oxygen therapy.

Lecture 01 hour. Laboratory 00 hours

Other Required Hours: Directed practice: 180 hours per semester.

Prerequisite(s): RESP-155 Assessment of the Cardiopulmonary System.

#### **SPAN-112Z Beginning Spanish II: Transition Course**

03 Semester Credits

Transition Course. Must have completed SPAN-111 Beginning Spanish I. Replaces SPAN-112 Beginning Spanish II.

Fulfills prerequisite for SPAN-1020 Beginning Spanish II. Study of Spanish language with emphasis on speaking.

Continued practice in speaking, understanding, reading, and writing. Further development of conversational skills.

Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): SPAN-111 Beginning Spanish I.

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### Subject Codes for Courses

Subject Area	Subject Code	Subject Area	Subject Code
Accounting	ACCT	Interior Design	INTD
American Sign Language	ASL	Italian	ITAL
Anthropology	ANTH	Japanese	JAPN
Applied Industrial Technology Bricklaying	ATBL	Journalism and Mass Communications	JMC
Applied Industrial Technology Cement Masonry	ATCM	Latin	LAT
Applied Industrial Technology Electrical Construction	ATEL	Law Enforcement	LAWE
Applied Industrial Technology Architectural and Construction Engineering Technology	ARCH	Manufacturing/ Industrial Technology	MIT
Art	ART	Marketing	MARK
Automotive Technology	AUTO	Massotherapy	MT
Aviation Technology	AVIA	Mathematics	MATH
Biology	BIO	Mechanical Engineering Technology	MET
Business Administration	BADM	Medical Assisting	MA
Cardiovascular Technology	CVT	Medical Laboratory Technology	MLT
Chemistry	CHEM	Music	MUS
Chinese	CHIN	Nursing	NURS
Commercial Art and Design	CART	Occupational Therapy Assistant	OTAT
Computer Studies	CS	Office Administration	OADM
Court and Conference Reporting	C&CR	Optical Technology	OPT
Dance	DANC	Paralegal Studies	PL
Dental Assisting	DAST	Pharmacy Technology	PHM
Dental Hygiene	DENT	Philosophy	PHIL
Dietetic Technology	DIET	Physical Education	PE
Early Childhood Education	ECED	Physical Science	PSCI
Earth Science	ESCI	Physical Therapist Assisting Technology	PTAT
Economics	ECON	Physician Assistant	PA
Education	EDUC	Physics	PHYS
Electrical/Electronic Engineering Technology	EET	Plant Science and Landscape Technology	PST
Emergency Medical Technology	EMT	Political Science	POL
English	ENG	Practical Nursing	PNUR
English as a Second Language	ESL	Psychology	PSY
Environmental, Health & Safety Technology	EHST	Radiography	RADT
Financial Management	FIN	Real Estate	REAL
Fire Technology	FIRE	Religious Studies	REL
French	FREN	Respiratory Care	RESP
General Studies	GEN	Russian	RUSS
Geography	GEOG	Social Science	SSCI
German	GER	Sociology	SOC
Graphic Communications and Photography	GCMT	Spanish	SPAN
Health	HLTH	Speech Communication	SPCH
Health Information Management	HIM	Surgical Physician Assistant	SPA
Health Technologies	HTEC	Theatre Arts	THEA
History	HIST	Urban Studies	UST
Hospitality Management	HOSP	Veterinary Technology	VT
Human Services	HS		
Humanities	HUM		

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ACCOUNTING - ACCT

#### **ACCT-1010 Quantitative Applications for Accounting and Business**

03 Semester Credits

Application of applied quantitative procedures to typical accounting, financial, and business situations. Topics include application of percents in business; simple and compound interest; financing; property and sales taxes; applied statistics; present and future values; and other accounting/business topics. Use of financial calculator in problem-solving.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **ACCT-1020 Applied Accounting**

03 Semester Credits

Fundamentals of accounting procedures as used in a double-entry bookkeeping system. Emphasis on application of techniques and procedures to record financial information in an accounting system and to generate financial statements. Introduction to use of commercial general ledger software in recording business transactions.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **ACCT-1030 Payroll**

03 Semester Credits

Detailed study of payroll, record-keeping regulations, reporting requirements, accounting procedures and federal labor laws. Covers computations of gross wages, salaries, mandatory deductions of federal, state and local taxes, and optional deductions. Covers employer's related taxes and preparation of various payroll tax forms.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **ACCT-1040 Individual Taxation**

03 Semester Credits

Individual income taxes with concentration at federal level. History, assumptions and objectives of federal income tax law. Determination of filing status, exemptions, inclusions, exclusions, adjustments, deductions, credits, tax liability and reporting requirements. Completion of tax returns, tax planning and introduction to federal tax research.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **ACCT-1310 Financial Accounting**

04 Semester Credits

Introduction to methodology and logic of accounting procedures, principles, and standards followed in development of information presented in financial statements of business organizations. Emphasizes measuring, describing, interpreting, and analyzing business economic activities.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **ACCT-1320 Accounting with Computer Applications**

04 Semester Credits

Microcomputer skills as used in accounting and business. Reinforcement of financial accounting concepts and procedures through use of personal computers and popular commercial software. Emphasis on using spreadsheet and/or other appropriate software for report preparation and solution of typical accounting/business-related problems. Selection of appropriate software tool, report layout and design, and documentation.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1020 Applied Accounting, or ACCT-1310 Financial Accounting; and CS-1020 Introduction to Computers, or OADM-1020 Microcomputer Applications; or departmental approval: equivalent coursework or skills.*

#### **ACCT-1340 Managerial Accounting**

04 Semester Credits

Introduces management emphasis to accounting information. Used by managers to plan operations, control activities, and make sound business decisions. Emphasizes cost accounting systems and cost behaviors; responsibility accounting; identification of financial information relevant to management; and critical thinking and decision making.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1310 Financial Accounting.*

#### **ACCT-1800 Special Topics in Accounting**

1-3 Semester Credits

Study of selected topics or current issues in Accounting. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **ACCT-181S Special Laboratory Topics in Accounting**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Accounting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **ACCT-181T Special Laboratory Topics in Accounting**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Accounting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ACCT-2040 Business Taxation**

03 Semester Credits

Introduction to business taxes. Concentration on corporate federal income taxes. Preparation of various tax forms including 1120 and 1120S and related schedules. Includes sales and use tax, personal property taxes, franchise taxes, and other taxes related to business.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### **ACCT-2310 Intermediate Accounting I**

04 Semester Credits

Continuation of Financial Accounting. In-depth study of accounting process and accounting records; nature and content of accounting statements: balance sheet, income statement, statement of retained earnings and statement of cash flows; analysis of working capital; and time value of money. Emphasis on special problems of asset valuation and income determination in areas of cash and receivables; trading and available-for-sale securities; inventory; property, plant and equipment, and intangible assets.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1310 Financial Accounting, or departmental approval: equivalent coursework or experience.*

### **ACCT-2320 Intermediate Accounting II**

04 Semester Credits

Continuation of Intermediate Accounting I. Emphasis on analysis, methods of valuation and statement presentation of current and long-term liabilities, including leases and pensions; corporate equity in both simple and complex capital structures, including earnings per share computations; income tax accounting; error correction and financial statement analysis.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-2310 Intermediate Accounting I.*

### **ACCT-2340 Cost Accounting**

04 Semester Credits

Theory and practice of cost accounting as applied to management of manufacturing businesses. Accounting for materials, labor, and overhead under process cost and job order cost systems. Study of budgeting process and standard cost procedures. Accounting for by-products and joint products. Use of gross profit analysis, contribution margin, break-even point, differential cost analysis, and other analytical tools by management in decision-making activities.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1340 Managerial Accounting, or departmental approval: equivalent coursework or experience.*

### **ACCT-2500 Governmental/Non-Profit Accounting**

04 Semester Credits

Accounting principles, standards and procedures for government entities and non-profit service entities, including school systems, colleges and universities, hospitals, charitable and religious organizations, and fraternal organizations. Application of current FASB and GASB standards.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1020 Applied Accounting, or ACCT-1310 Financial Accounting, or departmental approval: equivalent coursework or experience.*

### **ACCT-250A Government Accounting**

02 Semester Credits

Accounting principles, standards, and procedures for government entities. Emphasis on funds concept, financial reporting, and Government Accounting Standards Board (GASB) pronouncements.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1020 Applied Accounting, or ACCT-1310 Financial Accounting, or departmental approval: equivalent coursework or experience.*

### **ACCT-250B Non-Profit Accounting**

02 Semester Credits

Accounting principles, standards, and procedures for non-profit service entities. Emphasis on school systems, colleges and universities, hospitals, charitable, religious, and fraternal organizations. Application of current FASB and GASB standards.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1020 Applied Accounting, or ACCT-1310 Financial Accounting, or departmental approval: equivalent coursework or experience.*

### **ACCT-2800 Special Advanced Topics in Accounting**

1-3 Semester Credits

Study of selected advanced topics or current issues in Accounting. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ACCT-281S Special Advanced Laboratory Topics in Accounting**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Accounting (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ACCT-281T Special Advanced Laboratory Topics in Accounting**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Accounting (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ACCT-2830 Cooperative Field Experience

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. may be repeated for a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

### AMERICAN SIGN LANGUAGE - ASL

#### ASL-1010 Beginning American Sign Language I

04 Semester Credits

Introduction to American Sign Language (ASL) emphasizing basic survival skills, focusing on principles of ASL grammar, body language, and facial expressions. Practice in expressive and receptive skills.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): None.*

#### ASL-1020 Beginning American Sign Language II

04 Semester Credits

Focuses on continual skills/signs in order to communicate effectively in ASL. Practice in expressive and receptive skills daily in paragraph form. Introduction to conversational skills.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ASL-1010 Beginning American Sign Language I, or departmental approval: comparable knowledge or skills.*

#### ASL-1100 Deaf Culture

03 Semester Credits

Focuses on cultural differences and similarities between the hearing and Deaf communities. Topics may include special devices utilized by people who are Deaf, ADA laws, stories of famous people involved in Deaf community, and literature by and about individuals who are deaf. Visitations outside the classroom may be required.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ASL-1010 Beginning American Sign Language I, or departmental approval: comparable knowledge or skills.*

#### ASL-2010 Intermediate American Sign Language I

04 Semester Credits

Focuses on signs, body language, and facial expressions with emphasis on more complex conversational situations.

Practice at advanced beginner level. Study of fingerspelling.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ASL-1020 Beginning American Sign Language II, or departmental approval: comparable knowledge or skills.*

#### ASL-2020 Intermediate American Sign Language II

04 Semester Credits

Integrates facial expressions and body language in intermediate level. Practice receptive skills in a dialogue mode. Students interact in Deaf clubs utilizing skills developed,

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ASL-2010 Intermediate American Sign Language I, or departmental approval: comparable knowledge or skills.*

#### ASL-2410 Advanced American Sign Language

03 Semester Credits

Study of particular dialogues and drills, both from text and original work. Practice at advanced level, receptively and expressively. Learning variations in signs to understand a wide variety of ASL signs. Volunteer work in schools and/or churches to enhance skills and interact with Deaf individuals.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ASL-2020 Intermediate American Sign Language II, or departmental approval: comparable knowledge or skills.*

### ANTHROPOLOGY - ANTH

#### ANTH-1010 Cultural Anthropology

03 Semester Credits

Introduction to cultural study of human societies. Examples from various cultures within the United States and around the world used to provide understanding of cultural differences and similarities. Will relate current findings, perspectives and methods used by anthropologists in all fields.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### ANTH-1020 Physical Anthropology

03 Semester Credits

Study of humans as biological organisms. Major topics include genetics, evolution and variation, fossil record, and living primates.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### ANTH-1030 Archaeology

03 Semester Credits

Investigation of the past through current methods and perspectives of archaeology. Presentation of significant archaeological findings and interpretation from selected parts of the world.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### ANTH-1820 Independent Research in Anthropology

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Anthropology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Anthropology.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ANTH-2010 Peoples and Cultures of the World**

03 Semester Credits

Cross cultural understanding of universal human concerns and issues affecting particular regions and cultures, using a variety of anthropological perspectives and theories.

Emphasis on concerns of non-Western peoples and cultures.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ANTH-1010 Cultural Anthropology, or SOC-1010 Introductory Sociology, or SSCI-1030 Introduction to Social Science I, or departmental approval.*

### **ANTH-2030 Archaeological Field Methods**

04 Semester Credits

Overview of methods used in field archaeology as applied to actual archaeological sites. Students receive training and experience in surveying, mapping, excavation, artifact processing and data analysis. Requires on-site student participation in the field (see course schedule bulletin for specific requirements).

*Lecture 1-3 hours. Laboratory 0-3 hours.*

*Other Required Hours: 75 hours of supervised field work.*

*Prerequisite(s): Departmental approval: approval of instructor.*

### **ANTH-2800 Special Advanced Topics in Anthropology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Anthropology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ANTH-2820 Independent Advanced Research in Anthropology**

1-3 Semester Credits

Must be taken concurrently with any 2000-level course in Anthropology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Anthropology.*

## **ARCHITECTURAL AND CONSTRUCTION ENGINEERING TECHNOLOGY - ARCH**

### **ARCH-1410 Architectural Drafting and CAD I**

03 Semester Credits

Working drawing techniques of domestic structure. Scale, detailing, space requirements, framing systems, dimensioning, architectural lettering and modular systems. Introduction to computer-aided architectural drafting.

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): MIT-1220 Introduction to AutoCAD, or concurrent enrollment.*

### **ARCH-1420 Architectural Drafting and CAD II**

03 Semester Credits

Students begin work on commercial architectural drawing project, including studies of parking, public areas, structural systems, building equipment and relative codes. Projects will be computer drafted.

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): ARCH-1410 Architectural Drafting and CAD I.*

### **ARCH-1430 Architectural Drafting and CAD III**

03 Semester Credits

Student completes commercial architectural drawing project including development of curtain walled multi-storied, steel frame, office building and parking garage. Stairs, elevators, interior and exterior details developed with use of computer-aided drafting.

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): ARCH-1420 Architectural Drafting and CAD II.*

### **ARCH-2110 Surveying and Site Engineering**

03 Semester Credits

Applications and care of surveying instruments. Use of transit and level in horizontal and vertical measurement, differential and profile. Emphasis on accurate recording of field data in note form, contours, drainage, grading, layout of vertical curves, topographic stadia and plane table work as it applies to contemporary site engineering.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MATH-1160 Technical Mathematics I.*

### **ARCH-2210 Mechanical Equipment for Buildings**

03 Semester Credits

Introduction to mechanical systems as applicable to building construction. Water supply, waste, vent and sanitation. Heat loss, heat gain and hydronic heating systems are emphasized.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ARCH-1420 Architectural Drafting and CAD II.*

### **ARCH-2220 Electrical Equipment for Buildings**

03 Semester Credits

Forced air and solar heating systems for buildings. Electrical theory and electrical systems as applicable to building. Systems of building power distribution. Fundamentals of commercial and industrial lighting.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ARCH-1420 Architectural Drafting and CAD II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ARCH-2310 Construction Contracts, Specifications and Procedures**

03 Semester Credits

Legal contracts, construction procedures, construction documents, job reporting and interpretation of specifications and general conditions as related to construction industry.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ARCH-1420 Architectural Drafting and CAD II.*

### **ARCH-2320 Construction Methods, Materials and Estimating**

03 Semester Credits

Construction methods, materials and systems and how they are estimated. Students will work with actual plans of construction project to compute cost of labor and materials, lump sum and unit costs, preliminary and final estimates.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ARCH-1420 Architectural Drafting and CAD II.*

### **ARCH-2410 Principles of Structural Design I**

03 Semester Credits

Introduction to design of structural members and systems. Steel beams, columns, base plates, fasteners, welded connections, members in tension and compression.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MET-1600 Technical Statics.*

### **ARCH-2420 Principles of Structural Design II**

03 Semester Credits

Continuation of structured design with emphasis on wood structures including manufactured wood products and laminates. Simple concrete structures including beams, columns and footings combined with concrete mixes and testing methods.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ARCH-2410 Principles of Structural Design I.*

### **ARCH-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

### **ART - ART**

#### **ART-1010 Art Appreciation**

03 Semester Credits

Designed to introduce students to basic principles of aesthetics and visual arts forms. Verbal and visual analytical approach to recognizing formal qualities, function and meaning of Western and non-Western works of art.

Understanding of content in visual language through reading, discussion, visual lectures and written assignments.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **ART-1020 Art History I**

03 Semester Credits

Survey course tracing development of art in historical context. Topics include: Prehistoric, Egyptian, Ancient Near East, Greek, Roman, Byzantine, Medieval, Islamic, and Renaissance periods.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **ART-1030 Art History II**

03 Semester Credits

Survey course tracing development of art in historical context. Topics include: Mannerism, Baroque, Neoclassicism, Nineteenth and Twentieth Century Western Art.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **ART-1040 Survey of Non-Western Art**

03 Semester Credits

Stylistic and historical overview of visual arts in traditional societies of Africa, Asia, Oceanic and the Americas.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **ART-1050 Drawing I**

03 Semester Credits

Drawing course introducing basic methods, media and concepts. Emphasizes drawing from observation with development of relative value, negative/positive space and shape, composition, line, edge development, volumetric analysis of form, light and perspective. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours. Prerequisite(s): None.*

#### **ART-1060 Drawing II**

03 Semester Credits

Further development of observational and conceptual drawing skills. Emphasis on spatial, structural and compositional concepts. May be repeated for up to nine credits, three of which are applicable to degree requirements. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ART-1080 Visual Design I**

03 Semester Credits

Study two-dimensional design elements and principles of organization to create a foundation in visual communication. Traditional media and computer assisted sections available. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours. Prerequisite(s): None.*

### **ART-1090 Visual Design II**

03 Semester Credits

Study additive and subtractive color theory and applications. Exploration of spatial organization in concept development of visual communication. Traditional media and computer assisted sections available. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1080 Visual Design I, or departmental approval: comparable skills.*

### **ART-1100 Sculpture I**

03 Semester Credits

Introductory principles of sculpture employing basic forming processes and traditional materials. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours. Prerequisite(s): None.*

### **ART-1110 Sculpture II**

03 Semester Credits

Advanced study of carving, modeling and assembling in a variety of media. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1100 Sculpture I, or departmental approval: comparable skills.*

### **ART-1200 Calligraphy**

03 Semester Credits

Study and execution of letter forms and scripts from various cultural systems of writing. Understanding inherent beauty of scripts as graphic design elements. May be taught using hand or computer skill development. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours. Prerequisite(s): None.*

### **ART-1300 Introduction to Graphic Design**

03 Semester Credits

Visual design based on organizational grid structure. Includes principles of selection, translation of type and images as value. Interaction and hierarchy of graphic elements for two-dimensional design including point, line and plane. Hand skills with computer option. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours. Prerequisite(s): None.*

### **ART-1310 Computer Graphic: Letter Form and Image**

03 Semester Credits

Study and execution of letter form and image as elements of design for page concept. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1300 Introduction to Graphic Design, or departmental approval: comparable skills.*

### **ART-1500 Art for Elementary Education**

03 Semester Credits

Basic art education theory and practice in visual arts for elementary education majors. Emphasis on integration of visual arts disciplines with other subjects in elementary curriculum. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **ART-1700 Ceramics I**

03 Semester Credits

Fundamentals of basic hand building methods, glazing and decorative techniques by creating forms of increasing complexity. Broad survey of ceramic history. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours. Prerequisite(s): None.*

### **ART-1710 Ceramics II**

03 Semester Credits

Wheel throwing skills and advanced hand building techniques in the creation of three-dimensional forms. Introduction to kiln firing and ceramic materials in clay and glaze formulation. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1700 Ceramics I, or departmental approval: comparable skills.*

### **ART-1800 Special Topics in Art**

1-3 Semester Credits

Study of selected topics or current issues in Art. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ART-181S Special Laboratory Topics in Art**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Art (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ART-181T Special Laboratory Topics in Art**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Accounting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ART-1820 Independent Study in Art**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Art. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Art.*

### **ART-2000 Life Drawing I**

03 Semester Credits

Introduction to drawing human figure from live model. Emphasis on constructing human figure in terms of basic shapes and planes. Introduction to anatomy for artists. Various media explored. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.*

### **ART-2010 Life Drawing II**

03 Semester Credits

Drawing human figure from live model. Exploration of anatomy for artist with emphasis on relating human figure to three dimensional environment. Focus on craftsmanship and high level of proficiency with various media. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-2000 Life Drawing I, or departmental approval: comparable skills.*

### **ART-2050 Painting I**

03 Semester Credits

Introduction to materials and techniques of opaque painting (oil and acrylic). Emphasis on use of color and composition. Exploration of various styles of painting. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.*

### **ART-2060 Painting II**

03 Semester Credits

Exploration of semi-complex to complex painting problems utilizing various subjects. Emphasis placed on personal expression and independent problem-solving skills. Focus on craftsmanship and high level of proficiency with opaque painting media. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-2050 Painting I, or departmental approval: comparable skills.*

### **ART-2070 Watercolor**

03 Semester Credits

Introduction and exploration of transparent watercolor as painting technique. Investigates various styles of painting. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.*

### **ART-2080 Portrait Drawing and Painting**

03 Semester Credits

In-depth study of drawing and painting human head (portraiture) from live model. Basic anatomy explored along with relating model to three-dimensional environment. Involves use of variety of media. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ART-2100 Computer Graphic: Raster Images**

03 Semester Credits

Study raster (paint) software tools for graphic design and expressive images. Techniques relating to demands in current market include scanning, processing and compositing of images. Interactive digital portfolio output. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) New software options available as course is repeated. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1800 Visual Design I (computer aided), or ART-1090 Visual Design II (computer aided), or ART-1300 Introduction to Graphic Design, or departmental approval: comparable skills.*

### **ART-2110 Computer Graphic: Drawing**

03 Semester Credits

Study 2D vector object construction for graphic design images. Develop precision in Bezier curve manipulation, hand drawn images are scanned in, traced or streamlined into vector information. Filters humanize the mathematical hard edges of images. Interactive digital portfolio output. (May be repeated up to 9 credits; only 3 credits may be applied to degree requirements.) New software options are available as course is repeated. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1080 Visual Design I (computer aided), or ART-1090 Visual Design II (computer aided), or ART-1300 Introduction to Graphic Design, or departmental approval: comparable skills.*

### **ART-2150 Computer Graphic: 2D Animation/Video**

03 Semester Credits

Study 2D computer-based animation mixed with video for expressive images. Industry related techniques of keyed mattes, genlock dissolves, video capture, scanning, fractal landscapes, and chroma effects. Video portfolio output. (May be repeated for up to 9 credits; only 3 credits may be applied to degree requirements.) New software options available as course is repeated. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1080 Visual Design I (computer aided), or ART-1090 Visual Design II (computer aided), or ART-1300 Introduction to Graphic Design, or departmental approval: comparable skills.*

### **ART-2160 Computer Graphic: 3D Modeling and Rendering**

03 Semester Credits

Study 3D computer-based modeling and rendering. Understanding planar views using polygon construction of objects with numeric input. Deformation tools/ techniques to soften form. (May be repeated up to 12 credits; only 3 credits may be applied to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, and ART-1080 Visual Design I, or departmental approval: comparable skills.*

### **ART-2170 Computer Graphic: 3D Animation**

03 Semester Credits

Study 3D computer-based modeling, rendering, and animation. Emphasis on object construction for animation along with texture mapping, eight interactive lights, key frames, motion graph controls, NURBS and inverse kinematics. Video portfolio production output. (May be repeated up to 12 credits; only 3 credits may be applied to degree requirements.) New software options are available as course is repeated. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-2160 Computer Graphic: 3D Modeling and Rendering, or departmental approval: comparable skills.*

### **ART-2210 Printmaking I**

03 Semester Credits

General introduction to various aspects of printmaking and graphic composition. Techniques may include relief printing (wood/linocut, monotype); silk screen, intaglio (etching, engraving, dry point, mezzotint, acquatint); lithography, calligraphy, monoprint. Some multi-color work. Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.*

### **ART-2220 Printmaking II**

03 Semester Credits

Emphasis on advanced techniques of intaglio relief, lithography silk screening, colligraphy and monoprints. (May be repeated for up to 9 credits, 3 of which are applicable to degree requirements.) Requires a minimum of an additional 15 hours of outside classroom work to complete art projects.

*Lecture 01 hour. Laboratory 05 hours.*

*Prerequisite(s): ART-2210 Printmaking I, or departmental approval: comparable skills.*

### **ART-2800 Special Advanced Topics in Art**

1-3 Semester Credits

Study of selected advanced topics or current issues in Art. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ART-281S Special Advanced Laboratory Topics in Art**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Art (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ART-281T Special Research Laboratory Topics in Art**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Art (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ART-2820 Independent Advanced Study in Art**

1-3 Semester Credits

Must be taken concurrently with any 2000-level course in Art. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Art.*

## **AUTOMOTIVE TECHNOLOGY - AUTO**

### **AUTO-1000 Automotive Maintenance**

02 Semester Credits

Designed to teach automotive maintenance and introduce vehicle systems and components to automobile owner. Topics covered: orientation to hand tools and their safe usage; safe work habits; proper applications for fluids and lubricants; maintenance schedules and selection of a repair facility. Introduction to brake, electrical, suspension, fuel, and cooling systems and their terminology. Minimal hands-on application.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### **AUTO-1100 Introduction to Automotive Service Procedures**

02 Semester Credits

Designed to provide introduction to several basic service procedures required of a person beginning work in automobile service center. Provides student with opportunity to perform tasks using prescribed laboratory sheets after introduction to shop safety and safe operation of automobile equipment and hand tools. Oil change, tire service, safety inspection, and battery testing tasks performed.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): None.*

### **AUTO-1200 Introduction to Automotive Service Manuals and Information Systems**

01 Semester Credit

Introduction to a variety of automotive repair manuals containing automotive service information. Locating servicing information and proper repair procedures emphasized. Proper documentation of automotive repair orders is accomplished along with collecting information about regulations regarding Right to Know laws concerning storage, handling, and use of hazardous materials.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): None.*

### **AUTO-1300 Automotive Engines**

03 Semester Credits

Covers operation of internal combustion gasoline engine including engine fundamentals and removal, lubrication and cooling system operation, and cylinder head and engine block diagnosis. Engine disassembly, measurements for correctness and proper assembly techniques included.

*Lecture 01 hour. Laboratory 06 hours. Prerequisite(s): None.*

### **AUTO-1350 Manual Transmission and Drivetrain**

02 Semester Credits

Theory and operation of manual transmissions, transaxles, clutches, drive shafts, drivetrain couplings, rear axles, axle shafts, and four-wheel drive componentry. Course emphasizes diagnosis, troubleshooting and repair.

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

### **AUTO-1400 Automotive Alignment, Steering and Suspension**

03 Semester Credits

Theory and principles of automotive alignment geometry. Vehicle suspension inspections, diagnosis and repair through use of special tools and alignment equipment. Exploration of automotive steering systems and wheel and tire diagnosis and repair.

*Lecture 01 hour. Laboratory 06 hours. Prerequisite(s): None.*

### **AUTO-1450 Automotive Braking Systems**

03 Semester Credits

Designed to provide student with foundation in theory and operation of automotive braking systems. Includes hydraulic brake principles, machining operations, and troubleshooting and repair of disc and drum brake assemblies. Operation and diagnosis of anti-lock braking systems included.

*Lecture 01 hour. Laboratory 06 hours. Prerequisite(s): None.*

### **AUTO-1500 Automotive Electrical**

02 Semester Credits

Fundamentals of electricity for automotive technicians. Electrical theory, Ohm's Law, series, parallel and series-parallel circuits, control devices, and battery theory and testing are included. Interpreting and using wiring schematics along with the Digital Volt Ohm Meter emphasized. Lighting, horn and wiper systems examined.

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

### **AUTO-1550 Automotive Service Operations**

02 Semester Credits

Principles of operation of today's automotive repair center. Explores staffing, customer relations, personnel management, scheduling of work and workers, parts inventory control procedures, job costs, supervisor's role in cost control, manufacturer's warranties, marketing, and advertising. Workplace skills for automotive service technicians examined.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **AUTO-1800 Special Topics in Automotive Technology**

1-3 Semester Credits

Study of selected topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*  
*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AUTO-181S Special Laboratory Topics in Automotive Technology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Automotive (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 0 hours. Laboratory 2-6 hours. Other Required Hours: 00.*  
*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AUTO-181T Special Laboratory Topics in Automotive Technology**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Automotive (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 0 hours. Laboratory 3-9 hours. Other Required Hours: 00.*  
*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AUTO-1940 Automotive Field Experience I**

01 Semester Credit

Provides student with automotive field experience needed to develop career skills through work experience in automotive service industry.

*Lecture 00 hours. Laboratory 00 hours.*  
*Other Required Hours: Field experience: 12 clock hours per week.*  
*Prerequisite(s): Departmental approval: job site approval.*

### **AUTO-1950 Automotive Field Experience II**

01 Semester Credit

Provides student with automotive field experience needed to develop career skills through work experience in automotive service industry.

*Lecture 00 hours. Laboratory 00 hours.*  
*Other Required Hours: Field experience: 12 clock hours per week.*  
*Prerequisite(s): Departmental approval: job site approval.*

### **AUTO-1960 Automotive Field Experience III**

01 Semester Credit

Provides student with automotive field experience needed to develop career skills through work experience in automotive service industry.

*Lecture 00 hours. Laboratory 00 hours.*  
*Other Required Hours: Field experience: 12 clock hours per week.*  
*Prerequisite(s): Departmental approval: job site approval.*

### **AUTO-2300 Automatic Transmissions**

03 Semester Credits

Covers theory of operation of automotive transmissions and transaxles. Emphasis placed on hydraulic fundamentals, controls and planetary gear train theory. Maintenance, diagnosis, and overhaul procedures of transmissions are completed by student. Introduction to operation and diagnosis of electronic shift transmissions.

*Lecture 01 hour. Laboratory 06 hours.*  
*Prerequisite(s): AUTO-1500, Automotive Electrical, or departmental approval: industry-related experience.*

### **AUTO-2350 Automotive HVAC**

02 Semester Credits

Theory, diagnosis and servicing procedures of automotive air conditioning systems. Includes heating systems and operation, diagnosis and repair of electric and vacuum components and controls, and service procedures for R-12 and R-134A refrigerants.

*Lecture 01 hour. Laboratory 03 hours.*  
*Prerequisite(s): AUTO-1300 Automotive Engines, and AUTO-1500 Automotive Electrical, or departmental approval: industry-related experience.*

### **AUTO-2400 Engine Performance**

03 Semester Credits

Theory and testing of automotive engine performance which includes examining ignition, mechanical, fuel and emission systems. Will explore methods of analyzing and locating engine performance malfunctions using deductive methodology and diagnostic test equipment.

*Lecture 01 hour. Laboratory 06 hours.*  
*Prerequisite(s): AUTO-1500 Automotive Electrical, or departmental approval: industry-related experience.*

### **AUTO-2450 Automotive Electronic Engine Controls**

03 Semester Credits

Theory, operation and advanced diagnosis of modern automobile ignition, fuel, and emission control systems which are computer controlled. Will explore methods of analyzing and locating engine performance malfunctions using deductive methodology and diagnostic test equipment. Emphasis on scan tool usage along with five gas analysis of exhaust.

*Lecture 01 hour. Laboratory 06 hours.*  
*Prerequisite(s): AUTO-2400 Engine Performance, or departmental approval: industry-related experience.*

### **AUTO-2500 Automotive Electrical Diagnosis**

02 Semester Credits

Theory of operation, diagnosis, and repair of automotive electrical and electronic systems. Study of automotive systems including instrumentation, body, and chassis electrical and electronic controls. Theory, diagnosis and repair of automotive charging and starting systems.

*Lecture 01 hour. Laboratory 03 hours.*  
*Prerequisite(s): AUTO-1500 Automotive Electrical, or departmental approval: industry-related experience.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **AUTO-2800 Special Advanced Topics in Automotive Technology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Automotive. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AUTO-281S Special Advanced Laboratory Topics in Automotive Technology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Automotive (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AUTO-281T Special Advanced Laboratory Topics in Automotive Technology**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AUTO-2940 Automotive Field Experience IV**

01 Semester Credit

Provides student with automotive field experience needed to develop career skills through work experience in automotive service industry.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 12 clock hours per week.*

*Prerequisite(s): Departmental approval: job site approval.*

### **AUTO-2950 Automotive Field Experience V**

01 Semester Credit

Provides student with automotive field experience needed to develop career skills through work experience in automotive service industry.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 12 clock hours per week.*

*Prerequisite(s): Departmental approval: job site approval.*

## AVIATION TECHNOLOGY - AVIA

### **AVIA-1010 Private Pilot Theory**

03 Semester Credits

Introductory aerodynamics, weight and balance, meteorology, pilotage and basic navigation, radio communications and navigation along with Federal Aviation Regulations in preparation for private pilot written examination required by Federal Aviation Administration.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### **AVIA-1140 Aviation Meteorology**

02 Semester Credits

Basic concepts of meteorological phenomena, formation of air masses, fronts, thunderstorms, icing, fog and clouds, and analysis and use of weather data for safe flight.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### **AVIA-1150 Aviation Communications**

02 Semester Credits

Radio usage, knowledge of low and medium frequencies, proper phraseologies, A.T.C. procedures, convenience of radio aids in navigation. Emergency procedures, radar vectors, FCC assigned frequencies, high density traffic communication, approach and departure control, and en route procedures.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### **AVIA-1310 Primary Flight**

02 Semester Credits

Actual flight experience in approved aircraft. Designed to train students in aircraft pilot fundamentals which lead to Private Pilot Licensure by the Federal Aviation Administration. Flight experience: 38 clock hours. (Cost of flight instruction paid by student to fixed base operator.)

*Lecture 01 hour. Laboratory 02 hours*

*Prerequisite(s): None.*

### **AVIA-1410 Intermediate Flight I**

02 Semester Credits

Extensive navigation training including radio navigation utilizing VHF and LF radio navigation aids; air surveillance radar approaches; night operations including night navigation; extensive basic instrument training including radar approach procedures. Flight experience: 38 clock hours. (Cost of flight instruction paid by student to fixed base operator.)

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): AVIA-1310 Primary Flight.*

### **AVIA-1510 Commercial Pilot Theory**

02 Semester Credits

Elementary aerodynamics, weight and balance in aircraft, instruments and instrument systems, basic meteorology, F.A.A. regulations, radio communications and procedures, pre-flight inspection, safety procedures, navigation, and principles leading to written examination for commercial pilots administered by Federal Aviation Administration.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): AVIA-1010 Private Pilot Theory.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **AVIA-1800 Special Topics in Aviation**

1-3 Semester Credits

Study of selected topics or current issues in Aviation.

Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **AVIA-2310 Intermediate Flight II**

03 Semester Credits

Instrument flight planning; filing flight plan; aircraft performance range and fuel requirements; required instrumentation and equipment and their proper use; emergency procedures; IFR navigation, instrument approach procedures, including VOR, ILS, DME and ADF, and radar approach procedures; holding procedures, and missed approach procedures; compliance with A.T.C. procedures. Flight experience: 60 clock hours. (Cost of flight instruction paid by student to fixed base operator.)

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): AVIA-1410 Intermediate Flight I.*

### **AVIA-2320 Instrument Pilot Theory**

03 Semester Credits

Advanced course leading to F.A.A. examination for instrument pilot rating. Covers instruments, charts, advanced meteorology, approach and landing aids, radio navigation, radar, and automatic flight.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): AVIA-1010 Private Pilot Theory, or AVIA-1510 Commercial Pilot Theory, or departmental approval: comparable skills.*

### **AVIA-2410 Commercial Flight**

03 Semester Credits

Advanced maneuvers including chandelles, lazy eights, eights on pylons, gliding spirals and 720 degree power turns. Presentation of multi-engine aircraft systems, loading and performances; pre-flight, take-offs and landings, and basic maneuvers; single engine operation; emergency procedures; flight and fuel consumption planning; VMC V1 and V2 speeds; theories of multi-engine flight. Flight experience: 60 clock hours. (Cost of flight instruction paid by student to fixed base operator.)

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): AVIA-2310 Intermediate Flight II.*

### **AVIA-2620 Flight Instructor**

02 Semester Credits

Advanced course leading to F.A.A. written examination for instructor rating. Covers fundamentals of flight instruction, effective flight instruction methods, instructor responsibilities, medical requirements of flying, F.A.A. regulations and safety.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): AVIA-2320 Instrument Pilot Theory, or concurrent enrollment; or departmental approval: F.A.A. instrument pilot license, or comparable skills.*

### **AVIA-2630 Ground Instructor**

02 Semester Credits

Comprehensive study of fundamentals of teaching and learning as they apply to flight instruction; effective teaching methods; instructional management; instructor responsibilities; aeromedical information for instructors; aerodynamics; airplane performance; flight training syllabus; and federal regulations for instructors.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): AVIA-2320 Instrument Pilot Theory, or concurrent enrollment; or departmental approval: comparable knowledge or skills.*

### **AVIA-2650 Advanced Ground Instructor/Dispatcher**

02 Semester Credits

Advanced course leading to F.A.A. written examination for Advanced Ground Instructor and Flight Dispatcher. Covers advanced operating and flight rules, and flight operations including weather services, AIM, IAP, Mach speeds, flight logs, weight and balance, and aircraft performance analysis. Lecture 02 hours. Laboratory 00 hours.

*Prerequisite(s): AVIA-2620 Flight Instructor, or concurrent enrollment; or AVIA-2630 Ground Instructor, or concurrent enrollment; or departmental approval: comparable knowledge or skills.*

### **AVIA-2800 Special Advanced Topics in Aviation**

1-3 Semester Credits

Study of selected advanced topics or current issues in Aviation. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### BIOLOGY – BIO

#### **BIO-1040 The Cell and DNA**

03 Semester Credits

Designed for non-science majors. Considers cell structure, function, and metabolism, cell division, DNA structure and function, Mendelian and molecular genetics. Scientific method and reasoning emphasized. To fulfill laboratory science requirements, students should enroll in the related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **BIO-104L The Cell and DNA Laboratory**

01 Semester Credit

Laboratory course examines scientific method, cell structure and function, cell division, DNA structure and function, and Mendelian and molecular genetics. Includes microscope work, models, role play and various experiments designed to illustrate concepts covered in the lecture course.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in BIO-1040 is strongly recommended.*

#### **BIO-1050 Human Biology**

03 Semester Credits

Designed for non-science majors. Considers concept of homeostasis of the human body. Basic structure and function of body systems and diseases of these systems studied. To fulfill laboratory science requirements, students should enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **BIO-105L Human Biology Laboratory**

01 Semester Credit

Laboratory course examines structure and function of human body systems. Includes microscope work, models, computer applications, and animal dissection.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in BIO-1050 is strongly recommended.*

#### **BIO-1060 Environment, Ecology and Evolution**

03 Semester Credits

Designed for non-science majors. Surveys diversity of life. Considers chemical cycles, ecology, the environment, population genetics, evolution and genetic basis of evolution. Emphasis on the scientific method and its application to environmental issues. To fulfill laboratory science requirements, students should enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **BIO-106L Environment, Ecology and Evolution Laboratory**

01 Semester Credit

Laboratory examines diversity of life, chemical cycles, ecology, environment, population genetics, evolution and genetic basis of evolution. Includes microscope work, models, role play, and various experiments designed to apply the scientific method and reasoning to the topics considered.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in BIO-1060 is strongly recommended.*

#### **BIO-1100 Introduction to Biological Chemistry**

03 Semester Credits

Basic principles of inorganic chemistry, organic chemistry and biochemistry necessary for study of human physiology. Physiological applications of the chemical processes of cellular transport, communication and metabolism emphasized. Laboratory includes use of metric system, basic chemistry techniques and physiological applications.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Eligibility for MAH-1060 Survey of Mathematics or higher.*

#### **BIO-112Z General Biology II: Transition Course**

02 Semester Credits

Transition Course. Must have completed BIO-111 General Biology I. Replaces BIO-112 General Biology II. Fulfills prerequisite for BIO-1510 Principles of Biology II. Designed for science majors. Considers genetics, evolution, origin of life, and introduction to biological organization.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): BIO-111 General Biology I.*

#### **BIO-113Z General Biology III: Transition Course**

03 Semester Credits

Transition Course. Must have completed BIO-112 General Biology II. Replaces BIO-113 General Biology III. Completes course sequence. Designed for science majors. Surveys biological diversity, various reproductive processes, considers population, community, and ecosystem levels of organization and animal behavior.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): BIO-111 General Biology I, and BIO-112 General Biology II.*

#### **BIO-1200 Oral Structure and Development**

03 Semester Credits

Introduction to dental terminology, form and function of teeth and related structures. Development, histology, morphology and pathology of permanent and deciduous dentitions and soft tissue structures. Helps students identify normal structures and common abnormalities within the oral cavity, and to communicate effectively with other members of dental team.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to Dental Assisting Program.*

#### **BIO-1210 General and Oral Histopathology**

04 Semester Credits

General study of cells and tissues of human with special emphasis placed on development of face and teeth. General principles of pathology included, such as inflammation, neoplasia, metabolic, endocrine, and other systemic diseases affecting the general and oral health of the patient.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to Dental Hygiene Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **BIO-1220 Anatomy and Physiology for Radiographers**

03 Semester Credits

Basic understanding of body systems, structures and organs based on functions and relationships to diagnostic radiographic examinations.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to Radiography Program.*

### **BIO-1230 Anatomy and Physiology of the Eye**

04 Semester Credits

Detailed examination of the anatomy and physiology of the eye. Emphasis on eye terminology, structure, function, movement, disorders, diseases, lens physics, and visual testing/analysis. Study of eye model and preserved eye dissection.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to Optical Technology Program.*

### **BIO-1410 Anatomy and Physiology of Domestic Animals I**

04 Semester Credits

Explores the comparative anatomy and physiology of the canine, feline, equine, bovine, ovine, and porcine species. Focuses on cellular biology, tissues and membranes, the integumentary, skeletal, muscular, nervous, endocrine, and circulatory systems and emphasizes species variations.

Laboratory includes preserved and fresh specimens, models, microscopic observations, and audio/visual aids

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): BIO-1100 Introduction to Biological Chemistry, or concurrent enrollment.*

### **BIO-1420 Anatomy and Physiology of Domestic Animals II**

03 Semester Credits

Explores the comparative anatomy and physiology of the canine, feline, equine, bovine, ovine, and porcine species. Focuses on lymphatic, digestive, respiratory, urinary and reproductive systems. Immunology, pregnancy, lactation and genetics considered. Laboratory includes preserved and fresh specimens, models, microscopic observations, and audio/visual aids.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): BIO-1410 Anatomy and Physiology of Domestic Animals I*

### **BIO-1430 Anatomy and Physiology I**

04 Semester Credits

Study of structure and function of human body. Focus on fundamental concepts of cellular structure, tissues, organs, and systems. Considers structure, function, and terminology of skeletal, muscular, cardiovascular, lymphatic, digestive, respiratory, and urinary systems. Laboratory experiences include demonstrations, microscopic observations, anatomic models, and videos related to topics. It is strongly recommended that the BIO-1100 prerequisite be completed prior to taking course.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1100 Introduction to Biological Chemistry, or concurrent enrollment; or CHEM-1020 Introduction to Organic Chemistry and Biochemistry, or concurrent enrollment; or departmental approval: comparable knowledge or skills.*

### **BIO-1440 Anatomy and Physiology II**

04 Semester Credits

Study of structure and function of the human body. Focus on structure, functions, and terminology of the nervous, integumentary, endocrine, and reproductive systems. Immunology, cellular division, embryological and fetal development, classical genetics and genetic technology considered. Laboratory experiences include demonstrations, microscopic observations, anatomic models, and videos related to topics.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1430 Anatomy and Physiology I, or departmental approval: comparable knowledge or skills.*

### **BIO-144Z Anatomy and Physiology II: Transition Course**

02 Semester Credits

Transition Course. Must have completed BIO-143 Anatomy and Physiology I. Replaces BIO-144 Anatomy and Physiology II. Fulfills prerequisite for BIO-1440 Anatomy and Physiology II. Study of structure and function of human body. Considers structure, function, and terminology of respiratory and urinary systems. Laboratory experiences include demonstrations, microscopic observations, anatomic models, and videos related to topics.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): BIO-143 Anatomy and Physiology I.*

### **BIO-145Z Anatomy and Physiology III: Transition Course**

03 Semester Credits

Transition Course. Must have completed BIO-144 Anatomy and Physiology II. Replaces BIO-145 Anatomy and Physiology III. Completes course sequence. Study of structure and function of human body. Focus on structure, functions, and terminology of endocrine and reproductive systems. Considers immunology, cellular division, embryological and fetal development, classical genetics and genetic technology. Laboratory experiences include demonstrations, microscopic observations, anatomic models, and videos related to topics.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): BIO-144 Anatomy and Physiology II.*

### **BIO-1500 Principles of Biology I**

04 Semester Credits

Designed for science majors. Considers molecular and cellular basis of life, energy transformation and metabolism, cellular reproduction, genetics, evolution and the origin of life, introduction to biological organization.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **BIO-1510 Principles of Biology II**

04 Semester Credits

Designed for science majors. Surveys biological diversity, examines plant and animal structure, function, and development, considers population, community, and ecosystem levels of organization and animal behavior.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1500 Principles of Biology I, or departmental approval: equivalent knowledge or skills.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **BIO-1800 Special Topics in Biology**

1-3 Semester Credits

Study of selected topics or current issues in Biology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BIO-181S Special Laboratory Topics in Biology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Biology (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BIO-181T Special Laboratory Topics in Biology**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Biology (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BIO-1820 Independent Research in Biology**

1-3 Semester Credits

Specific content and objectives to be arranged between instructor and student. (May be repeated for a maximum of six credits.)

*Lecture 0-3 hours. Laboratory 0-9 hours.*

*Prerequisite(s): Departmental approval.*

### **BIO-2010 Field Botany**

03 Semester Credits

Study of the plant kingdom, emphasis on collection, identification, classification and ecology of local flora. Field trips required.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Completion of any 1000-level science course.*

### **BIO-2050 Field Zoology**

03 Semester Credits

Study of the animal kingdom, emphasis on location, identification, classification and ecology of local fauna. Field trips required.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Completion of any 1000-level science course.*

### **BIO-2060 Principles of Genetics**

03 Semester Credits

Study of principles of genetics with emphasis on human inheritance. Classical Mendelian genetics, the molecular basis of inheritance, current applications of genetic techniques, and the human genome project emphasized. Genetic basis of immunology and cancer explored.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1040 The Cell and DNA, or BIO-1440*

*Anatomy and Physiology II, or BIO-1420 Anatomy and Physiology of Domestic Animals II, or BIO-1500 Principles of Biology I.*

### **BIO-2070 Techniques in Molecular Genetics**

03 Semester Credits

Advanced study of structure and function of DNA with emphasis on laboratory techniques used in molecular biology. Laboratory practices and applications of sterile techniques, gel electrophoresis, DNA isolation, RFLP analysis, plasmids, and recombinant DNA. Protein structure and methods of protein purification explored.

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): BIO-1040 The Cell and DNA, or BIO-1500*

*Principles of Biology I, or BIO-1440 Anatomy and Physiology II.*

### **BIO-2100 Biology of Aging**

03 Semester Credits

Multidisciplinary approach to biological theories of aging with emphasis on humans. Fundamental concepts of cell biology and physiology will be used to study extrinsic and intrinsic factors in aging, the effects of aging on body systems, senescence, genetics, life expectancy and life span, and improving survivorship.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1040 The Cell and DNA, or BIO-1050*

*Human Biology, or BIO-1500 Principles of Biology I, or BIO-1430 Anatomy & Physiology I.*

### **BIO-2150 Environmental Science**

03 Semester Credits

Fundamental ecological concepts and their application to environmental issues emphasizing the impact of human activity on the biosphere. Topics include natural resources, air, water and land pollution, energy, and populations.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1060 Environment, Ecology and Evolution; or BIO-1510 Principles of Biology II.*

### **BIO-2200 Radiobiology**

02 Semester Credits

Theories of the biological effects of ionizing radiation, quantities and units of measurement, proper protective measures for both patient and personnel, effective dose equivalents, radiation absorption processes and shielding, and exposure monitoring devices.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1220 Anatomy and Physiology for Radiographers, and departmental approval: admission to Radiography Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **BIO-2500 Microbiology**

04 Semester Credits

Survey of microorganisms in terms of physiology, biochemistry, genetics, and diversity with emphasis placed on prokaryotes and eukaryotes causing human diseases. Methods of their control including physical, mechanical, chemical, chemotherapeutic, and role of the immune system discussed.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1410 Anatomy and Physiology of Domestic Animals I; or BIO-1430 Anatomy and Physiology I; or BIO-1500 Principles of Biology I; or BIO-1050 Human Biology and BIO-105L Human Biology Lab and BIO-1100 Introduction to Biological Chemistry; or departmental approval: comparable knowledge or skills.*

### **BIO-2520 Oral Microbiology and Immunology**

03 Semester credits

Intended for students in the field of dental hygiene. Provides an up-to-date survey of microbiology with emphasis placed on microbial and immunologic diseases of dental origin or diseases with secondary oral manifestations. Ecology of the oral flora, dental plaque and calculus, caries and cariology, periodontal disease, control and prevention of periodontal disease, periapical infections, and medical infections of concern to the dental professional. Sterilization and asepsis with currently accepted antimicrobials and antibiotics as well as diagnostic microbiology and immunology.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1210, General and Oral Histopathology.*

### **BIO-2600 Pathophysiology**

03 Semester Credits

General mechanisms of disease processes and health problems including inflammation, degeneration, immunity, congenital, hereditary, neoplasia as well as diseases caused by deficiencies or excesses. The most commonly occurring diseases of body systems are surveyed.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1440 Anatomy and Physiology II.*

### **BIO-2800 Special Advanced Topics in Biology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Biology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BIO-281S Special Advanced Laboratory Topics in Biology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Biology (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BIO-281T Special Advanced Laboratory Topics in Biology**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Biology (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BIO-2820 Independent Advanced Research in Biology**

1-3 Semester Credits

Specific content and objectives to be arranged between instructor and student. (May be repeated for a maximum of six credits.)

*Lecture 0-3 hours. Laboratory 0-9 hours.*

*Prerequisite(s): Departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### BUSINESS ADMINISTRATION - BADM

#### **BADM-1020 Introduction to Business**

03 Semester Credits

Comprehensive survey of American business system with emphasis on basic business vocabulary. Examination of principles and careers related to economics, management, marketing, accounting, finance, and general business.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **BADM-1120 Principles of Management**

04 Semester Credits

Introduction to management principles, concepts, and skills employed in operation of a business organization. Emphasis on functions of management including planning, organizing, staffing, leading, controlling, and decision-making.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-1020 Introduction to Business, or ACCT-1310 Financial Accounting, or departmental approval: comparable knowledge or skills.*

#### **BADM-1210 Labor-Management Relations**

03 Semester Credits

Historical, legal, and structural environments which influence management-labor relations. Rights and responsibilities of unions and management; negotiation and administration of labor agreement; results of labor relations process and collective bargaining issues. Application of labor relations process to public sector and nontraditional labor relations, such as health care professionals and athletes.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **BADM-1300 Small Business Management**

04 Semester Credits

Development of entrepreneurial and managerial skills needed by those who may choose to work in small business as either founders, or managers or both.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **BADM-1800 Special Topics in Business Administration**

1-3 Semester Credits

Study of selected topics or current issues in Business Administration. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **BADM-1820 Independent Study in Business Administration**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Business Administration. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in .*

#### **BADM-2110 Production/Operations Management**

03 Semester Credits

Overview of manufacturing and service operations covering such topics as: flow, bottleneck, balance, quality, workplace contribution, planning, materials requirement planning, inventory management procurement, logistics, floor shop control, just-in-time (JIT), capacity changes, technology and design, vertical integration, and operation strategy.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: 13 semester credits in Business Administration or comparable knowledge or skills.*

#### **BADM-2150 Business Law**

04 Semester Credits

Study of legal process as it relates to society, government, business and the individual; the law as it relates to legal system, contracts, sales, agency, business organizations, debtor-creditor relations, and governmental regulation of business.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-1020 Introduction to Business, or BADM-1120 Principles of Management, or departmental approval: comparable knowledge or skills.*

#### **BADM-2160 Introduction to Purchasing**

03 Semester Credits

Analysis of purchasing's roll in an industrial organization. Description of quality, specifications and standardization, supplier selection, international sourcing, pricing principles, types of contracts, negotiation techniques, make or buy, computer based system; EDI, capital equipment, services and value analysis, and legal and ethical aspects of purchasing.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-1020 Introduction to Business, or concurrent enrollment; or departmental approval: comparable knowledge or skills.*

#### **BADM-2180 Purchasing Management**

03 Semester Credits

Focuses on purchasing management process, including functions of planning, organizing, directing, motivating, and controlling the work and purchasing staff to help achieve organizational objectives. Purchasing systems and documentation discussed.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-2160 Introduction to Purchasing, or departmental approval: comparable knowledge or skills.*

#### **BADM-2200 Human Relations in Business**

03 Semester Credits

Interpersonal relationships in the work environment. Includes communication and group processes. Motivational concepts explored. Focuses on development of interpersonal skills.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **BADM-2210 Quality Management**

03 Semester Credits

Explores quality management concepts and approaches used by organizations today. Nominally focused and comprehensive system programs introduced. Case studies, field trips, speakers.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **BADM-2230 Value Analysis**

03 Semester Credits

Focuses on system which reduces cost of materials and services. Includes techniques for analyzing formal and informal programs, start-up operations, training and suppliers.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-2160 Introduction to Purchasing, or departmental approval: comparable knowledge or skills.*

### **BADM-2240 Negotiations**

03 Semester Credits

Principles, techniques, and skills needed in interpersonal, buyer-seller, transportation, and labor management negotiations.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **BADM-2300 Principles of Freight Management**

03 Semester Credits

Traffic Manager's responsibility operating within an industrial/commercial company. Includes freight loss and damage claims, handling of hazardous materials regulations, import/export, and just-in-time concepts. Relationship of industrial traffic management function to operating units of company, including inventory control, purchasing warehousing, and information management.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-2160 Introduction to Purchasing, or departmental approval: comparable knowledge or skills.*

### **BADM-2330 Human Resource Management**

03 Semester Credits

Management of personnel function. Recruitment, staffing, training, development, compensation and evaluation. Employment practices including legal and ethical issues.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **BADM-2410 Office Management**

03 Semester Credits

Basic principles of office organization and management. Emphasis on problem-solving and communications necessary to administer office functions.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **BADM-2420 CPS Review: Management, Finance and Business Law**

03 Semester Credits

Certified Professional Secretary Review. Designed to strengthen and increase participant's knowledge in tasks, skills and responsibilities of administrative secretary. Comprehensive review of behavioral science in business, human resource management, organizations, management, economics, accounting, and business law.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **BADM-2450 New Business Development**

05 Semester Credits

Complete business plan. Reflects generally accepted practice. Designed for student who wants to start a business.

*Lecture 03 hours. Laboratory 04 hours.*

*Prerequisite(s): BADM-1300 Small Business Management, or departmental approval: comparable knowledge or skills.*

### **BADM-2470 Marketing Techniques for Small Business**

03 Semester Credits

Marketing research and other marketing activities; market segmentation, product development, advertising, sales promotion, personal selling, and pricing.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-1300 Small Business Management, or MARK-2010 Principles of Marketing, or departmental approval: comparable knowledge or skills.*

### **BADM-2500 Business Operations**

03 Semester Credits

Comprehensive analytical/decision-making experience. Focus on realistic business situations.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-1120 Principles of Management; and departmental approval: 12 credit hours of business administration, and 12 credit hours of marketing and/or accounting.*

### **BADM-2800 Special Advanced Topics in Business Administration**

1-3 Semester Credits

Study of selected advanced topics or current issues in Business Administration. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **BADM-2820 Independent Advanced Study in Business Administration**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Business Administration. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Business Administration.*

### **BADM-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### APPLIED INDUSTRIAL TECHNOLOGY - (Bricklaying)

#### ATBL-1300 Basic Bricklaying Trade Skills

02 Semester credits

Basic study of bricklaying trade skills involving positioning, laying up, mixing and applying mortar and joint formation.  
*Lecture 01 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### ATBL-1310 Bricklaying Materials, Tools and Equipment

02 Semester credits

Study of materials, tools and equipment used in brick and block construction.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ATBL-1300 Basic Bricklaying Trade Skills, or concurrent enrollment.*

#### ATBL-1320 Basic Construction Drawings

01 Semester credits

Study of construction drawings to determine specifications, layout of pattern bonds, measurements related to laying out, laying up, dimensioning, estimating and planning.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): ATBL-1310 Bricklaying Materials, Tools and Equipment, or concurrent enrollment.*

#### ATBL-1330 Wall Construction I

02 Semester credits

Study of wall construction, grouting, layout, laying up, pattern bond pointing, parqing, and caulking. Use of reinforced masonry also studied.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-1300 Basic Bricklaying Trade Skills, or concurrent enrollment.*

#### ATBL-1340 Arch Construction I

02 Semester credits

Beginning study of construction of arches, types, parts and dimensions.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-1300 Basic Bricklaying Trade Skills, or concurrent enrollment.*

#### ATBL-1370 Construction Trades Safety

01 Semester credits

Study of safe practices on job, basic first aid, and OSHA requirements for construction trades.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### ATBL-1530 Wall Construction II

02 Semester credits

Advanced study of wall construction to include cavity, retaining, cantilever, gravity retaining, intersecting, garden and foundation/basement walls.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-1330 Wall Construction I, or concurrent enrollment.*

#### ATBL-1540 Arch Construction II

02 Semester credits

Study of basic plans to identify information included in a set of written specifications pertaining to concrete and to estimate amount of materials needed for project.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-1340 Arch Construction I, or concurrent enrollment.*

#### ATBL-1950 Construction Trades Field Experience

01-03 Semester credits

Limited to students in the Apprenticeship Program of the Construction Trades Joint Apprenticeship Training Committees. Employment in an approved training facility. Students may earn up to three credits in one semester and repeat to a cumulative maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field Experience: 12 to 36 hours per week.*

*Prerequisite(s): Formal acceptance into the Joint Apprenticeship Training Committee Apprenticeship Program; and ATBL-1310, Bricklaying Materials, Tools and Equipment.*

#### ATBL-2510 Advanced Brick-Block Construction

02 Semester credits

Advanced study of brick-block construction of corners, piers, pilasters and columns.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ATBL-1530 Wall Construction II and ATBL-1540 Arch Construction II, or concurrent enrollment.*

#### ATBL-2520 Step and Paving Assembly Construction

02 Semester credits

Study of masonry steps and paving assembly construction procedure, layout and lay-up.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-1320 Basic Construction Drawings, or concurrent enrollment.*

#### ATBL-2530 Door and Window Construction

02 Semester credits

Study of door and window construction to produce rough and finish masonry openings.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-1320 Basic Construction Drawings and ATBL-1340 Arch Construction I, or concurrent enrollment.*

#### ATBL-2710 Advanced Bricklaying Skills

03 Semester credits

Study of advanced bricklaying skills for the construction of flashings, lintels, chases, chimneys, vents and control joints.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ATBL-2530 Door and Window Construction, or concurrent enrollment.*

### CARDIOVASCULAR TECHNOLOGY - CVT

#### **CVT-1300 Introduction to Cardiovascular Technology**

01 Semester Credit

Introduces the cardiovascular technology profession and the modern hospital/health care environment. Professionalism and basic patient care and safety techniques presented. Includes exposure to emergency cardiac procedures, with special emphasis on introducing the major diagnostic modalities of the cardiovascular technology profession.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program or equivalent coursework and/or experience.*

#### **CVT-1310 Electrocardiographic Interpretations**

02 Semester Credits

Fundamentals of electrocardiography, normal pacer activation sequences, electrical pathways, pattern assessment, measurement intervals and changes seen in pathological states. Full interpretations from 12 lead EKG tracings.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program or equivalent coursework and/or experience.*

#### **CVT-1320 Electrocardiography, Holter, Pacemaker Laboratory**

01 Semester Credit

Laboratory practice and use of entry level cardiovascular procedures including EKG holters, and pacemakers. Emphasis on technical accuracy in operational, problem solving and quality control skills.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program or equivalent coursework and/or experience.*

#### **CVT-1340 Cardiac Stress Testing Laboratory**

01 Semester Credit

Practice and use of exercise stress testing. Cardiovascular procedures presented with emphasis on technical accuracy in operational, problem solving and quality control skills.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program or equivalent coursework and/or experience.*

#### **CVT-1350 Introduction to Cardiovascular Assessment**

02 Semester Credits

Introduces theory and practice of cardiovascular assessment tools used in patient preparation for cardiovascular procedures. Use of database in determining procedural appropriateness and patient safety, skills to be taught, history taking, physical assessment (auscultation, palpation, percussion), analysis of appropriate lab data and clinical correlations.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program or equivalent coursework and/or experience.*

#### **CVT-1360 Cardiovascular Anatomy and Physiology**

02 Semester Credits

Study of normal cardiovascular anatomy and physiology from its embryologic development to adulthood. Normal age-related changes presented and the various hemodynamic mechanisms that function at each age analyzed and discussed. Various tomographic planes used in ultrasound to assess the cardiac structures introduced with emphasis on accurate structure recognition.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1430 Anatomy and Physiology I, or concurrent enrollment; and departmental approval.*

#### **CVT-2300 Vascular Physical Principles and Instrumentation**

02 Semester Credits

Basic physical principles of electronics, ultrasound and hemodynamics, as related to diagnosing of vascular disease. Special focus on preparing student to take the American Registry of Diagnostic Medical Sonographers' Registered Vascular Technologist (ARDMS-RVT) and the Cardiovascular Credentialing International's Non-invasive Vascular Registry (CCI-RCVT) Board examinations for ultrasound testing.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): PHYS-1100 Physics of Ultrasound, or departmental approval: equivalent coursework and/or experience.*

#### **CVT-2310 Principles and Practice of 2-D/M-Mode Echocardiography**

04 Semester Credits

Theory and laboratory practice of cardiac ultrasound procedures including echocardiography (M mode and 2 dimensional), phonocardiography, and pulse wave forms. Emphasis on technical accuracy in operational, problem solving and quality control skills. Overview of acquired and congenital cardiac pathology involving heart valves, heart muscle, and related structures. Each pathological entity examined not only echocardiographically, but also through use of the following cardiac assessment tools: ECG data, history/physical exam findings, and catheterization data. Changes from normal noted by each modality serve to typify each pathologic condition, providing classic database.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): CVT-1350 Introduction to Cardiovascular Assessment, and CVT-1360 Cardiovascular Anatomy & Physiology.*

### **CVT-2320 Principles and Practice of Cardiac Doppler**

04 Semester Credits

Theory and laboratory practice of cardiac Doppler procedures, including pulsed wave, continuous wave and color flow mapping modalities. Fundamentals include physics of Doppler and wave form analysis. In lab, emphasis placed on technical accuracy, awareness of operator dependent quality, recognition of acceptable data, and problem solving. Role of Doppler in entire cardiac exam highlighted. In examining clinical applications of Doppler, an overview of acquired and congenital cardiac pathology involving heart valves, heart muscle and related structures presented. Other assessment tools, to evaluate each pathological entity and complement Doppler findings, include echocardiographic imaging data, ECG data, history/physical exam findings, and catheterization data.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): PHYS-1100 Physics of Ultrasound, and CVT-2310 Principles and Practice of 2-D/M-Mode Echocardiography.*

### **CVT-2340 Vascular Technology**

04 Semester Credits

Focus on mastery of battery of tests necessary to diagnose cerebrovascular and peripheral vascular disease, non-invasively.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): CVT-2310 Principles and Practice of 2-D/M-Mode Echocardiography, and CVT-2300 Vascular Physical Principles and Instrumentation.*

### **CVT-2400 Clinical Correlations in Cardiovascular Technology**

03 Semester Credits

Formal sessions covering professional issues and strategies in cardiovascular studies. Sessions include guest lecturers; literature review/critiques; panel discussions of current topics; new diagnostic techniques and technology; case presentations; future directions of the profession; and the research process. Study of how parameters obtained through cardiovascular studies affect clinical outcome of patient management. Correlations with other testing or monitoring procedures reviewed and relative strengths and weaknesses assessed. Sessions also include physician/reader needs, and problems and decisions. Special focus on reviewing content of national certification exams. Content includes ECG interpretations, holter scanning, cardiac stress testing and all aspects of echocardiography.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Concurrent enrollment in CVT-2930 Cardiovascular Procedures III.*

### **CVT-2910 Cardiovascular Procedures I**

04 Semester Credits

Practice in clinical setting utilizing cardiovascular testing equipment. First rotation in a sequence that involves supervised performance of diagnostic procedures in electrocardiography. Experiences leading to technical accuracy in performance of EKG's, holters, pacemaker assessment and exercise stress testing provided. Beyond development of technical competency, this clinical rotation guides student toward the professional realm. Upon gathering complete cardiac database in the electrocardiograph domain, student will be able to analyze information and formulate interpretive statements which are incorporated into preliminary reports. Emphasis on ability to accurately gather data, note variations, and arrive at logical interpretive conclusions. Students will participate in directed practice at a clinical site.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 18 hours per week.*

*Prerequisite(s): CVT-1320 EKG, Holter, Pacemaker Laboratory; CVT-1300 Introduction to Cardiovascular Technology; and CVT-1340 Cardiac Stress Testing Lab.*

### **CVT-2920 Cardiovascular Procedures II**

04 Semester Credits

Directed practice in a clinical setting utilizing cardiac ultrasound equipment in supervised performance of diagnostic procedures. Emphasis on developing technical accuracy in echocardiography (M Mode and 2 D) and pulse wave recordings. The rotation will also guide the student toward the professional realm. Upon gathering a complete cardiac database in the echocardiographic domain, student will analyze information and formulate/interpret statements which are incorporated into preliminary reports. Emphasis on ability to accurately gather data, note variations, and arrive at logical interpretive conclusions. Students will participate in directed practice at a clinical site.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 18 hours per week.*

*Prerequisite(s): CVT-1300 Introduction to Cardiovascular Assessment; CVT-1360 Cardiovascular Anatomy and Physiology; CVT-2310 Principles and Practice of 2-D/M-Mode Echocardiography; and CVT-2910 Cardiovascular Procedures I.*

### **CVT-2930 Cardiovascular Procedures III**

04 Semester Credits

Last clinical course sequence challenges student to independently function within supervised laboratory setting, guiding and tailoring each examination (ECG, Holter, stress testing and echocardiography) according to requirements of patient situation. Students exposed to more complex cardiac pathology through experience in portable ultrasound assessments in critical care areas. Students participate in directed practice in all non-invasive cardiac testing modalities at clinical site.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 18 hours per week.*

*Prerequisite(s): CVT-1300 Introduction to Cardiovascular Technology; CVT-1340 Cardiac Stress Testing Lab; CVT-1320 EKG, Holter, Pacemaker Lab; CVT-2310 Principles and Practice of 2-D/M-Mode Echocardiography; CVT-2910 Cardiovascular Procedures I; and concurrent enrollment in CVT-2400 Clinical Correlations in Cardiovascular Technology.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **APPLIED INDUSTRIAL TECHNOLOGY - (Cement Masonry) - ATCM**

#### **ATCM-1300 Fundamentals of Concrete Construction**

02 Semester credits

Study of concrete: ingredients, steps in production, factors of concrete mix design, uses for various types of concrete, admixtures and tests for various types of fresh concrete.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ATCM-1310 Applied Technical Communications and Economics**

02 Semester credits

Principles of effective industrial reports and letters; obtaining data; analysis of data; outlining and organizing of materials; letter writing techniques. Effective communication in writing, listening and speaking to meet industrial needs emphasized.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ATCM-1320 Basic Plan Reading**

02 Semester credits

Study of basic plans to identify information included in a set of written specifications pertaining to concrete and to estimate amount of materials needed for project.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ATCM-1330 Concrete Construction Equipment**

02 Semester credits

Study of tools used in concrete construction for testing forming, placing and finishing fresh concrete with emphasis on care and safe use of equipment.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ATCM-1300 Fundamentals of Concrete Construction, or concurrent enrollment.*

#### **ATCM-1340 OSHA Standards for the Construction Industry**

03 Semester credits

Study of occupational safety and health standards for construction industry.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ATCM-1370 Construction Trades Safety**

01 Semester credits

Study of safe practices on job, basic first aid, and OSHA requirements for construction trades.

*Lecture 01 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ATCM-1390 Basic Welding Skills**

02 Semester credits

Basic welding skills emphasized to obtain a thorough knowledge of welding safety related to electrical shock, body protection, accident prevention, reporting, and ventilation. Fundamentals of arc and oxy-acetylene welding studied.

*Lecture 01 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: Student must be enrolled in an Applied Industrial Technology program.*

#### **ATCM-1400 Concrete/Cement Forming and Finishing**

03 Semester credits

Study of various types of forms, placement of forms, placing leveling and finishing of concrete.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ATCM-1300 Fundamentals of Concrete Construction, or concurrent enrollment.*

#### **ATCM-1410 Commercial/Residential Form and Finish Work**

04 Semester credits

Study of building of steps, sidewalks, patios and driveways. Discussion includes types, finishes, and nosing.

*Lecture 02 hours. Laboratory 04 hours.*

*Prerequisite(s): ATCM-1400 Concrete/Cement Forming and Finishing, or concurrent enrollment.*

#### **ATCM-2320 Blueprint Fundamentals-Construction**

02 Semester credits

Study of basic plans to identify information included in a set of written specifications pertaining to concrete and estimating amount of materials needed for the project.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ATCM-1320 Basic Plan Reading, or concurrent enrollment.*

#### **ATCM-2500 Fundamentals of Concrete Curing**

01 Semester credits

Study of fundamentals associated with concrete curing, reason for curing and types of curing.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): ATCM-1400 Concrete/Cement Forming and Finishing, or concurrent enrollment.*

#### **ATCM-2510 Fundamentals of Concrete Joints**

01 Semester credit

Study of joints in concrete including types, locations, sealants, maintenance and reason for joints.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): ATCM-1410 Commercial/Residential Form and Finish Work, or concurrent enrollment.*

#### **ATCM-2520 Basic Cement Patching**

02 Semester credits

Study of essentials to properly rub and sack walls for patching and steps necessary to take when preparing walls.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ATCM-1400 Concrete/Cement Forming and Finishing, or concurrent enrollment.*

#### **ATCM-2530 Concrete Restoration**

03 Semester credits

Study of surface defects in concrete and how to recognize, recommend preventative treatment, techniques and remedies to restore surface.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ATCM-2520 Basic Cement Patching, or concurrent enrollment.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ATCM-2700 Advanced Concrete Finishing

03 Semester credits

Advanced study of placing and finishing a slab; placing and finishing concrete floors with various types of finishes.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): ATCM-1400 Concrete/Cement Forming and Finishing, or concurrent enrollment.*

### ATCM-2710 Concrete Specialty Products

01 Semester credits

Study of pavements: types of equipment used on pavement, procedures necessary to finish pavements and operation of paving machine.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): ATCM-2530 Concrete Restoration, or concurrent enrollment.*

## CHEMISTRY - CHEM

### CHEM-1010 Introduction to Inorganic Chemistry

04 Semester Credits

Introduction to atomic structure and bonding as basis for understanding valence, formulas, compounds and chemical reactions. Measurement, stoichiometry, states of matter, solutions, ionization, equilibria, acids, bases and pH, and applications in daily life.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): One year of high school algebra or equivalent.*

### CHEM-1020 Introduction to Organic Chemistry and Biochemistry

04 Semester Credits

Structure and properties of representative carbon compounds and applications to everyday life. Nature and metabolism of biochemical compounds and relationship of nucleic acids to protein synthesis.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): CHEM-1010 Introduction to Inorganic Chemistry, or departmental approval: equivalent knowledge or skills.*

### CHEM-1300 General Chemistry I

04 Semester Credits

Study of fundamental principles of chemistry emphasizing atomic theory and structure, chemical bonding, thermochemistry, solutions, stoichiometry, and state of matter. To fulfill laboratory science requirement, students should enroll in related laboratory course.

*Lecture 04 hours Laboratory 00 hours.*

*Prerequisite(s): Eligibility for MATH-1200, Intermediate Algebra; or CHEM-1010 Introduction to Inorganic Chemistry; or departmental approval: equivalent knowledge or skills.*

### CHEM-130L General Chemistry Laboratory I

01 Semester Credit

Basic laboratory experiments which correlate with chemical concepts, principles and processes of General Chemistry I. Emphasis on techniques and procedures.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): CHEM-1300 General Chemistry I, or concurrent enrollment; or departmental approval: equivalent knowledge or skills.*

### CHEM-1310 General Chemistry II

04 Semester Credits

Emphasis on kinetics, equilibrium concepts, electrochemistry, nuclear chemistry, thermodynamics, coordination chemistry and organic chemistry. To fulfill laboratory science requirement, students should enroll in related laboratory course.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): CHEM-1300 General Chemistry I, or departmental approval: equivalent knowledge or skills.*

### CHEM-131L General Chemistry Laboratory II

01 Semester Credit

Basic laboratory experiments which correlate with chemical concepts, principles and processes of General Chemistry II. Emphasis on technique and procedures.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): CHEM-130L General Chemistry Lab I; and CHEM-1310 General Chemistry II, or concurrent enrollment; or departmental approval: equivalent knowledge or skills.*

### CHEM-1800 Special Topics in Chemistry

1-3 Semester Credits

Study of selected topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### CHEM-181S Special Laboratory Topics in Chemistry

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### CHEM-181T Special Laboratory Topics in Chemistry

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### CHEM-1820 Independent Research in Chemistry

1-3 Semester Credits

Specific content and objectives to be arranged between instructor and student. (May be repeated for a maximum of six credits.)

*Lecture 0-3 hours. Laboratory 0-9 hours.*

*Prerequisite(s): Departmental approval.*

## **CHEM-2300 Organic Chemistry I**

05 Semester Credits

Functional group chemistry of aliphatic compounds covering nomenclature, structural- reactivity, and synthetic reactions. Theoretical concepts, structural bonding, stereochemistry and reaction mechanisms emphasized. Use of various spectrometric techniques for identification of compounds introduced.

*Lecture 03 hours. Laboratory 06 hours.*

*Prerequisite(s): CHEM-1310 General Chemistry II, and CHEM-131L General Chemistry Laboratory II; or departmental approval: equivalent knowledge or skills.*

## **CHEM-2310 Organic Chemistry II**

05 Semester Credits

Continuation of Organic Chemistry I. Common functional groups with emphasis on aromatic and carbonyl containing molecules, and selected topics such as heterocyclic compounds, macromolecules, and biomolecules introduced.

*Lecture 03 hours. Laboratory 06 hours.*

*Prerequisite(s): CHEM-2300 Organic Chemistry I.*

## **CHEM-2400 Quantitative Analysis**

04 Semester Credits

Study of chemical stoichiometry, homogeneous and heterogeneous equilibria, and the theory and techniques of gravimetric, volumetric, spectrometric, and electrochemical methods of quantitative analytical chemistry.

*Lecture 02 hours. Laboratory 06 hours.*

*Prerequisite(s): CHEM-1310 General Chemistry II, and CHEM-131L General Chemistry Laboratory II.*

## **CHEM-2800 Special Advanced Topics in Chemistry**

1-3 Semester Credits

Study of selected advanced topics or current issues in Chemistry. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **CHEM-281S Special Advanced Laboratory Topics in Chemistry**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Chemistry (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **CHEM-281T Special Advanced Laboratory Topics in Chemistry**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **CHEM-2820 Independent Advanced Research in Chemistry**

1-3 Semester Credits

Specific content and objectives to be arranged between instructor and student. (May be repeated for a maximum of six credits.)

*Lecture 0-3 hours. Laboratory 0-9 hours*

*Prerequisite(s): Departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### CHINESE - CHIN

#### **CHIN-1010 Beginning Chinese I**

04 Semester Credits

Introduction to standard spoken Chinese (Mandarin) through listening, speaking and using Chinese software on computer. Emphasis on becoming familiar with four tones of Chinese language.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): None.*

#### **CHIN-1020 Beginning Chinese II**

04 Semester Credits

Continued study of standard Chinese with expansion of vocabulary. Practice in conversation on given subjects and transition from speaking to reading.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CHIN-1010 Beginning Chinese I, or departmental approval.*

### COMMERCIAL ART AND DESIGN - CART

#### **CART-1050 Introduction to Commercial Art and Graphic Design**

02 Semester Credits

Design structure, tools and techniques used in commercial art, graphic design and illustration professions. Emphasis on basic studio skills, materials, processes and design concepts.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### **CART-1060 History and Trends in Commercial Art and Design**

03 Semester Credits

Comprehensive survey course of historical and cultural events, technical innovations, art and design movements related to advertising, graphic design and illustration from 19th century through present. Emphasis on awareness of past in influencing future trends in the field.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **CART-1300 Typography and Layout**

02 Semester Credits

Development, terminology, letterform, classification, selection and specification of typefaces. Emphasis on aesthetic and communicative aspects of typography. Introduction to techniques used to indicate type and images.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1050 Introduction to Commercial Art and Graphic Design, or concurrent enrollment; or departmental approval: comparable knowledge or skills.*

#### **CART-1310 Graphic Design Drawing**

01 Semester Credit

Commercial drawing for advertising, graphic design and illustration. Emphasis on graphic thinking, stylization, use of reference, and use of selected, purposeful and quality line. Students in degree program must take related laboratory course.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### **CART-131L Graphic Design Drawing Studio**

01 Semester Credit

Laboratory course that explores use of various tools, materials, techniques and practices, with emphasis on graphic design.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): CART-1310 Graphic Design Drawing, or concurrent enrollment; or departmental approval.*

#### **CART-1320 Page Layout and Design**

02 Semester Credits

Designing electronic page layout with type, text, and images as applied to advertising, commercial art and graphic design. Emphasis on creating professional multi-page layouts using various applications.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1300 Typography and Layout, or concurrent enrollment; or departmental approval.*

#### **CART-1340 Rendering Techniques**

02 Semester Credits

Marker/mixed media rendering for presentation of advertising, commercial art and graphic design concepts to art directors, photographers and clients. Emphasis on presenting the concept including perspective, lighting and style. Exploration of tools, materials and techniques used to render storyboards, rough and comprehensive layouts and how they relate to creative process.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### **CART-1400 Decorative Design**

02 Semester Credits

Comprehensive course in surface design for various commercial applications including paper products, gift wrap, wallpaper, and wearable art. Emphasis on design process in creating mass market designs.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### **CART-1500 Advertising and Design**

02 Semester Credits

Fundamentals of advertising design for newspaper, magazine and direct mail. Emphasis on materials, skill and techniques used to develop an ad from research and thumbnail concepts to finished comps.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1300 Typography and Layout; and CART-1340 Rendering Techniques, or concurrent enrollment; or departmental approval.*

#### **CART-1600 Imaging and Design**

01 Semester Credit

Skills and techniques in creation and manipulation of images. Emphasis on impact of design and use of visuals for advertising, publications and multimedia. Students in degree program must take related laboratory course.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### **CART-160L Imaging and Design Studio**

01 Semester Credit

Laboratory course to practice skills and techniques required to create and manipulate images.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): CART-1600 Imaging and Design, or concurrent enrollment; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **CART-1800 Special Topics in Commercial Art and Design**

1-3 Semester Credits

Study of selected topics or current issues in Commercial Art and Design. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CART-181S Special Laboratory Topics in Commercial Art and Design**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Commercial Art and Design (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CART-181T Special Laboratory Topics in Commercial Art and Design**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CART-2310 Graphic Design and Illustration**

02 Semester Credits

Techniques, tools and skills in creating commercial illustration integrating type and visuals using various applications.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1310 Graphic Design Drawing, or concurrent enrollment; or departmental approval.*

### **CART-2320 Designing for Production**

02 Semester Credits

Designing for various reproduction processes. Emphasis on history, terminology, paper, ink, printing, and production art. Exploration of tools, materials, and practical considerations in preparing design for production art.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1300 Typography and Layout, or concurrent enrollment; or departmental approval.*

### **CART-2330 Graphic Production**

02 Semester Credits

Techniques and methods in assembling and finalizing production art for printing. Emphasis on preparation and practical considerations for electronic reproduction.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-2320 Designing for Production, and CART-1320 Page Layout and Design; or departmental approval.*

### **CART-2340 Illustration in Pen and Ink**

02 Semester Credits

Use of various tools, materials and techniques used with pen and ink from portrait, product hardline to multi-image illustration.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1310 Graphic Design Drawing, or concurrent enrollment; or departmental approval.*

### **CART-2350 Illustration with Prismacolor**

02 Semester Credits

Emphasis on use of Prismacolor pencils as illustration medium for products and scenes.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1310 Graphic Design Drawing, or concurrent enrollment; or departmental approval.*

### **CART-2360 Illustration with Watercolor**

02 Semester Credits

Emphasis on development of full illustrations from products to scenes of human interests. Exploration and development of transparent and opaque watercolor techniques.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-2350 Illustration with Prismacolor, or concurrent enrollment; or departmental approval.*

### **CART-2410 Corporate Graphics**

02 Semester Credits

Comprehensive course in corporate graphics. Emphasis on the design process in creating corporate and brand identity. Exploration of the visual and nonvisual aspects of corporate graphics and their application.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1300 Typography and Layout, or concurrent enrollment; and CART-1310 Graphic Design Drawing, or concurrent enrollment; or departmental approval.*

### **CART-2420 Publication Design**

02 Semester Credits

Publication design including masthead, column, editorial and feature story page formats. Emphasis on using typography and images on multiple page formats. Exploration of practical and production considerations involved in publication design.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1320 Page Layout and Design, or concurrent enrollment; or departmental approval.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **CART-2430 Magazine Design**

02 Semester Credits

Magazine design including masthead, cover, contents, editorial and feature page formats. Emphasis on using sophisticated design, typography, and images to communicate. Exploration of the practical and production considerations involved in magazine design as a product itself.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1320 Page Layout and Design, or concurrent enrollment; or departmental approval.*

### **CART-2440 Package Design**

02 Semester Credits

Comprehensive package course from initial concept to presentation of dummies and mock-ups. Emphasis on conceptual thinking and problem solving using typography, color and images on folded and soft packaging. Exploration of the methods, materials, practical and production considerations involved in packaging design.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): CART-1320 Page Layout and Design, or concurrent enrollment; or departmental approval.*

### **CART-2450 Media Design**

02 Semester Credits

Comprehensive media course from initial concept to presentation. Emphasis on the interaction of type, image, motion, sound, and sequence in staging for various advertising media formats including commercials.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): CART-1320 Page Layout and Design, and CART-1600 Imaging and Design; or departmental approval.*

### **CART-2500 Creative Advertising Campaign**

02 Semester Credits

Comprehensive advertising campaign course from initial campaign concept through presentation. Emphasis on conceptual thinking and problem solving for magazine, billboard and TV/video storyboard advertising. Exploration of the various facets of advertising agency structure including the team concept. Includes the designer's role in research, analysis, planning, conceptualizing, copywriting and presentation.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): CART-1500 Advertising and Design, or departmental approval.*

### **CART-2700 Portfolio Preparation**

02 Semester Credits

Covers all aspects of professional portfolio preparation and presentation including self-promotion, resumes, interviewing and professional practices in job market. Emphasis on analysis of student work under consideration for portfolio. Students prepare their portfolio, self-promotion and resume for presentation.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): CART-2320 Designing for Production, or concurrent enrollment; or departmental approval.*

### **CART-2800 Special Advanced Topics in Commercial Art and Design**

1-3 Semester Credits

Study of selected advanced topics or current issues in Commercial Art. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CART-281S Special Advanced Laboratory Topics in Commercial Art and Design**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Commercial Art (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CART-281T Special Advanced Laboratory Topics in Commercial Art and Design**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CART-2820 Independent Advanced Study in Commercial Art and Design**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Commercial Art. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Commercial Art.*

### **CART-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### COMPUTER STUDIES - CS

#### CS-1020 Introduction to Computers

03 Semester Credits

Introductory computer literacy course. Hands-on skill development in word processing, spreadsheets, databases and communications (Internet).

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### CS-1030 Introduction to Internet

02 Semester Credits

Hands-on instruction in use of the Internet and World Wide Web. Software tools and techniques used to search, retrieve and create Internet documents. File downloading, E-Mail, search engines and Web page design included.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### CS-1310 Internal Computer Functions

02 Semester Credits

Examines popular modes of data representation and numbering systems (including EBCDIC, ASCII, zoned, packed, hex notation, binary, hexadecimal). Discusses primary addressing modes in computers and the various data and file structures employed. Reviews system and application software, types and uses of language translators.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): CS-1020 Introduction to Computers, or concurrent enrollment; or departmental approval: equivalent knowledge or skills.*

#### CS-1320 Microcomputer Operating Systems

03 Semester Credits

Overview of microcomputer operating systems and their role in hardware, software and data management. Hands-on skill development in use of current microcomputer operating system.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1020 Introduction to Computers, or concurrent enrollment; or departmental approval: equivalent knowledge or skills.*

#### CS-1350 Programming Logic

03 Semester Credits

Language-independent course introducing computer program design and development. Identification and solution of business problems emphasized. Structured flow charts, hierarchy charts and pseudocode used in program description and design.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): CS-1020 Introduction to Computers, or concurrent enrollment.*

#### CS-1400 Spreadsheet Use and Design

03 Semester Credits

Study of electronic spreadsheet concepts and software as used in business environment. Spreadsheet theory, design and implementation techniques. Problem solving strategies using spreadsheet software for accurate and timely storage, retrieval and interpretation of data.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1020 Introduction to Computers, or departmental approval: comparable knowledge or skills.*

#### CS-1410 Database Use and Design

03 Semester Credits

Study of electronic database concepts and software as used in business environment. Database theory, design and implementation techniques. Problem solving strategies using database software for accurate and timely storage, retrieval and interpretation of data.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1020 Introduction to Computers; or OADM-1020 Microcomputer Applications; or departmental approval: equivalent experience.*

#### CS-1500 Application Program Development I: COBOL

04 Semester Credits

Introduction to computer programming using current program development techniques and COBOL language within mainframe environment. Batch programs developed based on given program specifications, involving sequential/entry sequence files. Includes data definitions, data movement, calculations, editing data, table loading and processing, internal sorting, and multiphase programs.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1350 Programming Logic, or concurrent enrollment.*

#### CS-1800 Special Topics in Computer Studies

1-3 Semester Credits

Study of selected topics or current issues in Computer Studies. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### CS-181S Special Laboratory Topics in Computer Studies

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Computer Studies (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### CS-181T Special Laboratory Topics in Computer Studies

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Computer Studies (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### CS-2400 Network Fundamentals

03 Semester Credits

Overview of computer network environment capabilities and limitations. Provides hands-on exploration of network operations in a lab environment. Emphasis on network management, shared resources and control commands.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1320 Microcomputer Operating Systems, or departmental approval: equivalent experience or skills.*

### CS-2500 Microcomputer Project

03 Semester Credits

Culminating course in the microcomputer major. Primary focus on development of a comprehensive term project integrating microcomputer applications/ languages.

Includes structured systems development strategies and techniques.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): CS-1400 Spreadsheet Use and Design; and CS-1410 Database Use and Design; and CS-2700 Systems Analysis and Design; or departmental approval: equivalent knowledge or skills.*

### CS-2530 Application Program Development II: COBOL, CICS

05 Semester Credits

Intermediate level applications programming course that applies and builds on concepts, skills and competencies previously studied. Programs created using current program development techniques, COBOL language, and CICS, all within mainframe environment. Batch and on-line transaction processing programs developed based on given specifications, involving several file access techniques.

Includes creating and updating various types of files, system sorts, report writer, use of system libraries, unformatted and formatted terminal input and output processing.

*Lecture 03 hours. Laboratory 04 hours.*

*Prerequisite(s): CS-1500 Application Program Development I: COBOL; or departmental approval: comparable knowledge or skills.*

### CS-2550 Application Program Development III: COBOL, CICS, SQL

05 Semester Credits

Advanced level applications programming course that applies and builds on concepts, skills, and competencies previously studied. Programs created using current program development techniques, COBOL language, CICS, and SQL, all within mainframe environment. On-line transaction processing programs and interactive queries developed based on given specifications. Involves indexed file techniques and relational databases. Includes on-line transaction processing with formatted terminal input and output, on-line update of files, program to program communication, file browsing, relational database creation and maintenance, interactive queries and embedded SQL.

*Lecture 03 hours. Laboratory 04 hours.*

*Prerequisite(s): CS-2530 Applications Program Development II: COBOL, CICS; or departmental approval: comparable knowledge or skills.*

### CS-2610 Assembly Language Programming

04 Semester Credits

Computer programming, using current program development techniques and assembly level language. Batch programs developed based on given program specifications involving sequential/entry sequence files. Includes computer internal structure and addressing, data representation codes, number systems, machine instruction formats, dumps, register usage, data definitions, data movement, data editing, calculations, table processing, creating files and multiphase programs.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1350 Programming Logic, or departmental approval: equivalent experience or skills.*

### CS-2620 Visual Basic Programming

04 Semester Credits

Introduction to object-oriented programming in Windows environment using Visual Basic programming language. Emphasis on program development and design, application of logic in both user-defined and event-driven procedures, debugging techniques, and basics of Visual Basic syntax.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1350 Programming Logic, or departmental approval: equivalent experience or skills.*

### CS-2630 Advanced Visual Basic Programming

04 Semester Credits

Continuation of Visual Basic Programming. Covers advanced language features and techniques to develop more complex programs. Includes database access programming and integration with other applications.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-2620 Visual Basic Programming, and CS-1410 Database Use and Design; or departmental approval: equivalent experience or skills.*

### CS-2640 RPG Programming

04 Semester Credits

Coding and execution of Report Program Generator programs creating elementary level reports as used in business environment. Functions include I/O programming, editing of data, computations, specifications, arithmetic operations, comparing operations, looping, control breaks, array processing, table lookup, documentation, and transaction processing, using logical relationships among fields, records, and files.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1350 Programming Logic.*

### CS-2670 C/C++ Programming Language

04 Semester Credits

Introduction to programming using the C and C++ programming languages, emphasizing program development and design, debugging techniques, and common basics of the C/C++ languages. Topics include data types, control statements, functions, argument passing, arrays, strings, structures, data files, and classes.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): CS-1350 Programming Logic, or departmental approval: equivalent knowledge or skills.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **CS-2700 Systems Analysis and Design**

03 Semester Credits

Overview of systems development life cycle. Emphasis on documentation through use of both classical and structured tools and techniques for describing process flow, data flows, data structures, file designs, input and output designs, and program specifications. Discussion of information gathering and reporting activities and on strategies and techniques for producing logical methodologies which deal with complexity in development of information systems.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): BADM-1020 Introduction to Business, and departmental approval: any programming language.*

### **CS-2800 Special Advanced Topics in Computer Studies**

1-3 Semester Credits

Study of selected advanced topics or current issues in Computer Studies. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CS-281S Special Advanced Laboratory Topics in Computer Studies**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Computer Studies (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CS-281T Special Advanced Laboratory Topics in Computer Studies**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Computer Studies (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **CS-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## **COURT AND CONFERENCE REPORTING - C&CR**

### **C&CR-1000 Introduction to Court Reporting**

01 Semester Credit

Comprehensive survey of field of court reporting.

Examination of history of reporting, diversity, equipment needs and technological trends, role of the working reporter within legal system, corporate environment, and educational system.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

### **C&CR-1300 Realtime Theory**

04 Semester Credits

Focus on principles of writing on stenotype machine. On-line instruction of machine shorthand keyboard, arbitraries, phrases, word beginnings and endings. Emphasis on reading, writing, and reporter English skills in preparation for speedbuilding and transcription.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **C&CR-1350 Legal Terminology**

03 Semester Credits

Provides students with broad legal vocabulary, useful in any law related field. Emphasis on spelling, definition, and usage of legal terms.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **C&CR-1370 Introduction to Technology**

03 Semester Credits

Basics of computer aided transcription. Emphasis on basic terms, system supports, court reporting software, and beginning dictionary development. Theory and style techniques, and basics of reporter English.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): C&CR-1300 Realtime Theory.*

### **C&CR-1400 Speedbuilding and Transcription at 100 WPM**

02 Semester Credits

Speedbuilding at 80-100 wpm level. Utilization and expansion of machine-writing theory. Practical procedures on stenotype machine to develop beginning skill levels. Minimum exit speed is 100 wpm.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): C&CR-1300 Realtime Theory.*

### **C&CR-1450 Speedbuilding and Transcription at 140 WPM**

02 Semester Credits

Speedbuilding at 120-140 wpm level. Utilization and expansion of machine-writing theory. Practical procedures on stenotype machine to develop skill levels on question and answer testimony, jury charge and literary materials. Minimum exit speed is 140 wpm.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): C&CR-1400 Speedbuilding and Transcription at 100 WPM.*

### **C&CR-1500 Speedwriting**

03 Semester Credits

Practical hands-on approach to developing skills in use of RapidWrite software program, high-speed data entry package to translate steno into word processing.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): C&CR-1300 Realtime Theory.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **C&CR-1800 Special Topics in Court & Conference Reporting**

1-3 Semester Credits

Study of selected topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **C&CR-181S Special Lab Topics in Court & Conference Reporting**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Court & Conference Reporting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **C&CR 181T Special Lab Topics in Court & Conference Reporting**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Court & Conference Reporting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **C&CR-1820 Independent Study in Court & Conference Reporting**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Court & Conference Reporting. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Court & Conference Reporting.*

### **C&CR-2300 Court Procedures**

03 Semester Credits

Emphasizes role of official and freelance reporter including communication skills, professional image and business etiquette. Preparation of deposition/ court transcripts, marking and handling of exhibits, indexing and storing notes, reporting techniques and ethics, including NCRA Code of Ethics.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): C&CR-1300 Realtime Theory.*

### **C&CR-2400 Speedbuilding and Transcription at 180 WPM**

02 Semester Credits

Speedbuilding at 160-180 wpm level. Utilization and expansion of machine-writing theory. Practical procedures on stenotype machine to develop skill levels on question and answer testimony, jury charge and literary materials. Minimum exit speed is 180 wpm.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): C&CR-1450 Speedbuilding and Transcription at 140 WPM.*

### **C&CR-2450 Speedbuilding and Transcription at 225 WPM**

02 Semester Credits

Speedbuilding at CASE completion speed level at 225 wpm Question and Answer test, 200 wpm Jury Charge material and 180 wpm Literary. Utilization and expansion of machine-writing theory. Practical procedures on stenotype machine to develop skill levels on question and answer testimony, jury charge and literary materials.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): C&CR-2400 Speedbuilding and Transcription at 180 WPM.*

### **C&CR-2470 Advanced Technology**

03 Semester Credits

Designed to expand students' knowledge of the role of technology in court reporting. Topics include CAT (computer aided transcription) of depositions and trials, computer operation systems, realtime writing, litigation support, and videotaping.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): C&CR-1370 Introduction to Technology, and C&CR-1450 Speedbuilding and Transcription at 140 WPM.*

### **C&CR-2500 Advanced Speedwriting**

03 Semester Credits

Continued hands-on practice designed to improve accuracy, increase productivity, and build confidence when working with Steno machine and RapidWrite software. Emphasis on document preparation and production.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): C&CR-1400 Speedbuilding and Transcription at 100 WPM, and C&CR-1500 Speedwriting.*

### **C&CR-2600 Technical Writing I**

03 Semester Credits

Designed to expose students to much of subject matter court reporters encounter. Emphasis on medical and technical testimony with material duplicated from real-life situations.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): C&CR-1450 Speedbuilding and Transcription at 140 WPM.*

### **C&CR-2650 Technical Writing II**

02 Semester Credits

Continued exposure to writing technical and medical vocabularies with emphasis on multi-voice dictation. Students will develop consistent writing patterns for terms and multi-voice designations in order to produce near-perfect, first-pass transcripts.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): C&CR-1450 Speedbuilding and Transcription at 140 WPM.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **C&CR-2800 Special Advanced Topics in Court & Conference Reporting**

1-3 Semester Credits

Study of selected advanced topics or current issues in Court & Conference Reporting. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **C&CR-281S Special Advanced Lab Topics in Court & Conference Reporting**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Court & Conference Reporting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **C&CR-281T Special Advanced Lab Topics in Court & Conference Reporting**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **C&CR-2820 Independent Advanced Study in Court & Conference Reporting**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Court & Conference Reporting. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Court & Conference Reporting.*

### **C&CR-2840 Internship**

01 Semester Credit

Provides student with 75 hours of actual writing time during on-the-job training using machine shorthand technology.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 5 hours per week.*

*Prerequisite(s): Departmental approval.*

## DANCE - DANC

### **DANC-1100 Dance Appreciation**

03 Semester Credits

Introduction to elements and styles of the art of dance. Increase student's ability to identify and understand stage, movie and video dance styles through visual and movement concepts. Various performing artists and choreography studied in cultural and historical context.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **DANC-1220 Theatre Dance/Stage Movement**

03 Semester Credits

Basic stage geography, and theatre dance: jazz, latin, waltz, polka, and musical staging for singers and actors. Non-theatre majors learn techniques to analyze and control non-verbal communication (body language). Control and organization of space, energy and time, including basic stage combat, applied to group activities.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

### **DANC-1500 Dance I**

03 Semester Credits

For student with limited or no dance experience. Movement vocabulary of modern dance, ballet and jazz will train student to recognize and perform basic dance combinations, understand importance of proper alignment and muscular awareness, and analyze basic elements of movement: time, space and energy.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

### **DANC-1510 Dance II**

03 Semester Credits

Further study of secondary techniques of Modern Dance. Stresses dance as artistic form of self expression. Students identify variety of rhythms and perform secondary and intermediate dance combinations.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): DANC-1500 Dance I, or departmental approval: comparable knowledge or skills.*

### **DANC-1600 Choreography and Production**

02 Semester Credits

Student learns to make solo and group dances by exploring choreography process: content, form, technique and projection. Through formal and informal dance performances, student learns elements of lighting, costuming, public relations and promotion.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): DANC-1500 Dance I, or departmental approval: comparable knowledge or skills.*

### **DANC-1800 Special Topics in Dance**

1-3 Semester Credits

Study of selected topics or current issues in Dance. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **DANC-181S Special Laboratory Topics in Dance**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Dance (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DANC-2300 Dance III: Technique**

02 Semester Credits

Intermediate dance techniques, concepts and theories. Studio work challenges and nurtures student's creative and interpretive ability and performance techniques.

*Lecture 00 hours. Laboratory 04 hours.*

*Prerequisite(s): DANC-1510 Dance II, or departmental approval: comparable knowledge or skills.*

### **DANC-2310 Dance IV: Technique**

02 Semester Credits

Advanced dance techniques emphasizing dynamic variety and challenging physical limitations and movement memory. Exploration of different modern techniques and dance accompaniment applied to studio work.

*Lecture 00 hours. Laboratory 04 hours.*

*Prerequisite(s): DANC-2300 Dance III: Technique, or departmental approval: comparable knowledge or skills.*

### **DANC-2800 Special Advanced Topics in Dance**

1-3 Semester Credits

Study of selected advanced topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DANC-281S Special Advanced Laboratory Topics in Dance**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DENTAL ASSISTING - DAST**

#### **DAST-1300 Dental Assisting Methods I**

05 Semester Credits

Integrated study of dental equipment, instruments, materials, assistant and operator role, and clinical procedures associated with delivery of basic dental treatment. Physical and biological properties of restorative materials, bases, gypsum products, and impression materials are discussed as a foundation for mastering application of these materials in practice with focus on examination, diagnostic, amalgam, and composite procedures. Skills developed in preparation and manipulation of materials and instruments, in principles and practice of four-handed dentistry, and in anticipating needs of operator. Introduction to principles of microbial activity and application of current practices of infection control in dental office. Observation in a general practice setting required.

*Lecture 02 hours. Laboratory 09 hours.*

*Prerequisite(s): BIO-1200 Oral Structure and Development, or concurrent enrollment.*

#### **DAST-1310 Dental Assisting Radiography I**

03 Semester Credits

Study of physical properties of x-radiation, generation of x-rays for dental applications, uses of x-rays in dentistry, and understanding of and adherence to strict safe operating procedures and infection control practices. Theory and practice in fundamentals of oral radiographic technique as relevant to dental assistant. Emphasis on mastery of bisect-the-angle exposure technique in producing diagnostically acceptable full mouth and bite-wing radiographs on adult patient. After successful skill development utilizing manikins, a supervised experience on a patient will be scheduled. Skills developed in processing, mounting and evaluation of film, including recognition of errors and methods for their correction, and recognition of normal anatomic landmarks.

*Lecture 01 hour. Laboratory 06 hours.*

*Prerequisite(s): BIO-1200 Oral Structure and Development, or concurrent enrollment.*

#### **DAST-1320 Dental Office Management**

03 Semester Credits

Development of sound dental office business procedures and identification of role of dental auxiliary in management of dental practice. Emphasis on appointment scheduling guidelines, bookkeeping, telephone etiquette, collections, banking and insurance procedures. Review of basic math, grammar and spelling. Typing and computer keyboard skills introduced and/or reinforced.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1200 Oral Structure and Development, or departmental approval.*

### **DAST-1400 Dental Assisting Methods II**

03 Semester Credits

Integrated study of dental equipment, instruments, materials, assistant and operator roles, and clinical procedures associated with delivery of specialty dental treatment. Physical and biological properties of materials discussed as foundation for application of these materials during endodontic, removable and fixed prosthodontics, orthodontic, surgical, and periodontic clinical procedures. Skills developed in preparation and manipulation of materials, instruments and equipment, in principles and practices of four-handed dentistry, in anticipating needs of operator, and in monitoring patient reaction. Observation in specialty practice required.

*Lecture 01 hour. Laboratory 06 hours.*

*Prerequisite(s): DAST-1300 Dental Assisting Methods I; DAST-1860 Dental Assisting Practicum, or concurrent enrollment.*

### **DAST-1410 Dental Assisting Radiography II**

02 Semester Credits

Theory and practice in fundamentals of oral radiographic technique for special applications including occlusal, panoramic, edentulous and pediatric radiographs. Emphasis on mastery of the paralleling exposure technique, using extension cone paralleling device, in producing diagnostically acceptable full mouth and bite-wing radiographs on adult patient. Patients will be regularly appointed to dental assisting radiography course clinic where students will develop clinical competence under instructor supervision. Skills in maintenance of processing equipment, duplication of radiographs, monitoring quality assurance of equipment, charting existing restoration from radiographs, monitoring quality assurance of equipment, charting existing restoration from radiographs, and recognition of pathologic condition commonly seen on radiographs.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): DAST-1310 Dental Assisting Radiography I.*

### **DAST-1420 Current Concepts for the Dental Assistant**

01 Semester Credit

Basic overview of clinical concepts and knowledge needed by Certified Dental Assistant. Emphasis on chairside assisting, infection control and radiology.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: industry-related experience.*

### **DAST-1800 Special Topics in Dental Assisting**

1-3 Semester Credits

Study of selected topics or current issues in Dental Assisting. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DAST-1820 Independent Study in Dental Assisting**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Dental Assisting. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Dental Assisting.*

### **DAST-1860 Dental Assisting Practicum**

04 Semester Credits

Practical application of dental assisting skill and principles via a field experience in a dental practice setting under supervision of program-recognized practitioner or supervisor. Students rotate through various dental facilities. Emphasis is placed on techniques, efficiency, patient contact and personal and professional growth. Participation in campus-based weekly seminar allows students to share learning experiences. Guest speakers.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 21 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): DAST-1400 Dental Assisting Methods II, or concurrent enrollment.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### DENTAL HYGIENE - DENT

#### DENT-1300 Preventive Oral Health Services I

04 Semester Credits

Principles of social science related to Dental Hygiene practice and professionalization of dental hygiene. Knowledge and understanding of oral inspection and history prior to initiation of treatment. Philosophy of preventive oral health and its relevance to dental hygiene. Etiology, pathogenesis, treatment and prevention of oral accretions. Principles of technique for oral prophylaxis. Students practice on manikins and apply instruments to the mouth. Study of diagnostic aids by dentist in treatment planning.

*Lecture 02 hours. Laboratory 06 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### DENT-1310 Dental Anatomy

02 Semester Credits

Terminology, comparative anatomy of teeth, temporomandibular joint, occlusion and dental anomalies.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### DENT-1330 Radiology

03 Semester Credits

History and development of x-ray, its nature and properties. Safety precautions and uses of x-ray in dentistry. Theory and practice in the fundamentals of oral radiographic technique. Film placement, and tube angulation, processing and mounting of films.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### DENT-1400 Preventive Oral Health Services II

05 Semester Credits

Methods and materials utilized to implement preventive oral health. Identification of diagnostic criteria for caries susceptibility used in oral diagnosis. Apply knowledge of plaque control in client oral physiotherapy instruction. Apply topical anticariogenic agents and understand the mode of action. Study of clinic manual to apply knowledge to all facets of treatment of clients in dental hygiene clinic. Students perform oral prophylaxis, expose radiographs, apply topical fluoride to teeth and provide preventive oral health services to adult and child clients in the clinic. Special needs of geriatric and handicapped adult and child clients in the clinic.

*Lecture 01 hour. Laboratory 12 hours.*

*Prerequisite(s): DENT-1300 Preventive Oral Health Services I.*

#### DENT-1410 Current Concepts in Dental Materials

02 Semester Credits

Physical properties of dental materials and basic principles of their preparation. Application of principles of dental materials by manipulating cements, bases, liners, amalgam, impression materials, composites, bonding and sealant materials in laboratory setting.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): DENT-1300 Preventive Oral Health Services I.*

#### DENT-1420 Periodontics I

02 Semester Credits

Basic etiology of periodontal diseases. Histopathological changes, clinical and radiographic characteristics due to periodontal diseases.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): DENT-1300 Preventive Oral Health Services I.*

#### DENT-1430 Head and Neck Anatomy

03 Semester Credits

Study of function of masticatory apparatus as a unit.

Lectures on Dentosseous structures and temporomandibular joint, muscles of tongue, nervous system, innervation and vascular supply to the head, and viscera of the head.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): DENT-1300 Preventive Oral Health Services I.*

#### DENT-1800 Special Topics in Dental Hygiene

1-3 Semester Credits

Study of selected topics or current issues in Dental Hygiene. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### DENT-2300 Preventive Oral Health Services III

05 Semester Credits

Study and clinical application of principles of performing oral prophylaxis, exposing radiographs, applying preventive therapeutics and developing home care education.

Introduction to treatment planning and assessment of clinical protocols with clients, including emphasis on special needs client or patient. Ten hours of case report presentations required to discuss clinical care.

*Lecture 01 hour. Laboratory 12 hours.*

*Prerequisite(s): DENT-1400 Preventive Oral Health Services II.*

#### DENT-2320 Periodontics II

02 Semester Credits

Discussion of periodontal diseases in children and adults including classifications of diseases. Phases of periodontal care, non-surgical and surgical treatment methods and maintenance of periodontal health.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): DENT-1420 Periodontics I.*

#### DENT-2330 Pharmacology and Therapeutics

02 Semester Credits

Drugs and anesthetics, with emphasis on those used in dental office. Discussion of pain control, modes of administration, pharmacokinetics and effects on body systems. Implications for preoperative and postoperative client care.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): DENT-1400 Preventive Oral Health Services II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **DENT-2400 Preventive Oral Health Services IV**

05 Semester Credits

Continuation of clinical experience integrating social and basic sciences within scope of dental hygiene practice. Review of preventive oral health service methodologies with discussion and application of periodontal regimens. Incorporation of nutritional counseling and supplemental preventive treatment procedures through case-based presentations. Ten hours of case report presentations required to discuss clinical care.

*Lecture 01 hour. Laboratory 12 hours.*

*Prerequisite(s): DENT-2300 Preventive Oral Health Services III.*

### **DENT-2410 Community Oral Health**

02 Semester Credits

Study of principles of public health dentistry. Research design as it relates to scientific journal articles. Concepts of epidemiology, dental needs assessment, planning, implementation, and evaluation of community dental health practices. Review of special needs programs and public health dental care approach to preventive dentistry. Three to six hours of community service required.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): DENT-2300 Preventive Oral Health Services III.*

### **DENT-2430 Dental Hygiene Practice**

01 Semester Credit

Preparation for entry into dental hygiene career. Topics include preparing for employment, legal and ethical concerns of dental practice, aspects of practice management, and planning for the future.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): DENT-2300 Preventive Oral Health Services III.*

### **DENT-2800 Special Advanced Topics in Dental Hygiene**

1-3 Semester Credits

Study of selected advanced topics or current issues in Dental Hygiene. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DENT-281S Special Advanced Laboratory Topics in Dental Hygiene**

01-03 Semester credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Dental Hygiene (see Credit Schedule of classes for current offerings). Repeatable for different topics. No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.

*Lecture 00 hours. Laboratory 02-06 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DENT-2820 Independent Advanced Study in Dental Hygiene**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Dental Hygiene. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Dental Hygiene.*

## **DIETETIC TECHNOLOGY - DIET**

### **DIET-1000 Consumer Nutrition**

02 Semester Credits

Study of physical, psychological and social importance of food to the body during life cycle as affected by environmental factors. Consumer skills concerned with labeling, shopping, menu planning and food preparation. Nutrition concerns assessed for changing behavior and developing future goals.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite: Eligibility for ENG-0990 Language Fundamentals II.*

### **DIET-1050 Sports Nutrition**

03 Semester Credits

Nutrition implications for human physical and athletic performance including energy and specific nutrients. Emphasis on food selection to enhance performance and nutrition recommendations with regard to varying athletic activities. Calculation of individual energy needs based on weight and activity level. Assessment of body composition and appropriate use of ergogenic aids. Designed for coaches, athletes, and persons interested in enhancing physical performance through nutritional means.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **DIET-1150 Nutrition for Children and Families**

02 Semester Credits

Nutrition course designed for persons interested in education of small children and relationship of nutrition to total development and health of children. Nutritional requirements and methods of encouraging development of good eating habits.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

### **DIET-1200 Basic Nutrition**

03 Semester Credits

Designed for nursing students and other health care majors to help develop awareness and knowledge of nutrition principles related to personal and patient care. Nutrient and energy requirements, weight control, and stages of life cycle. Dietary recommendations and food patterns applied to culture, diets and prevention of nutrition related disease.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite: Eligibility for ENG-0990 Language Fundamentals II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **DIET-1300 Principles Of Nutrition Care**

04 Semester Credits

Study of major classes of nutrients, their food sources, digestion, absorption, and utilization in humans. Nutritional assessment for individuals and population groups.

Nutritional implications of socioeconomic, cultural, and psychological factors affecting food selection patterns on normal health status. Nutritional recommendations and dietary guidelines for individuals and groups.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **DIET-1310 Introduction to Dietetics**

02 Semester Credits

Introduction to professional aspects and career opportunities in dietetics and nutrition. Information is provided about undergraduate programs, and competencies required of dietetic technicians/ dietitians/nutritionists.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **DIET-1330 Fundamentals of Food Production**

06 Semester Credits

Application of scientific principles, techniques, and methods of food production for normal and therapeutic meals. Use of food production equipment appropriate for different food service systems. Application of nutrition criteria and quality assurance standards.

*Lecture 04 hours. Laboratory 04 hours.*

*Prerequisite(s): DIET-1300 Principles of Nutrition Care; or DIET-1200 Basic Nutrition and DIET-1820 Independent Study in Nutrition and Dietetic Technology; and departmental approval: admission to program.*

### **DIET-1570 Nutrition Meal Planning**

02 Semester Credits

Application of nutrition knowledge to sound nutritious meal planning. Focus on role of menu in institutional food service as it relates to facility, equipment, staff, nutritional adequacy, merchandising and marketing for profitability. Includes hands-on applications.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

### **DIET-1580 Cost Control Procedures**

01 Semester Credit

Study of basic food cost control procedures, financial statements and budget preparation as it relates to nutrition services.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for MATH-1140 Applied Algebra or higher.*

### **DIET-1590 Purchasing Procedures**

01 Semester Credit

Application of dietetic quantity purchasing skills required in supervision of institutional nutritional care delivery systems. Food specifications, procurement systems, receiving, storage and inventory control.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for MATH-1140 Applied Algebra or higher.*

### **DIET-1820 Independent Study in Nutrition and Dietetic Technology**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Dietetic Technology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Dietetic Technology.*

### **DIET-1850 Food and Nutrition Systems Practicum**

04 Semester Credits

Application of techniques in food production; equipment use and care; employee management; information flow; documentation; sanitation regulations; food service personnel recruitment, training and retention; and quality assurance in a health care facility. Activities will provide students with an opportunity to demonstrate application of knowledge acquired in previous and concurrent nutrition and diet therapy courses.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 02 hours per week.*

*Prerequisite(s): DIET-1300 Principles of Nutrition Care; or DIET-1200 Basic Nutrition and DIET-1820 Independent Study in Nutrition and Dietetic Technology; and DIET-1590 Purchasing Procedures; and DIET-1570 Nutrition Meal Planning; and HOSP-1020 Sanitation and Safety.*

### **DIET-2300 Medical Nutrition Therapy I.**

02 Semester Credits

Orientation to clinical dietetics, basic skills required for medical nutrition care; nutritional assessment, nutrition counseling and clinical simulations in medical nutrition care planning. Basic nutrition knowledge applied to therapeutic diets.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): DIET-1300 Principles of Nutrition Care; or DIET-1200 Basic Nutrition and DIET-1820 Independent Study in Nutrition and Dietetic Technology.*

### **DIET-2310 Medical Nutrition Therapy II**

02 Semester Credits

Application of nutrition knowledge to specialized medical nutrition therapy. Moderate to high nutrition risk factors examined. Internal medical and renal disease examined.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): DIET-2300 Medical Nutrition Therapy I.*

### **DIET-2400 Community Nutrition**

03 Semester Credits

Introduction to community nutrition. Review and study of nutritional status of diverse population groups. A variety of community nutrition delivery systems examined.

Community resources, government programs, legislative and regulatory agencies described. Health assessment, health promotion strategies, nutrition education and evaluation of community, social, and health delivery systems explored.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): DIET-2300 Medical Nutrition Therapy I; and concurrent enrollment in DIET-2860 Community Nutrition Practicum.*

### **DIET-2500 Geriatric Nutrition**

03 Semester Credits

Concepts, scientific principles, techniques, and application of nutrition care management processes that focus on older persons. Discussion of aging theories, legislative issues and service delivery systems that impact upon senior adults. Physical, social, psychological and economical factors that influence the nutritional status, health and well-being of diverse cultural population groups in both institutional and community-based settings.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): DIET-2310 Medical Nutrition Therapy II; and concurrent enrollment in DIET-2870 Geriatric Nutrition Practicum.*

### **DIET-2800 Special Advanced Topics in Nutrition and Dietetic Technology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Dietetic Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **DIET-2820 Independent Advanced Study in Nutrition and Dietetic Technology**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Dietetic Technology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Dietetic Technology.*

### **DIET-2850 Medical Nutrition Care Practicum**

02 Semester Credits

Application of dietetic technician skills required in medical nutrition care of patients or residents in acute or long-term care facilities under supervision of registered dietitian. Application and documentation of care plans and patient education. Course provides forum for discussion of practicum experience.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): DIET-1850 Food and Nutrition Systems Practicum; and concurrent enrollment in DIET-2310 Medical Nutrition Therapy II.*

### **DIET-2860 Community Nutrition Practicum**

02 Semester Credits

Practicum experience under supervision of registered dietitian. Skills in delivery of nutrition services in community-based agencies, ambulatory health settings, or social service agencies. Includes nutrition intervention, health promotion, and community-based treatment techniques.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): Concurrent enrollment in DIET-2400 Community Nutrition.*

### **DIET-2870 Geriatric Nutrition Practicum**

02 Semester Credits

Supervised practicum experience in nutrition services department of long-term care facility, health clinic and community-based organizations that provide services to senior adults.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): Concurrent enrollment in DIET-2500 Geriatric Nutrition.*

### **DIET-2990 Dietetic Technology Professional Development Skills**

02 Semester Credits

Integration of knowledge acquired in basic, technical and non-technical areas in preparation for professional roles and life-long professional growth and development.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Concurrent enrollment in DIET-2500 Geriatric Nutrition and DIET-2870 Geriatric Nutrition Practicum.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### EARLY CHILDHOOD EDUCATION - ECED

#### **ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs**

04 Semester Credits

Introduction to child development and philosophy of early childhood education. Emphasis on developmental characteristics of young children and philosophy of developmentally appropriate practices in a variety of child care settings. Identification of effective multicultural and inclusive early childhood learning environments. Recognition of importance of integrated curriculum as teaching strategy for young children. Introduction to role of early childhood teacher as facilitator, and the development of effective family/center relationships. Licensing and accreditation standards for child care settings. Observations in early childhood education settings.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **ECED-1300 Language Development and Literature for Early Childhood: Integrated Curriculum**

03 Semester Credits

Overview of spoken and written language development of young children. Theories and research related to language and literacy development and role of teacher in facilitating this development. Planning, implementing and evaluating developmentally appropriate multicultural materials and experiences for language discovery and learning. Selection and integration of appropriate inclusive literature in early childhood settings. Extensive practice in learning how to listen and talk with young children.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

#### **ECED-1310 Art in Early Childhood: Integrated Curriculum**

02 Semester Credits

Exploration of planning, organizing, implementing, and evaluating a developmentally appropriate curriculum that fosters the creative and aesthetic development of young children. Preparation, organization, and maintenance of early childhood environment will be emphasized. Students in lecture/lab setting experience extensive variety of art media suitable for young children.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

#### **ECED-1320 Cognition and Problem Solving in Early Childhood: Integrated Curriculum**

02 Semester Credits

Introduction to extensive variety of curricular experiences which enhance young children's intellectual curiosity and critical thinking skills. Role of teacher in facilitating science, math, problem solving experiences, scientific methods/learning process explored. Students participate in lecture/lab setting with variety of hands on problem solving activities.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

#### **ECED-1330 Music, Movement and Outdoor Environments in Early Childhood Education: Integrated Curriculum**

04 Semester Credits

Exploration of appropriate methods and materials for implementation of music in early childhood curriculum. Impact of music experiences on cognitive, socio-emotional and physical/motor development examined. Includes creative self expression using movement, sounds, songs, musical instruments, selection of recordings, multicultural experiences in music and use of community resources. Development and use of outdoor environments. Integration of movement activities.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ECED-1010: Introduction to Early Childhood Education: Children's Development and Programs.*

#### **ECED-1400 Administration and Leadership in Early Childhood**

04 Semester Credits

Overview of major administrative principles, types of child care centers, legislative mandates, center policies and procedures, insurance ramifications, design of physical facilities, purchasing, budgeting, recordkeeping, and professional public relations. Programmatic formats as related to philosophical assumptions, educational theories and environmental design with respect to infants, toddlers, preschool and school age settings. Modes of staff support and management including problem solving and conflict resolution surveyed.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs or concurrent enrollment.*

#### **ECED-1700 Including Children with Special Needs**

03 Semester Credits

Survey course focusing on children with special needs and their families. Emphasis on observation, identification, referral and adaptations of environment for inclusion of children with disabilities. Family centered interventions, community resources, legal mandates and communication skills necessary to work with families, children, and specialists in a variety of settings included.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs, or concurrent enrollment.*

#### **ECED-1820 Independent Study in Early Childhood Education**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Early Childhood Education. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Early Childhood Education.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ECED-1860 Experience with Young Children in Early Childhood Settings**

03 Semester Credits

Practice within diverse early childhood settings. Students introduced to developmentally appropriate care and education of young children within assigned setting. Preparation, organization and maintenance of an educational environment, responsive interaction and communication strategies, planning and presentation of experiences/activities for young children emphasized.

Experience provided in relating to wide array of individuality among children. Cultural and familial diversity, adjustment of children to group setting and development of positive work relationships emphasized.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs; and ECED-1300 Language Development & Literature for Early Childhood: Integrated Curriculum, or concurrent enrollment; and departmental approval.*

### **ECED-2300 Child Behavior and Guidance**

03 Semester Credits

Discussion and development of a variety of guidance and classroom management strategies for young children based upon child development and anti-bias principles. Emphasis on preparing, organizing, and maintaining physically and psychologically safe environment. Establishment and maintenance of positive, collaborative family relations and supportive, professional, ethical behavior emphasized. Consequences of stress and trauma on child development and behavior explored. Skills strengthened in observing and assessing child behavior to enhance planning for growth of young children.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

### **ECED-2400 Center-Family Relationships**

02 Semester Credits

Develop skills to work with families in fostering optimal development and growth of children. Emphasis on interpersonal techniques that will promote positive relationships with family, child care center and community. Explore different models for family involvement. Focus on working with socially, culturally, and linguistically diverse families.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

### **ECED-2500 Infant/Toddler Development, Relationships, and Programs**

03 Semester Credits

Comprehensive coverage of broad areas of infant and toddler development and care with special emphasis on developmentally appropriate practices for adults who work with children ages birth to three. Major developmental milestones in infant and toddler growth; creation of safe, healthy, and supportive learning environments for children under three. Selection of materials and equipment for center or home-based care; analysis of professional standards for high quality interactions between adults and very young children.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs.*

### **ECED-252Z Independent Living Skills for Special Needs Child: Transition Course**

03 Semester Credits

Transition Course. Replaces ECED-252 Independent Living Skills for the Special Needs Child. Completes a degree requirement. Role of educational assistant in planning, implementing and adopting developmentally appropriate curriculum. Appropriate strategies to meet specific needs of children with disabilities or developmental delays, including use of adaptive and assertive technology.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### **ECED-253Z Field Experience With Special Needs Child: Transition Course**

02 Semester Credits

Transition Course. Must have completed ECED-141 Role of the Special Needs Assistant, and ECED-170 The Special Child. Replaces ECED-253 Field Experience with the Special Needs Child. Completes a degree requirement. Practical experience for educational assistant in setting serving the child with special needs. Participation in planning and implementing developmentally appropriate curriculum and instructional practices based on knowledge of individual children. Function as collaborative team member.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): ECED-141 Role of the Special Needs Assistant, and ECED-170 The Special Child.*

### **ECED-2800 Special Advanced Topics in Early Childhood Education**

1-3 Semester Credits

Study of selected advanced topics or current issues in Early Childhood Education. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ECED-2820 Independent Advanced Study in Early Childhood Education**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Early Childhood Education. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Early Childhood Education.*

### **ECED-2870 Early Childhood Education Student Teaching Practicum**

02 Semester Credits

Participation in assigned early childhood education settings under college supervision to develop effective skills with young children, families, and staff. Integration of principles of development in designing and implementing developmentally appropriate curriculum, learning experiences and professionalism. Creation of inclusive environments through respectful, sensitive interactions. Each student will spend 240 hours per semester in field experience.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 16 hours per week.*

*Prerequisite(s): ECED-1860 Experience with Young Children in Early Childhood Settings; concurrent enrollment in ECED-2990 Early Childhood Education Teaching Seminar; and departmental approval.*

### **ECED-2990 Early Childhood Education Student Teaching Seminar**

03 Semester Credits

As capstone course, student will focus on consolidation and integration of knowledge, skills and dispositions associated with becoming effective, knowledgeable lead/group teacher of young children. Focus includes creating appropriate learning environments, developing professional conduct, and recognizing ethical issues. Preparation of materials to support wide variety of thinking processes and assessment processes addressed. Focus on teaching to individual styles and incorporating appropriate guidance techniques for managing groups of children in early childhood settings. Recognizing and maintaining collaborative relationships with families of different structures, social and cultural backgrounds. Recognizing opportunities for professional development.

*Lecture 02 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): ECED-1860 Experience in Early Childhood Settings; concurrent enrollment in ECED-2870 Early Childhood Student Teaching Practicum; and departmental approval.*

## **EARTH SCIENCE - ESCI**

### **ESCI-1310 Physical Geography**

03 Semester Credits

Introductory study of physical elements of geography. Includes earth-sun relationships, maps, atmospheric components and interactions, elements and controls of weather and climate, water resources and their distribution, vegetation associations, animal associations, ecological relationships, soil types, landforms, and plate tectonics. World distribution, causal relationships and significance to man are stressed. To fulfill laboratory science requirements, students should also enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **ESCI-131L Laboratory in Physical Geography**

01 Semester Credit

Laboratory studies include the scientific method, map interpretation and construction, remote sensing, energy transfers, weather components, climate classification, hydrology, pedology, ecology, plant and animal geography, and plate tectonics.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in ESCI-1310 Physical Geography is highly recommended.*

### **ESCI-1410 Physical Geology**

03 Semester Credits

Topics include materials and structures of the earth; processes and agencies which change earth's crust. Mineral composition of rocks; work of gravity, water, winds, and glaciers as agents of erosion; volcanoes and earthquakes as forces which change earth's surface. To fulfill laboratory science requirements, students should also enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **ESCI-141L Laboratory in Physical Geology**

01 Semester Credit

Laboratory studies include minerals, rocks, volcanoes, geologic dating, topographic maps and determination of depositional and erosional features, earthquake epicenter locations, folds and faults, interpretation of geologic maps, plate tectonic processes and boundaries, and field work to become familiar with local geology. Regularly scheduled field trips are integral part of this course.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in ESCI-1410 Physical Geology is highly recommended.*

### **ESCI-1510 Historical Geology**

03 Semester Credits

Geologic history of the earth and biota. Special emphasis on North America. Topics include plate tectonics, relative and absolute dating, rocks and their significance as indicators of environment, interpretation of geologic maps, evolution, fossilization, and major groups of fossils. To fulfill laboratory science requirement, students should also enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **ESCI-151L Laboratory in Historical Geology**

01 Semester Credit

Laboratory studies include mineral and rock identification, significance of rock type, relative and absolute dating, stratigraphy, fossilization, fossil identification and significance, evolutionary patterns, cladistics, geology and paleontology of major geologic time divisions, and field work. Required field work is integral part of this course.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in ESCI-1510 Historical Geology is highly recommended.*

### **ESCI-1610 Geology of the National Parks**

03 Semester Credits

Studies of each park will include reasons why each area was set apart as a park, its geologic history, its present lithology and topography, and influences of lithology and topography on climatic and biotic factors (and vice versa). Ecological and geologic problems that have arisen because of presence of humans in parks or in adjacent areas also considered. To fulfill laboratory science requirement, students should also enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **ESCI-161L Laboratory in Geology of the National Parks**

01 Semester Credit

Laboratory studies include use of topographic maps, aerial photos, remote sensing images, and geologic maps; volcanism and earthquakes, physiographic provinces; identification of igneous, sedimentary and metamorphic rocks and structures; studies of depositional and erosional features of streams, winds, glaciers, and waves; fossil identification; analyses of climatic and biological data; plate tectonics; investigations into ecological problems of many national parks. Field work required.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in ESCI-1610 Geology of the National Parks is strongly recommended.*

### **ESCI-2300 Introduction to the Science of Ecosystems**

03 Semester Credits

Studies of lithosphere, atmosphere, hydrosphere, and biosphere incorporated into comprehensive study of ecosystems. Emphasis placed on effects of humans on these ecosystems and how altered ecosystems, in turn, affect humans. Effects of humans to be studied are primarily those that are inflicted on ecosystems because of their numbers, concentrations, standards of living, and everyday economic activities.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Completion of any course in Biology, Chemistry, Earth Science, Physical Science, or Physics; and eligibility for ENG-1010 College Composition I.*

### **ESCI-2800 Special Advanced Topics in Earth Science**

1-3 Semester Credits

Study of selected advanced topics or current issues in Earth Science. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **ESCI-281T Special Advanced Laboratory Topics in Earth Science**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Earth Science (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ECONOMICS - ECON

#### **ECON-1210 Survey of Economics**

03 Semester Credits

Overview of economic principles and problems designed to provide general understanding of structure, organization and operation of our economy. Relationship of economy to our social and political welfare and its determination of the fundamental standard of living, on both macro and micro levels.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ECON-1220 Economic Development of the American Economy**

03 Semester Credits

Evolutionary development of American economic system. Review of changes in economic and organizational structure, emphasizing application of fundamental economic explanation of change.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ECON-1600 recommended for students without prior knowledge of economics).*

#### **ECON-1600 Principles of Economics**

01 Semester Credit

Developed for students with little or no knowledge of economics. Introduction to language, tools, methods, and topics of economics. Graphing, beginning linear equations, production possibility concepts, basic market operations and other topics fundamental to study of economics.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### **ECON-1610 Principles of Macroeconomics**

03 Semester Credits

Study of broad economy including measurement and analysis of economic activity, government and its roles in market system, banking system, monetary policy, economic growth and international economics.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ECON-1600 recommended for students without prior knowledge of economics).*

#### **ECON-1620 Principles of Microeconomics**

03 Semester Credits

Study of detailed economy at firm and industry level with emphasis on market theory (supply/demand), production, and price and output determination as they vary by market structure. Includes current problems and policy concerns.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ECON-1600 recommended for students without prior knowledge of economics).*

#### **ECON-1800 Special Topics in Economics**

1-3 Semester Credits

Study of selected topics or current issues in Economics. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **ECON-1820 Independent Study in Economics**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Economics. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Economics.*

### EDUCATION - EDUC

#### **EDUC-1010 School and Society**

03 Semester Credits

Designed to introduce student to broad and complex field of public education. Emphasis on personal and professional characteristics required for successful teaching.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **EDUC-2010 Approaches to Teaching**

03 Semester Credits

General strategies and skills of instruction with emphasis on curriculum design, instructional planning, learner diversity, decision making, interpersonal communication, questioning, and classroom management.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): EDUC-1010 School and Society.*

#### **EDUC-2050 Human Diversity in Education**

03 Semester Credits

Relationships between variety of socio-cultural patterns of students, communities, and abilities to instruct.

Development of strategies for increasing educational potential of all students.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): EDUC-1010 School and Society; PSY-2030*

*Educational Psychology, or concurrent enrollment; and concurrent enrollment in EDUC-2850 Sophomore Practicum; or departmental approval.*

#### **EDUC-2850 Sophomore Practicum**

02 Semester Credits

Participation of students in field experience at assigned sites under college supervision to develop, implement, and evaluate practical skills in teaching.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): EDUC-1010 School and Society; PSY-2030*

*Educational Psychology, or concurrent enrollment; and concurrent enrollment in EDUC-2050 Human Diversity in Education; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### APPLIED INDUSTRIAL TECHNOLOGY - (Electrical Construction) - ATEL

#### ATEL-1300 Direct Current Fundamentals

03 Semester credits

Study of Ohm's Law, electronic theory, series, and parallel circuits, Kirchoff's Law, motor sizes, wire sizes, voltage drop, wiring systems, kinds of wire insulation, and troubleshooting

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to any Applied Industrial Technology program.*

#### ATEL-1310 Alternating Current Fundamentals

03 Semester credits

Properties of alternating current, A.C. measurement, inductance and inductive reactance, capacitance and capacitive reactance, impedance, series and parallel A. C. circuits, resonance, power factor correction.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ATEL-1300, Direct Current Fundamentals or departmental approval: admission to any Applied Industrial Technology program.*

#### ATEL-1330 National Electric Code

02 Semester credits

Study of the national and local electrical codes for wiring and apparatus. Covers wiring design and protection, wiring methods and materials, general use equipment, special occupancies, special equipment, and use of table and diagrams for solution of practical wiring problems.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to any Applied Industrial Technology program.*

#### ATEL-1350 Industrial Safety

01 Semester credit

Selected topics to cover occupational safety and health. Students become familiar with rules and regulations for OSHA compliance.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to any Applied Industrial Technology approval.*

#### ATEL-1360 Blueprint Fundamentals - Electrical

02 Semester credits

Identifying components, electrical symbols, diagrams, and schematics derived from blueprints.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to any Applied Industrial Technology program.*

#### ATEL-2300 Industrial Electronics Fundamentals I

03 Semester credits

Introduction to electronics which includes semi-conductor theory and circuits, transistor theory and circuits, power supplies, integrated circuits, oscillator circuits, photosensitive devices, and pulse circuits.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ATEL-1310 Alternating Current Fundamentals.*

#### ATEL-2310 Industrial Electronics Fundamentals II

03 Semester credits

Study of electricity as it relates to environmental control systems, fire alarms, security systems, smoke detectors and HVAC systems.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite: ATEL-2300 Industrial Electronics Fundamentals I.*

#### ATEL-2350 Programmable Logic Controllers

03 Semester credits

Introduction to programming techniques, hardware configuration and theory of operation of a programmable logic controller. Systems to be studied may include the Allen-Bradley PLC 2 and Modicon Industrial Controllers.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ATEL-1300 Direct Current Fundamentals.*

#### ATEL-2500 AC/DC Motors and Generators

04 Semester credits

Direct current motor construction and principles of operation, kinds of D.C. motors and their characteristics and control, permanent magnet motor movement, ammeter and voltmeter construction, operation care and use, watt-meter and wheatstone bridge covered. Laboratory experience with D.C. motors, Alternators, rotating magnetic fields, A.C. motors, speed control, types of winding, and introduction to A.C. motor control.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ATEL-1300 Direct Current Fundamentals, and ATEL-1310 Alternating Current Fundamentals.*

#### ATEL-2510 Motor Controls

03 Semester credits

Introduction to DC and AC motor control circuits.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ATEL-2310 Industrial Electronics Fundamentals II, or concurrent enrollment*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY - EET

#### EET-1110 DC Electric Circuits

03 Semester Credits

Direct-current (DC) circuit fundamentals involving resistance, capacitance, and inductance. Emphasis on conventional current flow, electrical quantities and units of measurement, sources of EMF, Ohm's Law, Kirchhoff's Laws, Mesh and Nodal circuit analysis, Superposition, Thevenin's and Norton's Theorems, RC and RL time constants, and magnetic circuits as applied to series, parallel, and series-parallel circuit networks. Computer simulation and practical laboratory experience using electrical measuring instrumentation to observe and verify theories and concepts presented during lectures.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Eligibility for MATH-1160 Technical Mathematics I.*

#### EET-1210 AC Electric Circuits

03 Semester Credits

Fundamentals of alternating current (AC) circuits involving resistance, capacitance, and inductance. Sinusoidal voltage, current power, phase, resonance, and frequency response of basic circuit elements in series, parallel, and series-parallel connections as analyzed using Kirchhoff's laws, Mesh, Nodal, and Bridge Network analysis, Delta- Wye conversions, Superposition, Thevenin's, Norton's and Maximum Power Transfer theorems. Decibels, filters, Bode plots, Fourier series, polyphase transformers, and system analysis studied. Computer simulation and practical laboratory experience using AC instrumentation for measuring series-parallel networks to observe and verify theory and concepts presented during lectures.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-1110 DC Electric Circuits; and MATH-1360 Technical Mathematics II, or concurrent enrollment.*

#### EET-1220 Circuits and Electronics

03 Semester Credits

Direct-current (DC) and alternating-current (AC) circuit fundamentals involving resistance, capacitance, and inductance. Electrical quantities and units of measurements: Ohm's law, Kirchhoff's laws, network analysis and network theorems presented as applied to series, parallel, and series/parallel DC and AC circuits. Topics include RC and RL time constants, phasors, operators, impedance, admittance, and power triangles, power factor correction, polyphase systems, and transformers. Computer simulation and practical laboratory experience using electrical measuring instrumentation to observe and verify theories and concepts presented during lectures.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): MATH-1360 Technical Mathematics II, or concurrent enrollment.*

#### EET-1230 Telecommunications I

03 Semester Credits

Introductory course in analog communications systems and circuits. Introduces concept of complex waveforms and analysis of complex waveforms for frequency content. Presents fundamentals of transmission and reception of amplitude, single sideband, frequency and phase modulated signals. Systems and circuits for television broadcast and reception. Overview of broadcast antennas and antenna feed systems.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-1210 AC Electric Circuits, or concurrent enrollment.*

#### EET-1240 Digital Circuits/Microprocessors I

03 Semester Credits

Introduction to binary number system and to all logic gates used in digital circuits. Boolean algebra, logic gate equivalents and Karnaugh maps are used to simplify Boolean logic equations and various logic circuits. Decoders, multiplexers, latches, flip-flops, counters, and shift registers studied in detail. Laboratory experiments to reinforce lecture material used throughout course.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-1210 AC Electric Circuits, or concurrent enrollment.*

#### EET-2110 Industrial Electronics I

03 Semester Credits

Construction, theory of operation, performance characteristics and application of DC motors, DC auxiliary devices, AC single phase transformers, AC three phase transformers, AC three phase power generation, AC power distribution, AC synchronous motors, AC three phase induction motors, AC single phase motors, AC stepper motors, and AC special motors.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): MATH-1360 Technical Mathematics II, and EET-1210 AC Electric Circuits.*

#### EET-2120 Electronics I

03 Semester Credits

Introductory course to most common solid-state devices used in electronic circuits: the diode, bipolar transistor, field effect transistor, and uni-junction transistor. Graphical and analytical DC and AC analysis of various electronic circuits used. Computer circuit analysis program Pspice used to predict DC voltages and currents and frequency response of different circuits. Laboratory experiments reinforce topics studied in lecture.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-1210 AC Electric Circuits, and MATH-1360 Technical Mathematics II.*

#### EET-2130 Telecommunications II

04 Semester Credits

Continuation of telecommunications course sequence; introductory course in Data Communications and Network Theory. Topics include systems and techniques for digital and data communications, data communications protocol, digital transmission, time and frequency division multiplexing, as well as introductory material on communications networks.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-1230 Telecommunications I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **EET-2140 Digital Circuits/Microprocessors II**

03 Semester Credits

Introduction to microprocessor theory and function. Topics include programming concepts and program development, bus configuration, memory, timing relationships, data input and output techniques, interrupt handling and introduction to support chips.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-1240 Digital Circuits/ Microprocessors I.*

### **EET-2220 Electronics II**

03 Semester Credits

Continuation of electronic circuits. Includes study of difference amplifier used in operational amplifiers. Additional topics include various uses of operational amplifier, voltage comparator, digital- to-analog converter (DAC), analog-to-digital converter (ADC), active filter circuits, oscillators and sample hold circuits.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-2120 Electronics I.*

### **EET-2230 Telecommunications III**

03 Semester Credits

Final course in electronic telecommunication series.

Overview of fiber optic, microwave and broadband cable telecommunications media systems.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): EET-2130 Telecommunications II.*

### **EET-2240 Digital Circuits/Microprocessors III**

03 Semester Credits

Concluding course in Digital/Microprocessors series.

Focuses on application of microprocessor and related support chips, software and hardware interfacing with various input/output devices, and related software topics stresses control and measurement applications.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-2140 Digital Circuits/ Microprocessors II.*

### **EET-2250 Industrial Electronics II**

03 Semester Credits

Overview of common industrial power control circuits and devices including thyristors, unijunction transistors, relays and transient suppression devices. Introduction to relay logic and operation, and programming of programmable controller.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-2220 Electronics II, or concurrent enrollment.*

### **EET-2290 Electrical Design Project**

02 Semester Credits

Designed to allow students opportunity to demonstrate and apply capabilities and skills acquired during previous engineering technology course work. Students will choose approved electronic project compatible with their interest and background. Project will include research, documentation, construction, and testing and conclude with a report and presentation of results.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): EET-2220 Electronics II, or concurrent enrollment.*

### **EET-2400 Biomedical Instrumentation I**

03 Semester Credits

Students introduced to biomedical program and to organization of hospital and/or health facilities. Study of anatomy and physiology as pertaining to safety checking, servicing and maintaining biomedical electronic equipment (such as ECG, EEG, electro-surgery units, defibrillators, infusion pumps, patient monitors, and other monitoring and diagnostic equipment). Hospital electrical safety and interaction with nursing staff and physicians continuously emphasized. Laboratory experiments on centrifuges, infusion pumps and electrosurgery units.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-2120 Electronics I, or concurrent enrollment.*

### **EET-2410 Biomedical Instrumentation II**

03 Semester Credits

Continuation of biomedical program. Includes study of general hospital equipment such as EKG machines, defibrillators, automated medtesters, patient monitors and ventilator. Emphasis on using various technical service manuals to repair these and other biomedical equipment. Safety checks performed on all biomedical equipment used in laboratory.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): EET-2400 Biomedical Instruments I; and EET-2220 Electronics II, or concurrent enrollment.*

### **EET-2490 Biomedical Design Project**

02 Semester Credits

Designed to allow student opportunity to demonstrate and apply capabilities and skills acquired during their previous engineering technology course work. Students will choose approved biomedical project compatible with their interest and background. Project will include research, documentation, construction, and testing and conclude with a report and presentation of results.

*Lecture 01 hour Laboratory 03 hours.*

*Prerequisite(s): EET-2220 Electronics II, or concurrent enrollment; and EET-2410 Biomedical Instrumentation II, or concurrent enrollment.*

### **EET-2500 Instrumentation and Control**

03 Semester Credits

Concepts and practice in measurement and control of mechanical process variables in industry. Introduction to methods of instrumentation, characteristics of instruments, sensors, data acquisition and presentation, measurement and analysis of basic dimensions, force, motion, pressure, temperature, fluid flow and fluid viscosity.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PHYS-1220 College Physics II; and EET-1220 Circuits and Electronics, or EET-2120 Electronics I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **EET-2590 Telecommunications Design Project**

02 Semester Credits

Designed to allow students opportunity to demonstrate and apply capabilities and skills acquired during previous engineering technology course work. Students will choose approved telecommunications project compatible with their interest and background. Project will include research, documentation, construction, and testing and conclude with a report and presentation of results.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): EET-2220 Electronics II, or concurrent enrollment; and EET-2230 Telecommunications III, or concurrent enrollment.*

### **EET-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

### **EET-2900 Clinical Internship**

04 Semester Credits

Provides student with on-the-job experience in biomedical equipment field. Students supervised by qualified biomedical equipment technicians, assisting and repairing various biomedical equipment.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 360 hours per semester.*

*Prerequisite(s): EET-2410 Biomedical Instruments II, EET-2220 Electronics II, and EET-2140 Digital Circuits Microprocessors II.*

## **EMERGENCY MEDICAL TECHNOLOGY - EMT**

### **EMT-1300 Emergency Medical Technician--Basic**

05 Semester Credits

Comprehensive study of basic life support skills of emergency medical technician-basic including: recognition of nature and seriousness of patient's condition or extent of injuries; assessing requirements of emergency care, lifting, moving, handling and transporting patients as part of prehospital emergency care system.

*Lecture 04 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in EMT-1310 Cardiopulmonary Resuscitation, and EMT-1740 Emergency Medical Technician-Ambulance; and departmental approval: admission to program.*

### **EMT-1310 Cardiopulmonary Resuscitation**

01 Semester Credit

Introduction to respiratory and circulatory emergencies in adults, children and infants. Instruction and treatment methods to meet American Heart Association or American Red Cross standards for CPR.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

### **EMT-1320 Heavy Rescue**

02 Semester Credits

Techniques of heavy rescue, safe management of equipment used in heavy rescue, entrapment and patient extrication.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: certified EMT-B; emergency workers must be in good health or have physician's verification; must be able to lift 75 pounds.*

### **EMT-1330 Defensive Driving -- EMT**

01 Semester Credit

Principles and practices of defensive driving related to emergency rescue vehicles including laws, conditions of accidents and methods of avoiding accidents.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program, or certified EMT-B, or working with safety forces; must have valid Ohio driver's license.*

### **EMT-1340 Emergency Medical Services Communications**

01 Semester Credit

Theoretical and technical knowledge required to operationally perform functions of Emergency Medical Dispatcher. Radio and telephone techniques, dispatching, triage and prioritization procedures and pre-arrival medical instructions. Radio equipment and FCC regulations governing use of VHF and UHF radio frequencies.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): EMT-1300 Emergency Medical Technician-Basic, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **EMT-1740 Emergency Medical Technician -- Ambulance** 01 Semester Credit

Clinical experience based in hospitals under supervision. Students rotate through selected hospitals and squad units with focus on patient assessment, interaction with patients and staff, and basic emergency skills. Successful completion of in-hospital rotation required as a portion of EMT-B certification.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: Off-campus field experience: 33 hours/semester.*

*Prerequisite(s): Concurrent enrollment in EMT-1300 Emergency Medical Technician-Basic, and departmental approval: admission to program.*

### **EMT-1800 Special Topics in EMT**

1-3 Semester Credits

Study of selected topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **EMT-2000 Instructional Techniques -- EMT**

02 Semester Credits

Instructional training methods necessary to impart clinical competencies to students. Develops skill in instructional design, delivery and evaluation.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program or currently certified EMT-B.*

### **EMT-2010 Emergency Medical Technology Technical Management**

02 Semester Credits

Diagnostic categories of emergencies, emergency service categorization, hospital care capabilities, patient transport protocol and transfer agreements. Area-wide planning in preparation for disaster and procedures for establishing a training system for emergency medical personnel.

Exploration of emergency medical service planning and operation including new trends and managed care.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: certified EMT-B, EMT-I or EMT-P; emergency service administrators will be considered.*

### **EMT-2300 EMT--Intermediate**

04 Semester Credits

Principles and practices of emergency medical technicians at intermediate level, including patient assessment, airway management, shock, cardiac management, roles and responsibilities.

*Lecture 02 hours. Laboratory 03 hours.*

*Other Required Hours: Off-campus field experience: 45 hours/semester.*

*Prerequisite(s): Departmental approval: current State or National registry, EMT-B certification.*

### **EMT-2310 Paramedic Theory I**

10 Semester Credits

Principles and practices of emergency medical technicians at intermediate and paramedic level including roles and responsibilities, EMS systems, medical/legal considerations, EMS communications, rescue, major incident responses, stress management, shock, pharmacology, trauma, burns, environmental injuries, automated defibrillation and medical emergencies. At end of course, student eligible to take National Registry EMT-I examination. Additional field experience with rescue squad required.

*Lecture 06 hours. Laboratory 06 hours.*

*Other Required Hours: Directed practice: 11 hours per week.*

*Prerequisite(s): Departmental approval: certified EMT-B and admission to program.*

### **EMT-2320 Paramedic Theory II**

10 Semester Credits

Anatomy and physiology of cardiovascular system, assessment of cardiac patient, EKG interpretation, treatment modalities, pharmacology, defibrillation, and advanced cardiac life support. Management of geriatric, pediatric, neonatal, and behavioral emergencies including assessment and treatment, assessment and treatment of burns, environmental injuries, and medical emergencies. Pediatric advanced life support and basic trauma life support. Additional field experience with rescue squad required.

*Lecture 06 hours. Laboratory 06 hours.*

*Other Required Hours: Directed practice: 11 hours per week.*

*Prerequisite(s): EMT-2310 Paramedic Theory I, and departmental approval.*

### **EMT-2740 Advanced Paramedic Techniques**

04 Semester Credits

Designed to train paramedics to become critical care transport specialists and to acquire advanced skills in treatment and care of critically ill patient during transport. Pathophysiology of serious diseases, trauma and advanced techniques of management, legal issues, transport complications, physiologic alterations during air transport and infection control procedures.

*Lecture 02 hours. Laboratory 03 hours.*

*Other Required Hours: Directed practice: 5 hours per week.*

*Prerequisite(s): Departmental approval: current Ohio National registry EMT-P certification, BCLS provider, ACLS provider, PALS provider and BTLIS provider/PHTLS. Other health care professionals considered with medical director approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ENGLISH - ENG

#### **ENG-0960 Reading Improvement**

03 Semester credits

Designed for students who need to improve basic comprehension. Emphasis in literal, inferential, and critical comprehension and vocabulary development.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Placement by department: appropriate placement test score.*

#### **ENG-0980 Language Fundamentals I**

06 Semester Credits

Emphasis on mastery of language fundamentals.

*Lecture 06 hours. Laboratory 00 hours.*

*Prerequisite(s): Placement by department: appropriate placement test score.*

#### **ENG-0990 Language Fundamentals II**

06 Semester Credits

Emphasis on basic essay writing skills, reading, study and test-taking skills.

*Lecture 06 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-0980 Language Fundamentals I, or placement by department.*

#### **ENG-1000 Using Grammar Effectively**

03 Semester credit

Development of clear, effective English sentences by studying form and function of words, phrases, and clauses.

Note: Class is not intended for transfer.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-0990, Language Fundamentals II or departmental approval.*

#### **ENG-1010 College Composition I**

03 Semester Credits

Study of and practice in principles of good writing.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Placement by department; or appropriate placement test score; or ENG-0990 Language Fundamentals II; or departmental approval: recommendation from instructor of prior English course; or ESL-1320 Reading & Writing III.*

#### **ENG-1020 College Composition II**

03 Semester Credits

Study of and practice in principles of good writing with emphasis on analytical writing, research paper, reading and interpretation of selected literary works.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1010 College Composition I.*

#### **ENG-102Z College Composition II: Transition Course**

01 Semester Credit

Transition Course. Must have completed ENG-101 College Composition. Replaces ENG-102 College Composition.

Fulfills prerequisite for ENG-1020 College Composition II.

Study and practice of good writing, with emphasis on interpretive papers and research papers.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): ENG-101 College Composition.*

#### **ENG-103Z College Composition III: Transition Course**

02 Semester Credits

Transition Course. Must have completed ENG-102 College Composition. Replaces ENG-103 College Composition.

Completes course sequence. Study and practice in principles of good writing, with emphasis on critical papers about literature.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-102 College Composition.*

#### **ENG-1070 Advanced Reading Improvement**

03 Semester Credits

Instruction in art and skills of efficient reading with emphasis on understanding and critical analysis of college-level material. Strategies to increase comprehension, promote vocabulary development, and improve ability to study and retain text-related information. Application to professional and business-related reading when adaptable.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, or placement by department.*

#### **ENG-2010 Creative Writing**

03 Semester Credits

Practice in imaginative writing; exploration of creative potential. Emphasis on sources of creativity and forms of expression in selected literary genres.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

#### **ENG-2150 Technical Writing I**

03 Semester Credits

The technical communication process; roles within complex organizations, and how those roles affect communication of technical information. Emphasis on writing reports effectively to meet needs of various readers within an organization.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

#### **ENG-2160 Technical Writing II**

03 Semester Credits

Develops students' abilities to distinguish between data, conclusions drawn from data, and recommendations based upon conclusions. Principles for design and use of effective visual aids in a technical report. Various report formats for effective communication.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-2150 Technical Writing I, or departmental approval.*

#### **ENG-2310 American Literature I**

03 Semester Credits

Survey of major works of American prose, poetry, and drama from early period through 1860.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ENG-2320 American Literature II

03 Semester Credits

Survey of major works of American prose, poetry, and drama from 1861 to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2350 British Literature I

03 Semester Credits

Survey of major works of British prose, poetry, and drama from early period to 1725.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2360 British Literature II

03 Semester Credits

Survey of major works of British prose, poetry, and drama from 1725 to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2410 Introduction to Literature: Poetry

03 Semester Credits

Critical analysis of selected works of poetry, designed to develop understanding and appreciation of poem and dramatic text as literary forms.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2420 Introduction to Literature: Fiction

03 Semester Credits

Critical analysis of selected works of fiction, designed to develop understanding and application of short story and novel as literary forms.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2430 Introduction to Literature: Drama

03 Semester Credits

Critical analysis of selected dramatic works designed to develop understanding and appreciation of drama as a literary form.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2510 African-American Literature I

03 Semester Credits

Study of major works of African-Americans from colonial period to 1950.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition, or departmental approval.*

### ENG-2520 African-American Literature II

03 Semester Credits

Study of major works of African-Americans from 1950 to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2600 Survey of Juvenile Fiction

03 Semester Credits

Fiction survey designed to cover various works frequently read by children and adolescents.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2710 Shakespeare

03 Semester Credits

Critical analysis of selected works of Shakespeare.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1020 College Composition II, or departmental approval.*

### ENG-2800 Special Topics in Literature

1-3 Semester Credits

Study of selected advanced topics or current issues in English. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### ENG-2820 Independent Advanced Research in Literature

1-3 Semester Credits

May be taken concurrently with any 2000-level course in English. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in English.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ENGLISH AS A SECOND LANGUAGE - ESL (formerly included in ENGLISH - ENG)

#### ESL-1110 English as a Second Language: Grammar for Communication I 04 Semester Credits

English for non-native speakers. Understanding of basic grammar structures of American English and practice in producing them. Focus on form, meaning, and use in oral and written communication.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): Placement by ESL assessment exam, or departmental approval; and concurrent enrollment in ESL-1120 ESL-Reading and Writing I, and ESL-1130 ESL-Speaking I; or departmental approval.*

#### ESL-1120 English as a Second Language: Reading and Writing I 05 Semester Credits

English for non-native speakers. Practice in reading high beginning texts. Practice in writing narratives and personal expression paragraphs using basic sentence patterns and correct spelling and punctuation.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): Placement by ESL assessment exam or departmental approval; and concurrent enrollment in ESL-1110 ESL-Grammar I, and ESL-1130 ESL-Speaking I; or departmental approval.*

#### ESL-1130 Speaking English as a Second Language I 03 Semester Credits

Spoken English for non-native speakers. Practice in speaking and listening to American English. Recognition and production of sounds, rhythm and intonation patterns at a basic level. Development of competence and confidence in listening comprehension and conversational skills within supportive structured situations.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Placement by ESL assessment, or departmental approval; and concurrent enrollment in ESL-1110 ESL-Grammar I, and ESL-1120 ESL-Reading & Writing I; or departmental approval.*

#### ESL-1210 English as a Second Language: Grammar for Communication II 04 Semester Credits

English for non-native speakers. Understanding of intermediate grammar structures of American English and practice in producing them. Focus on form, meaning, and use in oral and written communication.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ESL-1110 ESL-Grammar I, or placement by ESL assessment exam, or departmental approval; and concurrent enrollment in ESL-1220 ESL-Reading & Writing II, and ESL-1230 ESL-Speaking II; or departmental approval.*

#### ESL-1220 English as a Second Language: Reading and Writing II 05 Semester Credits

English for non-native speakers. Practice in reading intermediate texts. Practice in writing personal essays and responses to readings, using intermediate sentence patterns and correct spelling and punctuation.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): ESL-1120 ESL-Reading & Writing I, or placement by ESL assessment exam, or departmental approval; and concurrent enrollment in ESL-1210 ESL-Grammar II, and ESL-1230 ESL-Speaking II; or departmental approval.*

#### ESL-1230 Speaking English as a Second Language II

03 Semester Credits

Spoken English for non-native speakers. Practice in speaking and listening to American English. Recognition and production of sounds, rhythm and intonation patterns at intermediate level. Development of competence and confidence in listening comprehension and conversational skills within supportive, structured and non-structured situations.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ESL-1130 ESL-Speaking I, or placement by ESL assessment exam, or departmental approval; and concurrent enrollment in ESL-1210 ESL-Grammar II, and ESL-1220 ESL-Reading and Writing II; or departmental approval.*

#### ESL-1310 English as a Second Language: Grammar for Communication III 04 Semester Credits

English for non-native speakers. Understanding of advanced grammar structures of American English and practice in producing them. Focus on form, meaning, and use in oral and written communication.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ESL-1210 ESL-Grammar II, or placement by ESL assessment exam, or departmental approval; and concurrent enrollment in ESL-1320 ESL-Reading & Writing III; or departmental approval. (Concurrent enrollment in ESL-1330 ESL-Speaking III recommended.)*

#### ESL-1320 English as a Second Language: Reading and Writing III 05 Semester Credits

English for non-native speakers. Practice in reading advanced texts and literary material. Practice in writing interpretive essays and personal responses to readings, using advanced sentence patterns and correct spelling and punctuation.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): ESL-1220 ESL-Reading & Writing II, or placement by ESL assessment exam, or departmental approval; and concurrent enrollment in ESL-1310 ESL-Grammar III; or departmental approval. (Concurrent enrollment in ESL-1330 ESL-Speaking III recommended.)*

#### ESL-1330 Speaking English as a Second Language III

03 Semester Credits

Spoken English for non-native speakers. Practice in speaking and listening to American English. Recognition and production of sounds, rhythm and intonation patterns at advanced level. Development of critical listening and speaking skills for academic, professional, and social situations.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): ESL-1230 ESL-Speaking II, or placement by ESL assessment exam, or departmental approval. (Concurrent enrollment in ESL-1310 ESL-Grammar III and ESL-1320 ESL-Reading and Writing III recommended.)*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### ENVIRONMENTAL, HEALTH AND SAFETY TECHNOLOGY - EHST

#### **EHST-1300 Environmental Health and Safety I**

04 Semester credits

Study of U.S. Occupational Safety and Health Administration's (OSHA) laws and regulations that pertain to safety and health of workers. Concentration on researching, interpreting, summarizing, and applying OSHA regulations including communication standards. Introduction to a "proactive" philosophy of company compliance with OSHA regulations.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ENG-1010 College Composition I recommended for students without prior knowledge of law.)*

#### **EHST-130A Environmental Health and Safety I - Workers**

02 Semester credits

Study of U.S. Occupational Safety and Health Administration's (OSHA) laws and regulations that pertain to safety and health of workers. Concentration on researching, interpreting, summarizing, and applying OSHA regulations including hazardous communication standards.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ENG-1010 College Composition I recommended for students without prior knowledge of law.)*

#### **EHST-130B Environmental Health and Safety I - Hazardous Communication**

02 Semester credits

Study of U.S. Occupational Safety and Health Administration's (OSHA) laws and regulations that pertain to safety and health of workers. Emphasis on using standard approaches to providing safe and healthful working environment. Provides instruction concerning development and implementation of Hazard Communication Program for employees.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ENG-1010 College Composition I recommended for students without prior knowledge of law.)*

#### **EHST-1310 Introduction to Environmental Law**

04 Semester credits

Study of U.S. Environmental Protection Agency (EPA) laws and regulations, which protect our environment and health. Students learn steps in managing hazardous wastes including production, treatment, transportation, and disposal of hazardous materials. Involves reading, interpreting, and summarizing sections from the Code of Federal Regulations and The United States Code. Coverage includes: National Environmental Policy Act, Occupational Safety and Health Act, Clean Air Act, Clean Water Act, and Safe Drinking Water Act, Resource Conservation and Recovery Act, Comprehensive Environmental, Response, Compensation, and Liability Act, Emergency Planning and Community Right-to Know Act and related toxic laws. Provides overview of the roles of judicial and legislative agencies.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ENG-1010 College Composition I recommended for students without prior knowledge of law.)*

#### **EHST-131A Introduction to Environmental Law - Water and Air**

02 Semester credits

Study of U.S. Environmental Protection Agency (EPA) laws and regulations, which protect our environment and health. Involves reading, interpreting, and summarizing sections from the Code of Federal Regulations and The United States Code. Coverage includes: National Environmental Policy Act, Occupational Safety and Health Act, Clean Air Act, Clean Water Act and Safe Drinking Water Act. Provides overview of the roles of judicial and legislative agencies.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ENG-1010 College Composition I recommended for students without prior knowledge of law.)*

#### **EHST-131B Introduction to Environmental Law - Remediation**

02 Semester credits

Study of U.S. Environmental Protection Agency (EPA) laws and regulations, which protect our environment and health. Coverage includes the: Resource Conservation and Recovery Act, Comprehensive Environmental, Response, Compensation, and Liability Act, Emergency Planning and Community Right-to Know Act and related toxic laws. Management of hazardous wastes including production, treatment, transportation, and disposal of hazardous materials.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None (ENG-1010 College Composition I recommended for students without prior knowledge of law.)*

#### **EHST-1320 International Standards Organization (ISO) 14,000**

02 Semester credits

Overview and history of International Standards Organization 14,000 series, international guidelines for environmental management systems (EMS). Addresses EMS auditing, setting an environmental policy, specifying objectives and targets, performing life cycle analysis, waste minimization, environmental labeling, benefits of ISO certification, regulatory and certification requirements, implementing environmental management program, monitoring and measuring program results, and reviewing program to ensure continual improvement. Uses case study to develop an EMS.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **EHST-132A International Standards Organization (ISO) 14,000 - Management**

01 Semester credits

Addresses Environmental Management Systems (EMS) auditing, setting an environmental policy, specifying objectives and targets, performing life cycle analysis, waste minimization, environmental labeling, benefits of International Standards Organization certification, regulatory and certification requirements, implementing environmental management program, monitoring and measuring program results, and reviewing program to ensure continual improvement. Uses case study to develop an EMS.

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **EHST-132B International Standards Organization (ISO) 14,000 - Product Standards**

01 Semester credit

Provides an overview and history of ISO 14,000 series, international guidelines for environmental management. Addresses International Standards Organization provisions including life cycle assessment, environmental labeling, environmental performance evaluations, environmental aspects of product standards and terms used by ISO. *Lecture 01 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **EHST-1340 Interdisciplinary Environmental Issues**

03 Semester credits

Study of selected interdisciplinary current issues in Environmental Health and Safety through different disciplines including literature and theatre. Examines historical and philosophical aspects of environmental topics. Covers scientific and economic factors in making environmental decisions.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **EHST-1800 Special Topics in Environmental Health and Safety**

01-03 Semester credits

Study of selected topics or current issues in Environmental Health and Safety. Provides student an opportunity to explore various topics in greater detail (see class for current offerings). Repeatable for different topics. (No more than six credits of special topics may be applied toward elective and/or program graduation requirements.)

*Lecture 01-03 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **EHST-2300 International Environmental Issues**

02 Semester credits

Overview of environmental issues in the US and internationally. Analysis of global environmental issues including endangered species, overpopulation, ocean dumping, border problems, deforestation, Mexican environmental regulations and global warming. Emphasis on management options and use of international laws and treaties especially the North American Free Trade Agreement.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2310 CERCLA Superfund Sites**

02 Semester credits

Examines liability scheme and regulatory process established under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund. Explores how Superfund process works from time a site is identified through time delisted. Presents EPA practices and methodologies, including procedures by potentially responsible parties and public to participate in process. Participation in negotiation exercises and evaluation of the success or failure of CERCLA process using case studies.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2320 Environmental Negotiation, Mediation, & Conflict Resolutions**

02 Semester credits

Overview environmental dispute resolution in environmental policy and decision making. Examination of successful negotiation techniques and how and when to use mediation and other conflict resolution techniques. Includes negotiation, mediation and conflict resolution simulations and environmental case studies. Examines listening and interpersonal skills.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2330 Ecotourism**

02 Semester credits

Examination of ecotourism as economic development and conservation activity. Discussion and analysis of human dimensions of ecotourism and impacts of ecotourism on cultural, political and social systems of host country or region. Organizations and groups, which provide ecotourism opportunities, identified and the career opportunities in ecotourism discussed.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2340 Department of Transportation Regulations**

02 Semester credits

Detailed study of US Department of Transportation (DOT) regulations. Students introduced to certain Nuclear Regulatory Commissions (NRC) and Environmental Protection Agency (EPA) regulations pertinent to hazardous materials transportation. Students learn to interpret DOT regulations, recommend compliance strategies, and select packaging, labeling, documentation and placarding for selected hazardous materials.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2350 Emergency Response**

02 Semester credits

Develop an emergency response contingency plan for a facility or community. Preparedness includes analyzing hazards, writing and implementing contingency plans, training employees for an emergency, and evaluating effectiveness of contingency plan.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2360 Environmental Sampling and Management**

04 Semester credits

Covers methodology of sampling, analyzing and interpreting results of various hazardous material tests. Competency in interpreting results gained so that results can be used in decision-making processes related to hazardous materials. Includes industrial hygiene monitoring, testing pH and moisture content, and selecting analytical service laboratories.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): MATH-1060 Survey of Mathematics or higher level math course.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **EHST-2370 OSHA/DOT Refresher**

02 Semester credits

Provides Occupational Safety and Health Act (OSHA)/ DOT refresher training to annual hazardous waste workers and supervisors covered under 29 CFR 1910.120 (HAZWOPER). Covers regulations, medical surveillance, hazard recognition, toxicology, site control, safe work practices, monitoring, personal protective equipment, decontamination and site safety. Safe work practices for emergency procedures discussed.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1300 Environmental Health and Safety I and EHST-1310, Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-237A Occupational Safety and Health Act Refresher**

01 Semester credit

Provides OSHA refresher training to annual hazardous waste workers and supervisors covered under 29 CFR 1910.120 (HAZWOPER). Covers regulations, medical surveillance, hazard recognition, toxicology, site control, safe work practices, monitoring, personal protective equipment, decontamination and site safety. Discusses safe work practices and procedures for emergencies.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-237B Department of Transportation Refresher**

01 Semester credits

Provides refresher training to the annual workers covered under Department of Transportation (DOT), 49 CFR, Subpart HM -181 training requirements. Covers DOT training for shippers and handlers of hazardous materials including general awareness, safety and job specific training including use of hazardous material table, completing shipping papers, packaging, marking labeling and placarding. Discusses safe work practices and procedures.

*Lecture 01 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1300 Introduction to Environmental Health and Safety I, or departmental approval: equivalent experience.*

### **EHST-2380 Risk Assessment**

02 Semester credits

Covers basic principles and methods of conducting a risk assessment. Examines both value and limitations of risk assessment. Focuses on environmental and health risks and includes an overview of toxicological principles, reviews how risk management decisions made in the public and private sectors. Examines how to communicate environmental and health risk, public policy choices and trade-offs to public.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1300 Introduction to Environmental Health & Safety I, or departmental approval: equivalent experience.*

### **EHST-2390 Solid and Hazardous Waste Management**

03 Semester credits

Study of statutes, regulations and guidelines pertaining to hazardous waste management, with emphasis on requirements of the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended. Management of hazardous wastes including "cradle to grave" requirements and enforcement strategies. Involves reading, interpreting, and summarizing sections from Code of Federal Regulations and the United States Code.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2400 Environmental Health and Safety II**

03 Semester credits

Provides overview of annual scheduled and proposed changes to federal and state environmental laws. Examines methods to track changes to laws through use of the federal register and various on-line services. Describes proactive methods to amend current laws.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): EHST-1300 Environmental Health and Safety I, and EHST-1310 Introduction to Environmental Law, or departmental approval: equivalent experience.*

### **EHST-2940 Field Experience**

01 Semester credits

Supervised field experience which relates to individual student's occupational objectives. Students assigned to a site to study regulatory compliance of federal and state environmental laws. Preparation of required governmental reports regarding site operations.

*Lecture 02 hours. Laboratory 00 hours.*

*Other Required Hours: Field Experience: 12 hours per week.*

*Prerequisite(s): EHST-2360 Environmental Sampling and Management, or EHST-2400 Environmental Health and Safety II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### FINANCIAL MANAGEMENT - FIN

#### **FIN-1060 Consumer Finance**

02 Semester Credits

Introductory course to develop consumer decision-making in personal budgeting, credit, insurance, medical care, investment, home ownership, retirement planning and income taxes.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **FIN-1110 Principles of Finance**

02 Semester Credits

Introductory course covering basic principles of finance, private and public government financial institutions, financial instruments, money and credit systems, and current problems in consumer and business financing.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **FIN-2100 Financial Management**

03 Semester Credits

Analytical study of basic principles of financial management, financial analysis and planning, working capital management, capital budgeting, capital structure, dividend policy, financial markets, and financial instruments.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ACCT-1340, Managerial Accounting, or departmental approval: equivalent courses or equivalent work experience.*

#### **FIN-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

### FIRE TECHNOLOGY - FIRE

#### **FIRE-1000 Introduction to Fire Science**

03 Semester Credits

Organization of fire service, structure and function of volunteer, paid, battalion and company. Personnel selection, training, fire equipment and apparatus, communication, records and reports, insurance ratings, EMT and Paramedic services and fire service laws.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **FIRE-1300 Fire Tactics and Strategy**

03 Semester Credits

Pre-planning of fire fighting operation, size-up fire scene, employment of fire personnel and equipment. Overall command pattern at fire scene.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science.*

#### **FIRE-1400 Chemistry of Hazardous Materials**

02 Semester Credits

Analysis of chemical reactions as causative agent of fire. Includes redox reactions, reaction rates, toxic compounds and hazardous combinations of chemicals. Safety procedures in handling hazardous materials, transporting and defusing them.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science.*

#### **FIRE-1800 Special Topics in Fire Technology**

01-03 Semester credits

Study of selected topics or current issues in Fire Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 01-03 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **FIRE-181T Special Laboratory Topics in Fire Technology**

01-03 Semester credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Fire Technology (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 03-09 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **FIRE-2320 Fire Prevention and Protection Systems**

03 Semester Credits

Design and operations of fire protection systems, water distribution, detection, alarm, and watchman services. Carbon dioxide, dry chemicals, foam, and water spray systems. Inspection procedures and fire prevention. Fire prevention codes and ordinances. Examination of heating systems, L.P. gases and flammable liquids protection.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science, or LAWE-1000 Introduction to Criminal Justice, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **FIRE-2350 Building Construction for Fire Prevention**

02 Semester Credits

Building construction and materials as related to fire codes and prevention. Emphasis on fire prevention procedures and practices. Fire rating of materials.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science, or ARCH-1410 Architectural Drafting and CAD I.*

### **FIRE-2400 Fire Hydraulics**

02 Semester Credits

Hydraulic theory. Drafting of water, velocity and discharge, friction loss, engine and nozzle pressure, fire streams, pressure losses, flow and pump testing and application to fire service.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science.*

### **FIRE-2600 Fire Investigation Methods**

03 Semester Credits

Principles of fire investigation, arson laws, interrogation of witnesses. Use of photography in fire investigation. Preparation of reports. Collection and presentation of arson evidence in court.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science.*

### **FIRE-2720 Fire Service Training and Public Relations**

02 Semester Credits

Methods and techniques of instruction for fire personnel. Organization of training programs and preparation of training materials. Study of public relations as related to fire service with emphasis on building good will and explanation of fire service activity in the community.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1000 Introduction to Fire Science.*

### **FIRE-2730 Managing Fire Services**

03 Semester Credits

Total management of effective fire and medical emergency services on immediate basis. Budget, personnel, labor relations, measurement and evaluation of productivity of service. Training and supervision of fire service personnel.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FIRE-1300 Fire Tactics and Strategy.*

### **FIRE-2800 Special Advanced Topics in Fire Technology**

01-03 Semester credits

Study of selected advanced topics or current issues in Fire Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 01-03 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **FIRE-281T Special Advanced Laboratory Topics in Fire Technology**

01-03 Semester credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Fire Technology (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 03-09 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **FIRE-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### FRENCH - FREN

#### **FREN-1010 Beginning French I**

04 Semester Credits

Introduction to French through multiple approaches with emphasis on speaking and understanding. Practice in conversational French and aural comprehension of topics of daily interest. Some practice in writing basic sentences and small simple paragraphs on relevant topics, and reading short paragraphs.

*Lecture 03 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **FREN-1020 Beginning French II**

04 Semester Credits

Development of proficiency in speaking, understanding, reading, and writing. Emphasis on strengthening conversational skills through discussions of selected readings and cultural topics.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): FREN-1010 Beginning French I, or one year of high school French; or departmental approval.*

#### **FREN-1100 French Intercultural Perspectives**

03 Semester Credits

French contributions to world culture and various nation-shaping events throughout history, with particular emphasis on shaping of United States of America. Cultural presence of France in United States.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **FREN-1820 Independent Study in French**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in French. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in French.*

#### **FREN-2010 Intermediate French I**

03 Semester Credits

Discussion of topics of everyday life, colloquialisms, vocabulary augmentation, and improvement of speech patterns. Grammar review. Practice in writing compositions. Introduction to civilization and literature of France.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FREN-1020 Beginning French II, or two years of high school French; or departmental approval.*

#### **FREN-2020 Intermediate French II**

03 Semester Credits

Intensive exercises in written and oral expression. Additional grammar review and vocabulary building. Further exploration of French literature.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FREN-2010 Intermediate French I, or three years of high school French; or departmental approval.*

#### **FREN-2410 French Conversation and Composition**

03 Semester Credits

Discussion of topics of everyday life, colloquialisms, vocabulary augmentation, and improvement of speech patterns. Practice in writing compositions. Discussion of French history and culture.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FREN-2020 Intermediate French II, or three years of high school French; or departmental approval.*

#### **FREN-2420 French Civilization and Literature**

03 Semester Credits

Introduction to French civilization and literature. Emphasis on interrelationship between history and geography of France and its culture. Readings in French literature of 19th and 20th centuries. Highlights of representative authors and their works. Emphasis on oral discussion.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): FREN-2020 Intermediate French II, or three years of high school French; or departmental approval.*

### GENERAL STUDIES - GEN

#### **GEN-1000 Introduction To College**

01 Semester Credit

Orients students to the College's programs, services, and policies. Topics may include student resources, college and student expectations, academic support services, financial aid, degree programs, and student rights and responsibilities.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### **GEN-1010 Personal Development**

02 Semester Credits

Experience-based course designed to help students examine individual resources, values, and goals. Emphasis placed on planned experiences to focus on self-direction, self-motivation, self-confidence, and empathy in a group setting.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **GEN-1020 College Survival Strategies**

02 Semester Credits

Information and methods helpful for student success in college. Planning, time management, communication skills, relationships, memory techniques, test-taking skills, college resources, and other topics important to college success.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-0990 Language Fundamentals II or higher; or departmental approval.*

#### **GEN-1030 Information Literacy**

02 Semester Credits

Provides in-depth study of library and information research in electronic information environment. Assignments emphasize study of electronic research tools. Sources include on-line catalogs, on-line research data-bases, and Internet. Preparation of annotated bibliography to demonstrate effective use of search strategies, OhioLINK book catalogs, research databases and Internet.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### GEN- 1040

02 Semester Credits

Survey of career development theory. Emphasis on nature and meaning of work, values, interests, functional skills, attitudes and needs as related to career development process. Sources of occupational information discussed. Series of self-assessment inventories utilized.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### GEN-1050 Organizing Your Employment Campaign

02 Semester Credits

Techniques for initiating an employment campaign including occupational information, identifying potential employers, labor market trends, interviewing techniques and resume preparation. Criteria for job satisfaction and job adjustment analyzed.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-0990 Language Fundamentals II or higher; or departmental approval.*

### GEN-1800 Special Topics in General Studies

1-3 Semester Credits

Study of selected topics or current issues in General Studies. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### GEN-181S Special Laboratory Topics in General Studies

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in General Studies (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### GEN-1820 Independent Study in General Studies

1-3 Semester Credits

Specific content and objectives to be arranged between instructor and student. May be repeated for a maximum of six credits.

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Concurrent enrollment in GEN-1000 Introduction to College, and placement in ENG-0980 Language Fundamentals I.*

## GEOGRAPHY - GEOG

### GEOG-1010 World Regional Geography

03 Semester Credits

Study of present issues and future prospects of developed and developing countries. Emphasis on economic activities determined by physical environment, social and cultural characteristics, and political stability.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### GEOG-1030 Environmental Geography

03 Semester Credits

Study of issues created by a rapidly increasing world population causing depletion of world energy resources and agricultural crises. Other environmental problems including pollution, destruction of rain forests, overgrazing, and loss of habitat considered.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### GEOG-1050 Africans in the Americas

03 Semester Credits

Study of world regions touched by the African Diaspora, especially Africa, Caribbean, Brazil, and United States. Focus on characteristics of each region, demographic changes, and variations that shaped culture during and after slavery and to the present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

### GEOG-1510 Regional Geography of the United States and Canada

03 Semester Credits

Regional geography of the United States and Canada noting significant characteristics of each region. Physical setting, economic activities, cultural diversity, social conditions, and political identity of each region studied.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*



### GERMAN – GER

#### GER-1010 Beginning German I

04 Semester Credits

Introduction to German through multiple approaches with emphasis on speaking and understanding. Practice in conversational German and aural comprehension of topics of daily interest. Some practice in writing basic sentences and small simple paragraphs on relevant topics and reading short paragraphs.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): None.*

#### GER-1020 Beginning German II

04 Semester Credits

Development of proficiency in speaking, understanding, reading, and writing. Emphasis on strengthening conversational skills through discussions of selected readings and cultural topics.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): GER-1010 Beginning German I, or one year of high school German, or departmental approval.*

#### GER-1150 Beginning Business German I

04 Semester Credits

Introduction to German business practices. Emphasis on business vocabulary and business terms through use of simple exercises. Conversational topics associated with daily business dealings. Awareness of cultural business differences.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): None.*

#### GER-1160 Beginning Business German II

04 Semester Credits

Continued study of German business dealings and further practice in speaking, understanding, reading and writing. Emphasis on strengthening conversational business skills through discussions of selected business terms and settings. Study of management style, labor relations and import-export dealings. Emphasis on cultural differences.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): GER-1150 Beginning Business German I, or departmental approval.*

#### GER-1820 Independent Study in German

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in German. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in German.*

#### GER-2010 Intermediate German I

03 Semester Credits

Discussion of topics of everyday life, colloquialisms, vocabulary augmentation, and improvement of speech patterns. Grammar review. Practice in writing compositions. Introduction to German civilization and literature.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): GER-1020 Beginning German II, or two years of high school German, or departmental approval.*

#### GER-2020 Intermediate German II

03 Semester Credits

Intensive exercises in written and oral expression. Additional grammar review and vocabulary building. Further exploration of German literature.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): GER-2010 Intermediate German I, or three years of high school German, or departmental approval.*

#### GER-2410 German Conversation and Composition

03 Semester Credits

Practice in German conversation and composition skills. Vocabulary augmentation. Discussion of German history and culture.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): GER-2020 Intermediate German II, three years of high school German, or departmental approval.*

#### GER-2420 German Civilization and Literature

03 Semester Credits

Introduction to German civilization and literature. Emphasis on the interrelationship between German history, literature and culture. Readings of German modern literature. Emphasis on oral discussion.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): GER-2020 Intermediate German II, three years of high school German, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### GRAPHIC COMMUNICATIONS AND PHOTOGRAPHY - GCMT

#### GCMT-1000 Orientation to Graphic Communications

01 Semester Credit

Overview of printing and publishing industries, both traditional and digital, exploring history, technical processes, terminology, career opportunities and technological changes. Acquaint students with literature, web sites, professional and trade organizations, OSHA and EPA regulations. Discussion of graphic communications career opportunities.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### GCMT-1010 Introduction to Printing

01 Semester Credit

Exploratory experiences in processes and procedures used to produce printed product. Designed for those with little or no experience in use of tools, materials and techniques of printing and publishing industry. Includes laboratory and field experiences to augment and reinforce printing concepts.

*Lecture 00 hours. Laboratory 03 hours. Prerequisite(s): None.*

#### GCMT-1340 Printing Science

02 Semester Credits

Basic physics, chemistry and mathematics for printing and digital publishing processes. Includes metrics, measuring systems, effects of different molecular states, molecular energy, magnetism, electricity, pressroom chemistry, lithographic plates, chemistry of inks and paper, recycled paper, digital presses, lenses, digital and traditional photography, sensitometry, densitometry and spectrophotometry, digital prepublishing, scanning and the Internet. Recommended for those wishing to understand how processes work.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### GCMT-1350 Image Reproduction and Film Assembly

02 Semester Credits

Fundamental concepts of lithographic darkroom and offset stripping procedures. Theory and practice with contacting and process camera operations producing line, halftone and special effect images. Planning layouts and assembly of flats for single and multi-color printing and multi-page impositions, monochrome and color proofing, register systems, machine processing, densitometry, and quality control.

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

#### GCMT-1400 Computer Applications for Publishing

03 Semester Credits

Introduction to computer and its application in printing, publishing, photography and multimedia. Provides experiences with microcomputers, software, data storage and input and output devices. Concentrates on applications used to create and modify graphic images, page layouts, and visual presentations. Introduction to computer operations and basic business applications. Explores hardware and software selection, networking, telecommunications and program languages specific to the industry.

*Lecture 02 hours. Laboratory 03 hours. Prerequisite(s): None.*

#### GCMT-1410 Document Preparation for Reproduction

03 Semester Credits

Designing, planning and preparing copy for conventional and electronic reproduction. Emphasizes planning processes; electronic type and art preparation; and direct to output systems. Includes principles of design-and-layout; type identification and specification; copy mark-up, proofreading; scaling copy, preparing key-line art, producing electronic type and layouts and sending electronic files to print-on-demand systems.

*Lecture 02 hours. Laboratory 03 hours. Prerequisite(s): None.*

#### GCMT-1500 Black and White Photography I

03 Semester Credits

Introduction to technical and aesthetic fundamentals of black and white photography. Emphasizes camera operation, exposure and development of film and printing techniques, and aesthetics of contemporary photography. Student must provide own camera, film and printing paper.

*Lecture 02 hours. Laboratory 03 hours. Prerequisite(s): None.*

#### GCMT-1510 Black and White Photography II

03 Semester Credits

Advanced black and white photographic principles and techniques with emphasis on refinement of technical skills. Development of critical skills necessary for self-evaluation and appreciation of aesthetic issues in the medium.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1500 Black and White Photography I, or departmental approval: submission of portfolio of photographs.*

#### GCMT-1520 Color Photography I

03 Semester Credits

Introduction to technical and aesthetic fundamentals of color photography with emphasis on color transparency.

Introduction to color theory pertaining to work with color transparency and color print materials. Emphasizes film characteristics, lighting characteristics, and processing techniques. Introduction to use of sequential images in presentation applications.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1500 Black and White Photography I, or departmental approval: submission of portfolio of photographs.*

#### GCMT-1600 Digital Imaging I

03 Semester Credits

Introduction to technical and aesthetic fundamentals of digital photography. Emphasizes use of computer software for modification of photographic image. Use and understanding of computer hardware and software systems for input, modification and output of digital photographs.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1500 Black and White Photography I, and GCMT-1400 Computer Applications for Publishing; or departmental approval: prior photographic and computer experience.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **GCMT-1800 Special Topics in Graphic Communications and Photography**

1-3 Semester Credits

Study of selected topics or current issues in Graphic Communications and Photography. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **GCMT-181S Special Laboratory Topics in Graphic Communications and Photography**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Graphic Communications and Photography (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **GCMT-181T Special Laboratory Topics in Graphic Communications and Photography**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Graphic Communications and Photography (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **GCMT-2300 Printing Materials**

02 Semester Credits

Study of printing papers, plastics and metals, and printing inks for lithography, gravure, letterpress, flexography and screen process. Includes paper making, recycled printing paper, paper identification, and ink laboratory quality control. May conduct some labs at manufacturer's site.

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

### **GCMT-2310 Printing Technology.**

03 Semester Credits

Introduction to offset, flexographic and screen printing processes. Includes platemaking procedures, make-ready and press operation. Students operate presses to gain understanding of processes, procedures, and printing systems. Offset printing includes both conventional and continuous flow dampening systems, make-ready, press adjustments, and print evaluation. OSHA, EPA rules and procedures in printing plant. Quality control procedures, computer to plate principles and waterless printing.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): None.*

### **GCMT-2320 Offset Printing**

02 Semester Credits

Theory and laboratory practice leading towards technical competence. Includes preventative maintenance, printing unit, press orientation, inking system, feeder system, dampening system, sheet register system, press make-ready, delivery system, and press production.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-2310 Printing Technology, or departmental approval.*

### **GCMT-2340 Imposition, Layout, Bindery and Finishing**

03 Semester Credits

Image imposition and layout, planning, cutting, folding, gathering and other bindery operations and equipment. Finishing operations including UV coatings, aqueous press coatings, diecutting, paper embossing, foil stamping, mailing and distribution operations.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): None.*

### **GCMT-2350 Printing Production and Operations Management**

02 Semester Credits

Procedures applied to managing various sizes of printing, reprographic and publishing facilities. Includes critical thinking and decision making, office and plant layout, meeting planning and presentation, total business planning, scheduling, job tracking, inventory control, quality control and purchasing.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing; GCMT-1350 Image Reproduction and Film Assembly; GCMT-2310 Printing Technology; and GCMT-2340 Imposition, Layout, Bindery and Finishing; or departmental approval: equivalent knowledge or skills.*

### **GCMT-2360 Customer Service and Sales Support**

02 Semester Credits

Introduction to business practices for customer service and sales representatives in printing and publishing industry, emphasizing sales techniques, ethics and protocols particular to the industry.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing; GCMT-1350 Image Reproduction and Film Assembly; and GCMT-2310 Printing Technology; or departmental approval: equivalent knowledge or skills.*

### **GCMT-2370 Printing Estimating**

02 Semester Credits

Introduction to various cost estimating systems and procedures used in small and medium sized printing and reprographic facilities. Includes establishing cost centers, production standards, estimating time and materials needed for pre- publishing, imaging and binding operations. Includes introduction to computer estimating and printing management systems.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing; GCMT-1350 Image Reproduction and Film Assembly; and GCMT-2310 Printing Technology; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **GCMT-2410 Electronic Publishing I**

02 Semester Credits

Applications used for microcomputer-based electronic "desktop" publishing systems. Use of hardware and software for production of printed documents for personal, business, advertising, scientific and technical communications. Emphasizes productivity and standard procedures for producing quality electronic documents. (May be repeated for a total of four credits using different software.)

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing, or departmental approval: equivalent knowledge or skills.*

### **GCMT-2420 Electronic Publishing II**

02 Semester Credits

Emphasizes production and preparation of complex documents for output to proofing and image setting devices. Study of advanced features of page layout programs emphasizing advanced typographic controls, image control, multipage document construction, creation of templates, style sheets, formats and trapping. Includes preparation of documents for multicolor reproduction, integrating graphic images into documents, and preparation of Postscript image setting files. (May be repeated for a total of four credits.)

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-2410 Electronic Publishing I, or departmental approval: equivalent knowledge or skills.*

### **GCMT-2430 Color Scanning and Reproduction**

02 Semester Credits

Introduction to digital reproduction of original art, photographs, and transparencies. Emphasizes color theory, investigation of conventional and electronic color separation techniques, color correction, color management, reproduction requirements, color proofing, color communications and evaluation of final print or proof.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing, or departmental approval: equivalent knowledge or skills.*

### **GCMT-2440 Electronic Painting and Illustration**

02 Semester Credits

Use of digital tools for creating and modifying vector graphics. Includes comparison of vector and raster generated graphics for reproduction and electronic transmission. Emphasizes image file structure, file formats, color specification, typographic controls, and output considerations. (May be repeated for up to four credits using different software.)

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing, or departmental approval: equivalent knowledge or skills.*

### **GCMT-2450 Prepress/Service Bureau Procedures I**

02 Semester Credits

Applied study of hardware, software, and standard practices used in complex and full color documents for prepress imaging production and proofing. Emphasizes proper preparation of complex documents, requirements for predictable color reproduction, "pre-flighting" analysis of documents and system configuration. Includes creating, proofing and correcting final film or plate output.

Emphasizes industry trends and evolving technology. Students must have good working knowledge of page layout and imaging software prior to taking this class.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-2410 Electronic Publishing I, or departmental approval: equivalent knowledge or skills.*

### **GCMT-2460 Prepress/Service Bureau Procedures II**

02 Semester Credits

Introduction to electronic page layout including imposition, automatic color trapping, image modification, retouching and enhancement. Emphasis on organization of pages for reproduction of multipage, multicolor documents and correcting images to given specifications.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing, and GCMT-1350 Image Reproduction and Film Assembly; or departmental approval.*

### **GCMT-2470 Internet/World Wide Web Publishing**

02 Semester credits

Procedures for creating text and graphic hypermedia content for publishing on the Internet and World Wide Web.

Emphasis on analysis of function, purpose and effectiveness of the web site, standard practices for formatting of text and images for hypermedia publishing, markup and construction of web page using HTML, appropriate extensions, and PDF files. Introductory information necessary to establish a WWW site.

*Lecture 01 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1400 Computer Applications for Publishing, and GCMT-1600 Digital Imaging I, or departmental approval.*

### **GCMT-2500 Commercial Studio Techniques**

03 Semester Credits

Introduction to use of artificial lighting and large format cameras in commercial studio and location photography including portraiture, fashion, advertising product, architectural and editorial photography.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1510 Black and White Photography II, or departmental approval: submission of portfolio of photographs.*

### **GCMT-2510 Portfolio Preparation**

02 Semester Credits

Preparation by students of professional portfolio of their work. Concentration on designing portfolio emphasizing individual strengths and areas of specialization. Use of appropriate presentation materials, business forms and protocols to ensure proper handling of portfolios. Discussion of presentation techniques used in interviews. Successful portfolio review required for completion of program.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: sufficient quantity of successfully completed work for portfolio inclusion.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **GCMT-2520 Color Photography II**

03 Semester Credits

Advanced color photographic techniques emphasizing aesthetics of color print. Refinement of technical skills in color printing. Introduction to digital color principles and techniques.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1520, Color Photography I, or departmental approval: submission of portfolio of photographs.*

### **GCMT-2530 Professional Photographic Practices**

03 Semester Credits

Business and marketing practices common in commercial photography industry. Emphasis on developing professional objectives based upon consideration of financial, legal, organizational, promotional, interpersonal and ethical practices particular to photographic industry.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: sophomore level status or photography work experience.*

### **GCMT-2540 Individual Projects in Photography and Graphic Communications**

02 Semester Credits

Individual projects in photography in areas of student's choice. Progress and grading determined on individual basis according to criteria mutually agreed upon between student and instructor. (May be repeated for up to six credits.)

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: six semester hours of photography or submission of portfolio of photographs.*

### **GCMT-2600 Digital Imaging II**

03 Semester Credits

Visual problem solving in digital photography concentrating on refined application of computer software for modification of photographic image. Emphasizing use of photographic images in print, multimedia and web applications.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1600 Digital Imaging I, or departmental approval: prior digital imaging experience.*

### **GCMT-2700 Kinetic and Sequential Imaging I**

03 Semester Credits

Introduction to digital video, digital audio, presentation graphics and multimedia applications emphasizing technical and aesthetic fundamentals of kinetic and sequential imaging. Introduction to conceptualizing, storyboarding and planning kinetic and sequential presentations.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-1600 Digital Imaging I, or departmental approval: prior digital imaging experience.*

### **GCMT-2710 Kinetic and Sequential Imaging II**

03 Semester Credits

Application of technical and aesthetic fundamentals of digital photography, digital video, and digital audio in creation of interactive multimedia presentations. Use and understanding of software applications designed for creating kinetic and sequential presentations emphasizing scripting, sequencing and interactivity.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): GCMT-2700 Kinetic and Sequential Imaging I, or departmental approval: prior digital imaging experience.*

### **GCMT-2800 Special Advanced Topics in Graphic Communications and Photography**

1-3 Semester Credits

Study of selected advanced topics or current issues in Graphic Communications and Photography. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **GCMT-281S Special Advanced Laboratory Topics in Graphic Communications and Technology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Graphic Communications and Photography (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **GCMT-281T Special Advanced Laboratory Topics in Graphic Communications and Photography**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Graphic Communications and Photography (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **GCMT-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for n accrued a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour. Prerequisite(s): Formal application into the Cooperative Education Program.*

### **GCMT-2840 Internship**

1-3 Semester Credits

Limited to students in Internship Program. Employment in approved training facility under college supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. (May be repeated for an accrued maximum of nine credits.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Internship: 180 clock hours of approved work per credit. Prerequisite(s): Formal acceptance in the Internship Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### HEALTH - HLTH

#### **HLTH-1100 Personal Health Education**

03 Semester Credits

Introduction to meaning and scope of health as related to individual, family, and community. Focuses on introspective view of physical, emotional, intellectual, social, and spiritual dimensions of health with emphasis on mechanism for positive behavior change.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HLTH-1200 Introduction to Health Technologies**

02 Semester Credits

Introduction and orientation to health careers, including specific duties, certification and licensure requirements, work settings and conditions, career ladder opportunities, salary, and employment potential. Reviews interactions of personality and values in selection of career choice.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HLTH-1230 Standard First Aid and Personal Safety**

01 Semester Credit

Basic level first aid and one-person CPR course intended to provide knowledge and skills necessary to minimize consequences of injury and sudden illness until professional medical help arrives. Special emphasis placed on cause, effect, and prevention in relation to emergency care. Upon successful completion, student is eligible for certification in Standard First Aid by the American National Red Cross.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### **HLTH-1300 Health and Medical Aspects of Chemical Dependency**

03 Semester Credits

Focuses on health and medical considerations of drug use, with emphasis on alcohol. Provides overview of history of alcohol use, etiology of drug dependency, physiological and psychological effects of chemical abuse, and effects of drug use on relationships.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HLTH-1400 Childhood Health, Safety and Nutrition**

03 Semester Credits

Focuses on nutrition, health, and safety needs of young children. Training provided in communicable disease recognition, prevention and management, first aid, infant/toddler CPR, and child abuse recognition and prevention, as required by Ohio Day Care Licensing Rules. Nutritional requirements of young children, meal planning and menu evaluation, principles of hygiene and safety in storage, preparation and serving of food addressed. Positive health practices emphasized as integral elements in nurturing children's total development.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HLTH-2800 Special Advanced Topics in Health Education**

1-3 Semester Credits

Study of selected advanced topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### HEALTH INFORMATION MANAGEMENT - HIM

#### **HIM-1010 Basic Medical Transcription**

01 Semester Credit

Introduction to the basic concepts of medical transcription with emphasis on transcription equipment, transcribing techniques, use of medical reference books, and practice in transcribing various reports.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval.*

#### **HIM-1050 Medical Transcription**

02 Semester Credits

Further development of skills necessary to transcribe medical dictation with emphasis on speed and accuracy. Students will transcribe a wide variety of physician-dictated reports arranged by body system or medical specialty.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval.*

#### **HIM-1110 Physician Office Coding**

02 Semester Credits

Introduction to basic concepts of coding using ICD-9-CM (International Classification of Diseases, Ninth edition, Clinical Modification) for diseases and CPT (current procedural terminology) to meet requirements for physician office coding and billing.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

#### **HIM-1130 Introduction to Coding with CPT**

02 Semester Credits

Introduction to coding using Current Procedural Terminology (CPT) with emphasis on basic skills required to code medical services and procedures.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

#### **HIM-1150 Introduction to Coding with ICD-9-CM**

02 Semester Credits

Introduction to basic principles required to code diseases and procedures using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) classification system.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HIM-1300 Principles of Health Information Management**

04 Semester Credits

Introduction to field of health information management (HIM) including overview of the profession; functions of HIM department; purposes, uses and flow of patient information through health care system.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

### **HIM-1310 Legal Aspects of Health Care**

02 Semester Credits

Introduction of legal and ethical issues applicable to health information including confidentiality, release of information, legislative process, the court system, legal vocabulary, retention guidelines, patient rights/advocacy, advance directives and ethics.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

### **HIM-1400 Health Care Delivery Systems**

03 Semester Credits

Overview of health care delivery system including trends and issues, identification and organization of health care professionals and health care facilities.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): HIM-1300 Principles of Health Information Management, or departmental approval.*

### **HIM-1410 Health Care Statistical Applications**

02 Semester Credits

Introduction to use, collection, presentation, and verification of health care data including fundamental concepts of descriptive statistics; data validity and reliability; data presentation techniques; and vital statistics.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): HIM-1300 Principles of Health Information Management, and MA-1020 Medical Terminology I; or departmental approval.*

### **HIM-1420 Health Data Content and Structure**

03 Semester Credits

Documentation requirements for complete and accurate health records as required by licensing, certifying and accrediting agencies; forms design; functions of assembly, analysis and abstracting; health information systems needs and applications.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): HIM-1310 Legal Aspects of Health Care, BIO-1430 Anatomy and Physiology I, and MA-1020 Medical Terminology I; or departmental approval.*

### **HIM-2300 Coding Systems Used in Health Care**

04 Semester Credits

Study of classification systems used in health care with emphasis on theory and application of skills required to code diagnoses and procedures using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) classification system and to code medical services and procedures using Current Procedural Terminology (CPT).

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): HIM-1410 Health Care Statistical Applications; and HIM-1420 Health Data Content and Structure; and BIO-1440 Anatomy and Physiology II; or departmental approval.*

### **HIM-2310 Data Assessment and Registries**

03 Semester Credits

Introduction to disease and health registries and to data assessment activities being performed in health care facilities. Discussion of Practicum experiences.

*Lecture 01 hour. Laboratory 02 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): HIM-1400 Health Care Delivery Systems, and CS-1410 Database Use and Design; or departmental approval.*

### **HIM-2400 Advanced Coding and Reimbursement**

02 Semester Credits

Introduction to prospective payment system and computer applications of coding skills. Further development of skills necessary to code using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and Current Procedural Terminology (CPT).

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): HIM-2300 Coding Systems Used in Health Care, and BIO-2600 Pathophysiology; or departmental approval.*

### **HIM-2410 Management Practices in Health Information**

02 Semester Credits

Introduction to management principles used in managing health information functions and personnel, with emphasis on duties and responsibilities of supervisor in coordinating goals of a health information management department; training of personnel; concepts of continuous quality improvement.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): HIM-2310 Data Assessments and Registries, or departmental approval.*

### **HIM-2420 Trends in Health Information Management**

02 Semester Credits

Introduction to design concepts and information systems to support biomedical and health services research and investigation; discussion of selected diseases from various perspectives including clinical, ethical and economical; discussion of current trends, recent research, theory, issues and development in Health Information Management; discussion of Practicum experience.

*Lecture 00 hours. Laboratory 02 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): HIM-2850 Practicum I, or departmental approval.*

### **HIM-2800 Special Advanced Topics in Health Information Management**

1-3 Semester Credits

Study of selected advanced topics or current issues in Health Information Management. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **HIM-2850 Practicum I**

02 Semester Credits

Supervised practicum designed to allow student to apply technical knowledge and skills learned in classroom to procedures performed in health information management department. Assignments will be made to various types of health care facilities to gain exposure to health information practices.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week.*

*Prerequisite(s): Concurrently enrolled in HIM-2310 Data Assessment and Registries; and HIM-1400 Health Care Delivery Systems; and HIM-1410 Health Care Statistical Applications; and HIM-1420 Health Data Content and Structure; and CS-1410 Database Use and Design; or departmental approval.*

### **HIM-2860 Practicum II**

02 Semester Credits

The second of two supervised practicums designed to allow student to apply technical knowledge and skills learned in classroom to procedures performed in health information management department. Assignments will be made to various types of health care facilities to gain exposure to health information practices.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week.*

*Prerequisite(s): Concurrently enrolled in HIM-2420 Trends in Health Information Management; and HIM-2300 Coding Systems Used in Health Care; and HIM-2310 Data Assessment and Registries; and HIM-2850 Practicum I; or departmental approval.*

### **HEALTH TECHNOLOGIES - HTEC**

#### **HTEC-1020 Integrated Basic Science**

03 Semester Credits

Introduction to basic sciences and pathology. Concepts of physics, chemistry and life sciences emphasizing application to human structure and function. Integrated approach to study of human body in health and as altered by various disease states.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **HTEC-1100 Allied Dental Pharmacology**

02 Semester Credits

Survey course acquainting Dental Assisting students with basic principles and concepts of pharmacology. Provides a general review of therapeutic use of drugs in a dental/medical emergency. Emphasizes indications and contraindications of drugs relating to dental anesthetics.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to Dental Assisting Program.*

#### **HTEC-1110 Ethics for Health Care Professionals**

01 Semester Credit

Survey course emphasizing basic definitions, concepts and issues of clinical law and ethics for health care professionals. Ethical decision-making models will be explained utilizing professional-patient relationship and case studies.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **HTEC-1170 EKG for the Health Care Technician**

01 Semester Credit

Theory and laboratory practice of entry level cardiovascular procedures for electrocardiography (EKG). Emphasis on technical accuracy in operational, problem solving and quality control skills. Recommended for students currently enrolled in health career program or employed in health career field.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **HTEC-1200 Patient Management for Health Career Professionals**

01 Semester Credit

Basic overview of managing patients in various situations. Emphasis on understanding patient's feelings. Development of motivational plans based on patient's needs.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to a health career program.*

#### **HTEC-1610 Introduction to Pharmacology**

02 Semester Credits

Acquaint students with general principles and concepts of pharmacology. Provide understanding of indications, uses, doses and contraindications associated with individual drugs as well as mechanisms of drug administration and therapeutic management of patients with specific disease processes. Review basic mathematics related to correct calculation of drug dosages and preparation of solutions.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### HISTORY - HIST

#### **HIST-1010 History of Civilization I**

03 Semester Credits

Introduction to study of world civilizations from ancient times to beginning of modern era.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HIST-1020 History of Civilization II**

03 Semester Credits

Introduction to study of world civilizations from beginning of modern era to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): HIST-1010 History of Civilization I, or departmental approval.*

#### **HIST-1510 United States History to 1877**

03 Semester Credits

Introduction to study of United States History from Age of Exploration to end of Reconstruction.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HIST-1520 United States History since 1877**

03 Semester Credits

Introduction to study of United States history from post Civil War/Reconstruction to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): HIST-1510 United States History to 1877, or departmental approval.*

#### **HIST-1610 American Studies**

03 Semester Credits

Introduction to American Studies. Discussion of selected issues and institutions in American civilization; multidisciplinary approach to subject matter utilizing concepts from various social science and humanities disciplines.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HIST-1630 History of Immigration in America**

03 Semester Credits

Study of immigration in America. Discussion of ethnic institutions; explanation of continuity and change between first, second and third generations of an immigrant group, and exploration of relationships between and among different groups; analysis of nativism and restrictionism; explanation of immigrant contributions to America.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HIST-1700 History of Africa**

03 Semester Credits

General survey of African history with special emphasis on pre-colonial (pre-1500) Africa plus political, economic and social challenges of nineteenth and twentieth centuries.

Importance of Islam and emergence of South Africa from apartheid era.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HIST-1710 African-American History to 1877**

03 Semester Credits

Study of African-American experiences from African origins through Atlantic slave trade, adaptation to the Americas, and influence on American culture from slavery to emancipation and Reconstruction.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HIST-1720 African-American History 1877 to Present**

03 Semester Credits

Study of African-American experiences from end of Reconstruction, development of institutionalized racial discrimination, growth of racial advancement organizations, migration to cities, development of racial consciousness, and struggle for civil rights and political power until present time.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): HIST-1700 History of Africa, or HIST-1710 African-American History to 1877.*

#### **HIST-1820 Independent Study in History**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in History. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in History.*

#### **HIST-2050 History of Russia**

03 Semester Credits

Growth, development and decline of Kievan state; evolution of Muscovite tsardom and expansion of Russian Empire to 1917. Considers geopolitical, social, cultural, and intellectual development of Russian state; emphasis on theory of tsardom which led to emergence of distinct civilization in Russia.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Any 1000-level history or political science course; or departmental approval.*

#### **HIST-2060 Modern Russian History and Politics**

03 Semester Credits

Development of U.S.S.R. since collapse of tsarist monarchy to dissolution of Soviet Union and Communist system. Emphasis on origins, development, establishment of power and rule by Communist government; analysis of development and implementation of domestic and foreign policies.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Any 1000-level history or political science course; or departmental approval.*

#### **HIST-2660 Women in American History**

03 Semester Credits

Study of changing role of women in America from colonial times to present. Introduction to current research techniques used to reconstruct family, political and work roles; special emphasis on participation in social reforms leading to women's rights, suffrage and feminist movements; impact of race, gender and region on gender perspectives and conflicts; evaluation of contemporary trends.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Any 1000-level history or political science course; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HIST-2800 Special Advanced Topics in History**

1-3 Semester Credits

Study of selected advanced topics or current issues in History. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **HIST-2820 Independent Advanced Research in History**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in History. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in History.*

## **HOSPITALITY MANAGEMENT - HOSP**

### **HOSP-1010 Introduction to the Hospitality Industry**

02 Semester Credits

Comprehensive tour through fascinating and challenging related fields and career opportunities in hospitality industry; travel and tourism, lodging, food service, meetings, conventions and expositions, leisure and recreation, and beverage operations. Mapping of specific positions including requirements of job duties, skills, knowledge, personality attributes, physical abilities, and working conditions. Basic keys to successful career in service based industry. Overview of industry in Greater Cleveland area, nationally and globally, and current trends.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, or departmental approval: industry experience.*

### **HOSP-1020 Sanitation and Safety**

02 Semester Credits

Sanitation and accident prevention practices in food service and lodging establishments. Management oriented treatment for prevention of food borne illnesses using HACCP method of safe food handling, sanitary design and care of facilities and equipment, pest control, self inspection, and interpretation of food service laws. Causes and prevention of accidents and elementary first aid including Heimlich Maneuver and CPR. Emphasis on employee training.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, or departmental approval: industry experience.*

### **HOSP-1030 Basic Food Preparation**

03 Semester Credits

Introduction to food preparation techniques, culinary theory, and equipment used in commercial food service. Basic concepts of kitchen organization and operation, heat transfer, basic terminology, use of standardized recipes, weights and measures, recipe conversion, food composition, nutrition, elementary menu construction and introduction to commercial equipment and work methods. ACF required competency skills included.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-0950, Beginning Algebra I; and eligibility for ENG-1010 College Composition I; and HOSP-1020 Sanitation and Safety, or concurrent enrollment; or departmental approval: industry experience.*

### **HOSP-1040 Customer Services**

02 Semester Credits

Discussion and practice of basic skills and competencies needed in entry level positions to provide quality guest service as recommended by National Restaurant Association. Introduction to selected basic competencies for following positions as recommended by Educational Institute of American Hotel and Motel Association: Front Desk, Bell Attendant, Concierges, Housekeeping, and Reservationists.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-0950 Beginning Algebra I; and eligibility for ENG-1010 College Composition I; and HOSP-1020 Sanitation and Safety, or concurrent enrollment; or departmental approval: industry experience.*

### **HOSP-1350 Menu Planning and Nutrition**

03 Semester Credits

Study of central role of menu in food and beverage operations in terms of facility, equipment, staff, nutritional adequacy, merchandising and marketing for profitability. Emphasis on comprehension and application of principles of nutritional dietary guidelines in menu planning process. Practice in researching, writing, presenting, and evaluating menus for variety of food operations. Computer generated menus and menu labeling.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-0950 Beginning Algebra I; and eligibility for ENG-1010 College Composition I.*

### **HOSP-1370 Food and Beverage Operations I**

03 Semester credits

Overview of the many aspects of food and beverage operations and knowledge and skills needed by various operational and management positions. Focuses on three specific areas of food and beverage operations: bar and beverage operations, food and beverage menu, and calculations of food and beverage selling prices. Skill practice in bartending skills, beverage service, menu planning, calculating selling prices, and evaluating product quality.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, and MATH-0950 Beginning Algebra I or higher, or departmental approval: industry related experience.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HOSP-1380 Dimensions of Tourism**

03 Semester Credits

Overview of tourism industry. Discussion of terminology, concepts and various specialized fields that comprise the industry. Field trips may be taken to Cleveland area attractions.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry, or concurrent enrollment; or departmental approval: industry experience.*

### **HOSP-1450 Advanced Food Preparation**

04 Semester Credits

Further development of culinary theory and skill proficiency. Practice of contemporary food techniques in skill and theory within professional kitchen setting. Foods examined by category. Discusses variety of preparation methods and nutritional alternatives for each category. Skill training based on American Culinary Federation requirements.

*Lecture 02 hours. Laboratory 06 hours.*

*Prerequisite(s): HOSP-1030 Basic Food Preparation.*

### **HOSP-1480 Housekeeping Operations**

02 Semester Credits

Overview of professional housekeeping services in lodging industry. Examines basic cleaning methods and equipment currently used; work production and quality control techniques peculiar to housekeeping management; factors determining frequency workload and staffing. On-site observation with practical application of housekeeping functions.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry; and HOSP-1020 Sanitation and Safety; and HOSP-1040 Customer Services.*

### **HOSP-1550 Baking Production and Sales**

02 Semester Credits

Fundamentals of professional production baking. Development of skills to meet American Culinary Federation standards for quality handcrafted products including elementary cake decorating. Emphasis on recognizing quality standards, cost controls, labor controls, marketing and packaging.

*Lecture 00 hours. Laboratory 06 hours.*

*Prerequisite(s): HOSP-1020 Sanitation and Safety; and HOSP-1030 Basic Food Preparation; or departmental approval: industry-related experience.*

### **HOSP-1580 Front Office Operations**

02 Semester Credits

Fundamentals of front office operations in lodging properties. On-site observation with practical application of front office functions. Includes all phases of guest cycle. Computer practice in areas such as reservations, confirmation, room availability, guest services and operational controls.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry; and HOSP-1040 Customer Services.*

### **HOSP-1650 Dining Room Operations**

02 Semester Credits

Study, discussion and demonstration of various types of dining room service and operations. Emphasis on individual training of service personnel in different areas of responsibility within a restaurant facility dining room, including serving, setup, labor, point of sale technology and management functions.

*Lecture 00 hours. Laboratory 06 hours.*

*Prerequisite(s): HOSP-1030 Basic Food Preparation; and HOSP-1040 Customer Services; and HOSP-1450 Advanced Food Preparation, or concurrent enrollment; or departmental approval: industry-related experience.*

### **HOSP-1670 Food and Beverage Operations II**

03 Semester credits

Focuses on three specific areas of food and beverage operations: marketing and sales, food and beverage service operations and evaluations, and financial operations including use of point of sale system reports to analyze the menu, efforts of marketing, and total sales picture of the operation.

*Lecture 01 hours. Laboratory 06 hours.*

*Prerequisite(s): HOSP-1030 Basic Food Preparation; HOSP-1040 Customer Services; HOSP-1450 Advance Food Preparation or concurrent enrollment; or departmental approval: industry related experience.*

### **HOSP-1700 Hospitality Purchasing**

02 Semester Credits

Principles for purchasing supplies, equipment, food and beverages, and contract services for hospitality industry. Exploration of government regulations, industry standards, product availability, economic concerns, supplier relationships, and marketplace. Practice applications of purchase orders, bidding specifications, computer assisted ordering and inventory controls.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1020 Sanitation and Safety, and HOSP-1030 Basic Food Preparation.*

### **HOSP-1860 Hospitality Practicum (and Seminar)**

03 Semester Credits

Hospitality Management Department supervised on-site work experience in student's area of specialization. Students required to function in variety of workstations to reinforce learned classroom/lab skills. Seminars on employability skills, resumes, appearance, situations which occur during practicum, and related subjects. (May be repeated up to three times with departmental approval.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry; HOSP-1020 Sanitation and Safety; HOSP-1030 Basic Food Preparation; HOSP-1040 Customer Services; and departmental approval: work site approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HOSP-2300 Facilities Design and Maintenance**

02 Semester Credits

Introduction to knowledge needed for clear communication with those in charge of maintenance and engineering departments, lodging and food service facilities. Survey of blueprint reading; basic elements of electrical systems and appliance; plumbing and waste systems; heating principles; refrigeration; ventilation and air conditioning; building transportation systems; swimming pools; sound and pollution controls; energy conservation. Planning and evaluation of facilities and selection of appropriate equipment. Field trips may be required.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry; HOSP-1020 Sanitation and Safety; HOSP-1030 Basic Food Preparation; and HOSP-1040 Customer Services.*

### **HOSP-2350 Restaurant Operations**

03 Semester Credits

Practical application of learned food preparation and presentation skills. Hands-on skill development within simulated in-house restaurant kitchen setting with exposure to each job position; table and buffet presentations.

*Lecture 00 hours. Laboratory 09 hours.*

*Prerequisite(s): HOSP-1450 Advanced Food Preparation.*

### **HOSP-2380 Hospitality Marketing and Sales**

03 Semester Credits

Application of marketing and sales principles to food and lodging industry. Strategies and techniques to increase sales with emphasis on planned profits.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry.*

### **HOSP-2400 Hospitality Management and Supervision**

03 Semester Credits

Analysis of hospitality operations through use of terminology, theories, and principle. Special emphasis placed on evolution of management thought, commitment to quality and productivity in various environments that affect practice of management and supervision. Through experiences and practical application, concepts will focus on standards and procedures for selection, training, and development of human resources in hospitality industry.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry; or departmental approval: admission to Dietetic Technology or Hospitality Management Program, or related work experience.*

### **HOSP-2480 Hospitality Law**

03 Semester Credits

Examination of legal considerations of hospitality operations and property management. Discussion includes contracts, hotel-guest relationship, frauds, employment laws, anti-trust regulations, food and beverage sales, wage and hour standards, social security and income tax withholding requirements, tax/ tip reporting, and immigration laws.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): HOSP-1010 Introduction to the Hospitality Industry.*

### **HOSP-2500 Hospitality Cost Control**

03 Semester Credits

Basic procedures to control food, beverage, labor costs and sales income in food and beverage operations. Analysis of factors that serve as base for decision-making and improvement of operations that result in increased profits. Use of developing technology related to spreadsheets and other cost control aids.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): HOSP-1700 Hospitality Purchasing, and ACCT-1020 Applied Accounting.*

### **HOSP-2580 Convention Management and Meeting Planning**

02 Semester Credits

Examination of convention and meetings market, focusing upon complex jobs of meeting planners and convention service managers. Includes exercises in practical applications.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): HOSP-2380 Hospitality Marketing and Sales, or departmental approval: related work experience.*

### **HOSP-2650 Restaurant Management Experience**

04 Semester Credits

Development and practice of management skills with shared responsibility for management and supervisory functions in an in-house, simulated restaurant experience. Capstone seminar and presentation of student accomplishments portfolio with review by industry, faculty, and staff.

*Lecture 00 hours. Laboratory 09 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): HOSP-2350 Restaurant Operations; HOSP-2400 Hospitality Management and Supervision; HOSP-1650 Dining Room Operations; and HOSP-2500 Hospitality Cost Control, or concurrent enrollment.*

### **HOSP-2860 Hotel Management Experience Practicum**

04 Semester Credits

On-site observation and work experience in variety of job areas in hospitality industry. Emphasis on practice of technical supervisory skills. Presentation and discussion of current issues pertinent to the industry. Special emphasis on evaluation of student accomplishments and preparedness to enter industry as career professional.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 2 hours per week.*

*Prerequisite(s): HOSP-2400 Hospitality Management and Supervision; and departmental approval: work related experience at approved site.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HOSP-2870 Food and Beverage Management Experience**

04 Semester credits

On-site observation and work experience in a variety of job areas in the Food and Beverage sector of the hospitality industry. Emphasis on practice of technical supervisory skills. Presentation and discussion of current issues pertinent to the industry. Special emphasis evaluation of student accomplishments and preparedness to enter industry as a career professional. Seminar and culmination of on-going portfolio with review by industry, faculty, and staff representatives.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 2 hours per week.*

*Prerequisite(s): HOSP-2400 Hospitality Management and Supervision, and departmental approval: approved site.*

### **HOSP-2990 Advanced Culinary Skills and Evaluation**

02 Semester Credits

Capstone course. Practice preparation of contemporary haute cuisine or modern fine foods. Review of culinary skills learned in previous courses, and guided practice of selected culinary skills. Demonstration and hands-on laboratory experience with special project. Culminating evaluation of culinary skills based on standards established by American Culinary Federation Educational Institute and other industry standards.

*Lecture 00 hours. Laboratory 06 hours.*

*Prerequisite(s): HOSP-2350 Restaurant Operations; and HOSP-1550 Baking Production and Sales; and HOSP-1860 Hospitality Practicum and Seminar.*

### **HUMAN SERVICES - HS**

#### **(formerly Community Mental Health Technology -CMHT)**

#### **HS-1300 Introduction to Human Services**

03 Semester Credits

Survey of historical and philosophical developments and their effects on Human Services. Introduction to contemporary Human Services delivery systems. Development of client-centered Human Services interventions. Emphasis on understanding Human Services within context of culturally/ethnically diverse urban environment.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **HS-1310 Issues in Chemical Dependency I**

02 Semester Credits

Introduction to current concepts, theoretical models and research used by practitioners to understand total ecology of chemically dependent individual. Examination and explorations of psychological, social and cultural lifestyle aspects of chemical dependency as applied to multicultural and special populations.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): HLTH-1300 Health and Medical Aspects of Chemical Dependency.*

#### **HS-1320 Issues in Chemical Dependency II**

02 Semester Credits

Examination of models and theories used in prevention strategies. Study of levels of prevention, methods, strategies, legal aspects, social and community resources available to prevent chemical dependency and relapse.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): HLTH-1300 Health and Medical Aspects of Chemical Dependency.*

#### **HS-1400 Group Work in the Human Services**

02 Semester Credits

Introduction to group work. Investigation of group work theories, different types of groups, group dynamics, stages of group process, group facilitation, participant role/influences, and group counseling techniques. Cooperative learning and role playing incorporated into learning experience.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Concurrent enrollment in HS-1850 Introduction to Human Services Principles and Practices, or departmental approval: assessment by program coordinator.*

#### **HS-1410 Diagnostic Tools and Advocacy Strategies**

02 Semester Credits

Introduction to signs and symptoms of behaviors associated with mental illness, using DSM IV. Knowledge and limitations of psychotropic and related medications. Identification of criteria to qualify consumers for services. Discussion of networking strategies. Development of advocacy strategies based on integration of course material.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HS-1420 Legal Issues**

02 Semester Credits

Basic legal issues and policies affecting consumers of mental health and substance addiction services. Exploration of Ohio Revised Code Statutes relating to probate commitment, retention, release, due process, patient's rights, forensics, confidentiality and privacy act. Discussion of recent court decisions pertaining to mental health and substance addiction legal issues.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **HS-1800 Special Topics in Human Services**

1-3 Semester Credits

Study of selected topics or current issues in Human Services. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 00. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **HS-181P Special Topics Practicum in Human Services**

2-3 Semester Credits

Practicum in special areas of Human Services. Experiences will vary as interest arises in field of Human Services. (Repeatable. No more than six credits of special topics courses may be applied toward fulfilling elective graduation degree requirements.)

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: Practicum: 7-14 hours per week. Seminar: 1 hour per week. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **HS-1850 Introduction to Human Services Principles and Practices**

05 Semester Credits

Principles and practices of Solution Focused/Brief Therapy Theory. Development of behavioral observation, assessment and assertiveness skills. Emphasis on developing cooperative relationships with clients and practicum supervisor. Introduction to community support process and managed care system. Demonstration of ethical and culturally sensitive interventions at practicum site. Supervised practicum of seven (7) hours per week with emphasis on orientation, data collection, documentation, interpretation of behavior, and decision making relating to individuals and social systems.

*Lecture 03 hours. Laboratory 00 hours. Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week. Prerequisite(s): HS-1300 Introduction to Human Services, or departmental approval: equivalent coursework.*

### **HS-185Z Human Services Principles and Practices I: Transition Course**

03 Semester Credits

Transition Course. Must have completed CMHT-126 Inquiry, Observation, and Assessment; or CMHT-126M Introduction to Human Services Principles and Practices. Replaces CMHT-127 Social Ecology, or CMHT-127M Human Services Principles and Practices I. Fulfills the requirements for HS-1850 Introduction to Human Services Principles and Practices. Continuation of practicum experience. Development of assessment skills. Completion of log writing requirements. Emphasis on managed care essentials and implementation of therapy principles. Assertiveness skills. Class discussion of practicum experience. Practicum site visits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Practicum: 105 hrs./semester. Seminar: 15 hrs./semester. Prerequisite(s): CMHT-126 Inquiry, Observation and Assessment; or CMHT-126M Introduction to Human Services Principles and Practices.*

### **HS-2310 Issues in Chemical Dependency III**

02 Semester Credits

Review of physical, cultural, social and psychological aspects of chemical dependency. Examination of various methods of intervention, assessment, case management, referrals and community resources which help chemically dependent persons maintain sobriety. Emphasis on proper use of assessment tools, diagnosis, dimensions of treatment, and proper documentation.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): HLTH-1300 Health and Medical Aspects of Chemical Dependency.*

### **HS-2320 Issues in Chemical Dependency IV**

02 Semester Credits

Examination of roles, skills, knowledge and ethics necessary for a career in field of Chemical Dependency. Personal inventory of one's skills, knowledge and boundary issues. Special emphasis on twelve core functions, global criteria and ethical standards necessary in chemical dependency field. Students demonstrate assertiveness, advocacy and stress management techniques and skills.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): HLTH-1300 Health and Medical Aspects of Chemical Dependency.*

### **HS-2410 Family Systems**

02 Semester Credits

Principles of family dynamics. Introduction to family intervention strategies. Development of human service skills to service families. Explore range of services available to families. Reporting policies, requirements and processes.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **HS-2420 Intervention Strategies**

02 Semester Credits

Introduction to intervention strategies with individuals, groups and community. Focus on range of human service populations and service issues. Includes prevention, early intervention, crisis intervention and recovery strategies.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **HS-2510 Human Service Systems**

02 Semester Credits

Development of Systems Approach to human service delivery, with emphasis on macro and micro systems. Exploration of formal and informal systems. Development of skills to evaluate existing human services in community. Client advocacy. Development of assessment skills for individuals and families through use of genogram and ecological mapping tools.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): HS-1850 Introduction to Human Services Principles and Practices.*

### **HS-2520 Case Management in the Human Services**

02 Semester Credits

Practice in development of skills in assessment, planning, coordination intervention, maintenance, and referral as integral part of case management. Emphasis on oral and written communication as pertains to case management.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): HS-1850 Introduction to Human Services Principles and Practices.*

### **HS-2530 Proposal Writing and Program Development**

02 Semester Credits

Fundamentals of proposal writing and program development. Students will develop grant proposal that meets funding criteria.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### **HS-2800 Special Advanced Topics in Human Services**

1-3 Semester Credits

Study of selected advanced topics or current issues in Human Services. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **HS-281P Special Advanced Topics Practicum in Human Services**

2-3 Semester Credits

Practicum in special advanced areas of Human Services. Experiences will vary as interest arises in field of Human Services. (Repeatable. No more than six credits of special topics courses may be applied toward fulfilling elective graduation degree requirements.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7-14 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **HS-2850 Human Services Principles and Practices I**

05 Semester Credits

Develop basic skills of time management. Application of time management skills to student's personal schedule. Investigation of therapeutic theories of laughter and playfulness. Research and practice in development of preventive measures in Human Services. Participation in practicum experience.

*Lecture 02 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): HS-1850 Introduction to Human Services Principles and Practices; or concurrent enrollment in HS-2510 Human Services Systems; or departmental approval: equivalent coursework or experience.*

### **HS-285Z Human Services Principles and Practices II: Transition Course**

03 Semester Credits

Transition Course. Must have completed CMHT-202 Community Mental Health Technology Principles and Practices I. Replaces CMHT-203 Community Mental Health Technology Principles and Practices II. Completes requirements for HS-2850 Human Services Principles and Practices I. Research and practice in development of preventive measures in human service field. Information exchange between field site representative and students.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Practicum: 105 hrs./semester. Seminar: 15 hrs./semester. Prerequisite(s): CMHT-202 Community Mental Health Technology Principles and Practices I.*

### **HS-2860 Human Services Principles and Practices II**

03 Semester Credits

Continuation of practicum experience. Focus on client within existing service delivery system.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 1 hour per week. Prerequisite(s): HS-2850 Human Services Principles and Practices I.*

### **HS-2990 Human Services Capstone Course**

02 Semester Credits

Assessment of one's knowledge, experience and skills as Human Service Worker. Preparation and presentation of qualifications through written resume and portfolio. Guidelines and preparation for employment interview. Investigation into Human Services issues.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite: HS-2850 Human Services Principles and Practice I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### HUMANITIES - HUM

#### **HUM-1010 Introduction to Humanities**

03 Semester Credits

Examines creative enterprise in human cultures through the study of great works of art and literature. Lectures, performances, exhibits, and multi-media presentations.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HUM-1020 The Individual in Society**

03 Semester Credits

Introduction to works of art, philosophies, and scientific views that portray, explain, and evaluate positions and interactions of individuals in society. Lectures, performances, exhibits, and multi-media presentations.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HUM-1030 The Individual in the Cosmos**

03 Semester Credits

Introduction to works of art, philosophies, religions, and scientific views that portray, explain, and evaluate individual's search for meaning in cosmos. Lectures, performances, exhibits, and multi-media presentations.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **HUM-1100 Leadership Development Studies**

03 Semester Credits

Introduction to theories and ethics of group dynamics in leadership styles through study of classic and contemporary writings. Internationally recognized course, designed by Phi Theta Kappa. Lectures, discussions, and experiential learning exercises.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **HUM-1750 Honors Forum: Critical Issues**

03 Semester Credits

Analysis of contemporary critical issues through their roots in past and present social, philosophical, and political attitudes and literature. Topics may vary with each offering, lecture, discussion, guest presentation, and multi-media presentation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Department approval: honors program enrollment.*

#### **HUM-1800 Special Topics in Humanities**

1-3 Semester Credits

Study of selected topics or current issues in Humanities. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### INTERIOR DESIGN - INTD

#### **INTD-1110 Introduction to Interior Design**

01 Semester Credit

Introduction to interior designs with emphasis on design elements and sources. Exploration of the field for employment with areas of specialization.

*Lecture 01 hour. Laboratory 00 hours. Prerequisite(s): None.*

#### **INTD-1820 Independent Study in Interior Design**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Interior Design. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Interior Design.*

#### **INTD-2300 Interior Design Studio I**

03 Semester Credits

Introduction of functional space planning through design of residential projects. Emphasis on problem solving and exploring multiple design solutions.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): INTD-1110 Introduction to Interior Design, ARCH-1410 Architectural Drafting and CAD I, ART-1060 Drawing II, and ART-1090 Visual Design II.*

#### **INTD-2320 History of Interiors**

03 Semester Credits

History of development of furnishings, ornaments, interiors and architectural details from Egyptian through prominent 20th century movements to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ART-1020 Art History I.*

#### **INTD-2330 Interior Design Materials and Sources**

03 Semester Credits

Reviews various interior furnishings, finishes, and materials through lectures, field trips, and research assignments. Information presented on furniture sources, showroom functions, and criteria for specifying elements of interior spaces.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): INTD-1110 Introduction to Interior Design.*

#### **INTD-2350 Textiles**

03 Semester Credits

Study of natural and manufactured fibers; aesthetics, application, function, and technical aspects. Lectures and field trips cover fabric construction, physical properties and technology in textile industry.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): INTD-1110 Introduction to Interior Design, or departmental approval: comparable knowledge or skills.*



## **INTD-2380 Fundamentals of Lighting**

03 Semester Credits

Principles and techniques of lighting design and application in interior space. Light measurement, sources, specifications, color and light, and terminology along with calculations of light in interior environment.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): INTD-1110 Introduction to Interior Design; INTD-2300 Interior Design Studio I, or concurrent enrollment.*

## **INTD-2400 Interior Design Studio II**

03 Semester Credits

Considers advanced problems in commercial interiors with concepts in advancement and application of planning techniques. Emphasis on research and analysis of existing structures, building constraints, accessibility, and furnishing and materials specifications.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): INTD-2300 Interior Design Studio I.*

## **INTD-2430 Architectural Materials and Methods**

03 Semester Credits

Materials and methods presented on building construction, emphasizing wood, concrete unit masonry and light steel construction. Projects include working drawings and interpretations, field trips to construction sites, and fabricating plans.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): ARCH-1410 Architectural Drafting and CAD I.*

## **INTD-2460 Interior Design Presentation**

03 Semester Credits

Rendering techniques stressed to communicate design concepts. Focuses on prespective rendering skills, performance of three dimensional space, and mixed media. Quick sketch techniques and computer use for residential and commercial interiors.

*Lecture 01 hour. Laboratory 06 hours.*

*Prerequisite(s): ARCH-1410 Architectural Drafting and CAD I; ART-1060 Drawing II; ART-1090 Visual Design II; and concurrent enrollment in INTD-2400 Interior Design Studio II.*

## **INTD-2470 Professional Practice of Interior Design**

03 Semester Credits

Business practices for production of residential and commercial interior design projects to completion. Operation, communications, and legal responsibilities along with resumes, interviews, and business conduct presented.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): INTD-1110 Introduction to Interior Design, or departmental approval: comparable knowledge or skills.*

## **INTD-2800 Special Advanced Topics in Interior Design**

1-3 Semester Credits

Study of selected advanced topics or current issues in Interior Design. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **INTD-281S Special Advanced Laboratory Topics in Interior Design**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Interior Design (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **INTD-281T Special Advanced Laboratory Topics in Interior Design**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Interior Design (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **INTD-2820 Independent Advanced Study in Interior Design**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Interior Design. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Interior Design.*

## **INTD-2850 Interior Design Practicum**

03 Semester Credits

Students are placed in a practical work environment under College supervision. Interaction with professionals in the field and application of skills and knowledge gained in the classroom required.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 210 hours per semester at assigned site. Seminar: 15 hours per semester.*

*Prerequisite(s): INTD-1110 Introduction to Interior Design, and concurrent enrollment in INTD-2470 Professional Practice of Interior Design; or departmental approval.*

### ITALIAN - ITAL

#### **ITAL-1010 Beginning Italian I**

04 Semester Credits

Introduction to Italian through multiple approaches emphasizing speaking and understanding. Practice in conversational Italian and aural comprehension on topics of daily interest. Practice in writing basic sentences and small simple paragraphs on relevant topics and reading short paragraphs.

*Lecture 03 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **ITAL-1020 Beginning Italian II**

04 Semester Credits

Development of proficiency in speaking, understanding, reading, and writing in Italian. Emphasis on strengthening conversational skills through discussions of selected readings and cultural topics.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): ITAL-1010 Beginning Italian I, or one year of high school Italian; or departmental approval.*

#### **ITAL-1100 Italian Intercultural Perspectives**

03 Semester Credits

Study of Italian image and contribution to world culture and various nation-shaping events throughout history from Roman times to present, with particular emphasis on shaping of United States of America. Cultural presence of Italy in United States.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **ITAL-2010 Intermediate Italian I**

03 Semester Credits

Increased vocabulary development and structural review through readings of cultural texts. Emphasis on oral expression and group discussions. Intensive exercises in written and oral expression. Grammar review and vocabulary building.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ITAL-1020 Beginning Italian II, or two years of high school Italian; or departmental approval.*

#### **ITAL-2020 Intermediate Italian II**

03 Semester Credits

Intensive exercises in written and oral expression in Italian with emphasis on conversation. Further improvements of written skills. Reading of selected texts in order to deepen understanding and appreciation of Italian culture.

Additional grammar review and vocabulary building.

Further exploration of Italian literature.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ITAL-2010 Intermediate Italian I, or two years of high school Italian; or departmental approval.*

#### **ITAL-2410 Italian Conversation and Composition**

03 Semester Credits

Development of proficiency in speaking, understanding, reading, and writing. Emphasis on strengthening conversational skills through discussions of selected readings and cultural topics and more conversational opportunities. Discussion of topics of everyday life, colloquialisms, vocabulary augmentation, and improvement of speech patterns. Practice in writing compositions.

Emphasis on group discussion.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ITAL-2020 Intermediate Italian II, or concurrent enrollment with departmental approval: three years of high school Italian.*

#### **ITAL-2420 Italian Civilization, Culture and Literature**

03 Semester Credits

Introduction to civilization and literature of Italy. Emphasis on interrelationship between history and geography of Italy and its culture.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ITAL-2410 Italian Conversation and Composition, or concurrent enrollment with departmental approval: three years of high school Italian.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### JAPANESE - JAPN

#### JAPN-1010 Beginning Japanese I

04 Semester Credits

Introduction to modern Japanese. Listening, speaking, reading, writing, and basic grammatical structures, with emphasis on appropriate social use of the language within Japanese culture. Hiragana, katakana, and 75-100 kanji. Basics of kanji dictionaries. Presented through class interaction, audio, video, and computer lab instruction. *Lecture 03 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### JAPN-1020 Beginning Japanese II

04 Semester Credits

Continued study of modern Japanese in social and cultural context. Emphasis on listening comprehension and speaking regarding practical daily transactions. Reading basic, graded texts and writing simple compositions, integrating basic grammatical structures, hiragana, katakana, and 100-150 new kanji. Acquiring speed in referring to kanji dictionaries. Class interaction, audio, video and computer lab.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): JAPN 1010 Beginning Japanese I, or departmental approval.*

#### JAPN-113Z Beginning Japanese III: Transition Course

03 Semester Credits

Transition Course. Must have completed JAPN-112 Beginning Japanese II. Replaces JAPN-113 Beginning Japanese III. Completes course sequence. Continued study of Japanese listening, speaking, reading, writing, and grammar. Appropriate social use of the language within Japanese culture.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): JAPN-112 Beginning Japanese II, or departmental approval.*

#### JAPN-1800 Special Topics in Japanese

1-3 Semester Credits

Study of selected topics or current issues in Japanese. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### JAPN-2010 Intermediate Japanese I

04 Semester Credits

Continued study of modern Japanese in social and cultural context. Listening and speaking skills necessary for basic function and communication in Japanese society. Reading functional, intermediate, graded texts and writing brief compositions and personal correspondence, integrating intermediate grammatical structures and 150-200 new kanji. Class interaction, audio, video, and computer lab.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): JAPN-1020 Beginning Japanese II, or departmental approval.*

#### JAPN-2020 Intermediate Japanese II

04 Semester Credits

Continued study of modern Japanese in social and cultural context. Emphasis on communicative listening and speaking skills. Discussion of topics on Japanese culture and society. Reading and writing longer texts and compositions expressing more complex ideas, integrating 150-200 new kanji. Completion of Japanese grammar foundation. Class interaction, audio, video, and computer lab.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): JAPN-2010 Intermediate Japanese I, or departmental approval.*

#### JAPN-2410 Advanced Japanese I

03 Semester Credits

Modern Japanese in social and cultural context. Development of focused listening comprehension and conversational skills. Discussion of cultural and business topics in Japanese. Reading selected literary materials texts. Introduction to formal writing style and its structural differences. Writing formal letters and brief essays. Introduction of 200-250 new kanji. Class interaction, audio, video, and computer lab.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): JAPN-2020 Intermediate Japanese II, or departmental approval.*

#### JAPN-2420 Advanced Japanese II

03 Semester Credits

Modern Japanese in social and cultural context. Further development of focused listening and conversation skills. Discussion of aspects of Japanese politics and economy. Reading authentic texts such as periodicals, short stories, and novel excerpts. Writing journal entries and compositions of 200-400 characters. Introduction of 200-250 new kanji. Class interaction, audio, video, and computer lab.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): JAPN-2410 Advanced Japanese I, or departmental approval.*

#### JAPN-2800 Special Advanced Topics in Japanese

1-3 Semester Credits

Study of selected advanced topics or current issues in Japanese. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### JOURNALISM AND MASS COMMUNICATIONS - JMC (formerly Journalism - JOUR)

#### JMC-1010 Introduction to Mass Communication I

04 Semester Credits

Nature and function of mass media: print, television, radio and film. Impact and influence on individuals in a democratic society.

*Lecture 04 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### JMC-1020 Introduction to Mass Communication II

03 Semester Credits

Examination of each of the mass media. Includes current trends and issues, social economic and legal constraints, ethics of mass media, communication research, and probable future of mass media.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### JMC-1310 Film Appreciation

03 Semester Credits

(formerly ART-140)

Introduction to aspects of film including script, directing and elements of cinematography. Includes survey of film history and criticism. Class views masterpieces from a number of countries.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### JMC-1410 Staff Practice

01 Semester Credit

Class laboratory experience in assembling, making-up and publishing College newspaper. Detailed weekly analysis of effectiveness of news stories written and published and overall presentation of College newspaper. Students assigned to College newspaper staff.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Concurrent enrollment in JMC-2010 News Writing, or departmental approval: comparable knowledge or skills.*

#### JMC-1610 Survey of the Black Press

03 Semester Credits

Nature and function of Black press including broadcast, with emphasis on history and function of Black press and impact of Black press on minorities in general. Special attention on career opportunities for minorities and problems of black journalist working with general press.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### JMC-2010 News Writing

04 Semester Credits

News gathering and writing for print media. Emphasis on basic structure of news story and writing against deadline. Survey of career opportunities in print and broadcast journalism. Principal ethical, policy and legal questions confronting reporters and their newspapers.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, or departmental approval: comparable knowledge or skills.*

#### JMC-2020 News Reporting

04 Semester Credits

Emphasis on problems of news gathering using community as laboratory. Interpretive reporting. Attention to needs of wide variety of types of newspapers and to journalistic specialties.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): JMC-2010 News Writing.*

#### JMC-2030 News Editing

04 Semester Credits

Copy desk methods. Copy and proofreading, headline writing, newspaper makeup and style. Introduction to newspaper law, including libel, right to privacy and press privileges. Editorial writing, problems and policy. Examination of major contemporary American newspapers.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): JMC-2010 News Writing.*

#### JMC-2210 Introduction to Radio and Television

03 Semester Credits

(formerly THEA-172)

Survey of radio and television industry and its impact on contemporary society with critical study of broadcast programming including production, direction and writing.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite: JMC-1010 Introduction to Mass Communication I.*

#### JMC-2220 Broadcast Journalism

03 Semester Credits

News reading, news preparation, news reporting on audiotape, videotape and live camera for television and radio. Covers Federal Communications Commission rules and regulations on news. Fundamentals of what makes a story and how to get it. Art of interviewing. Field work, study of radio and television history.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite: JMC-1010 Introduction to Mass Communication I.*

#### JMC-2410 Television Production

03 Semester Credits

Introduction to basic concepts of video production. Emphasis on operation of video cameras, microphone placement, lighting, editing and post-production equipment. Teamwork and group production emphasized.

*Lecture 2 hours. Laboratory 02 hours.*

*Prerequisite(s): JMC-1010 Introduction to Mass Communication I, or departmental approval: comparable knowledge or skills.*

#### JMC-2420 Advanced Television Production

03 Semester Credits

Advanced television production and operations, to include hands-on training with studio and field equipment. Theories and processes of producing and directing video programs, including script writing, visualization, personnel management and budgeting. Includes multi-camera and single-camera production, video editing techniques. Teamwork and group production emphasized.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): JMC-2410 Television Production.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **JMC-2470 Motion Picture Production**

03 Semester Credits

(formerly THEA-282)

Introduction to motion picture production techniques.

Students design, shoot and edit their own projects.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): JMC-1010 Introduction to Mass Communication I, or departmental approval: comparable knowledge or skills.*

### **JMC-2480 Radio Broadcast Production**

03 Semester Credits

(formerly THEA-290 and 291)

Basic principles of production and programming including training and development in basic performance areas. Study of contemporary radio station programming theories and techniques.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): JMC-1010 Introduction to Mass Communication I, or departmental approval: comparable knowledge or skills.*

### **JMC-2800 Special Advanced Topics in Journalism and Mass Communication**

1-3 Semester Credits

Study of selected advanced topics or current issues in Journalism and Mass Communications. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **JMC-281S Special Advanced Laboratory Topics in Journalism & Mass Communication**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Journalism & Mass Communication (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **JMC-281T Special Advanced Topics in Journalism and Mass Communication Laboratory Experience**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Journalism and Mass Communication (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **JMC-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program.

Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## **LATIN - LAT**

### **LAT-1010 Beginning Latin I**

04 Semester Credits

Introduction to Latin through multiple approaches with emphasis on comprehension of basic and some complex grammar. Use of language lab and analysis of English vocabulary.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): None.*

### **LAT-1020 Beginning Latin II**

04 Semester Credits

Continued study of Latin language Development of proficiency in reading, writing, and speaking. Emphasis on reading classical works.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): LAT-1010 Beginning Latin I, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### LAW ENFORCEMENT - LAWE

#### **LAWE-1000 Introduction to Criminal Justice**

03 Semester Credits

History and philosophy of criminal justice in America; review system, identification of subsystems, role expectations, and relationships. Theory of crime, punishment, and rehabilitation. Ethics, education, and training required in law enforcement, nature of formal and informal decision making in criminal justice, sociology, politics, economics, and law of criminal justice.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1010 Computers in Criminal Justice**

02 Semester Credits

Introduction to uses and applications of computer technology in criminal justice field. Includes discussions of basic terminology; common applications in database, word processing, and spreadsheet uses; and an introduction to World Wide Web. Comprehensive examination of computer crimes and procedures, techniques, and legal constraints which apply.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1050 Introduction to Security**

02 Semester Credits

Historical perspective on development of security with definition of current role and function. Studies in fundamental principles of risk assessment, physical plant security, defense systems, internal security, fire prevention and disaster preparedness in security field.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1070 Introduction to Corrections**

02 Semester Credits

Introduction to processes, procedures and issues in contemporary corrections. History and evolution of various elements of juvenile and adult correction systems.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1100 Criminal Procedures and Evidence**

03 Semester Credits

Traces criminal justice system and procedures used in bringing someone to trial; viewing the arrest, bail, grand jury, pre-trial through trial process. Roles of all participants in process examined. Discussion of post-trial proceedings: appeals, habeas corpus hearings, probation and parole. Thoroughly reviews rules of evidence.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1110 Constitutional Law**

03 Semester Credits

Development of Federal Constitution and history of Bill of Rights. In-depth analysis of first, fourth, fifth, sixth, eighth and fourteenth Amendments. Impact of recent court decisions on these amendments and implications for criminal justice officials.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAWE-1100 Criminal Procedures and Evidence, or departmental approval: comparable knowledge or skills.*

#### **LAWE-1300 Patrol Operations**

04 Semester Credits

Examination of techniques required in performing patrol function. Covers preparation, vehicle patrol, foot patrol, crimes in progress, prowler calls, building searches, performance of stops and approaches, vehicle identification, and prisoner booking and handling. Incorporates report writing required of police officers. Discussion of various types of forms and reports necessary and methods for accurate completion. Use and structure of field notes, investigative report form and content, and use of proper grammar in narrative reports.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): LAWE-1000 Introduction to Criminal Justice, or departmental approval: comparable knowledge or skills.*

#### **LAWE-1310 Traffic Enforcement and Investigation**

03 Semester Credits

Examination of traffic accident investigation, traffic enforcement and other control procedures utilized in highway transportation system. Comprehensive study of traffic enforcement principles, problems, and procedures and how traffic accident investigation program relates to traffic enforcement program. Investigation of accident scene and methods for enforcement of specific driving violations.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAWE-1000 Introduction to criminal justice, or departmental approval: comparable knowledge or skills.*

#### **LAWE-1400 Assets Protection**

04 Semester Credits

In-depth study of principles of loss prevention with emphasis on risk management. Examination of concepts of physical security with management systems; physical security requirements; alarm systems; planning and vulnerability assessments.

*Lecture 04 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1500 Community Intervention Resources**

04 Semester Credits

In-depth survey of community-based resources designed for intervention, prevention and control or rehabilitation of juvenile and adult offender.

*Lecture 04 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **LAWE-1800 Special Topics in Law Enforcement**

1-3 Semester Credits

Study of selected topics or current issues in Law Enforcement. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **LAWE-181S Special Laboratory Topics in Law Enforcement**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Law Enforcement (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **LAWE-181T Special Laboratory Topics in Law Enforcement**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Law Enforcement (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **LAWE-2300 Juvenile Delinquency**

02 Semester Credits

Problem of juvenile delinquency, police programs and community resources for prevention of juvenile delinquency presented. Juvenile court organization and procedure, detention, filing, police procedures and enforcement of juvenile code.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1000 Introduction to Criminal Justice, or departmental approval: comparable knowledge or skills.*

## **LAWE-2310 Criminal Investigation**

04 Semester Credits

Comprehensive examination of investigative techniques utilized in development of criminal cases. Focus on initial response and crime scene investigation, and conducting interviews and interrogations. Use of Reid Technique of interrogation: crime scene protection; sketching and photographing; fingerprints; identifying and collecting evidence; and specific scientific examinations utilized in various types of crimes.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1300 Patrol Operations, or departmental approval: comparable knowledge or skills.*

## **LAWE-2320 Ohio Revised Code**

03 Semester Credits

Intensive examination and study of criminal and traffic statutes of Ohio Revised Code. Designed to provide students with ability to recognize specific violations of both criminal and traffic law from elements present in given situation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1000 Introduction to Criminal Justice, or departmental approval: comparable knowledge or skills.*

## **LAWE-2340 Police Management and Supervision**

04 Semester Credits

Comprehensive examination of both supervisory and administrative roles in law enforcement environment. Examines supervisory role in leadership development, discipline, motivation, personnel evaluation, human relations, administrative concerns in organizational structure, time management, collective bargaining, conflict and stress management, manpower deployment, civil liability, and employee productivity.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1000 Introduction to Criminal Justice; and LAW-1010 Computers in Criminal Justice; or departmental approval: comparable knowledge or skills.*

## **LAWE-2350 Special Issues in Criminal Justice**

02 Semester Credits

Review of special and contemporary issues in field of criminal justice. Discussion of varying viewpoints and aspects of problems faced in these fields. Critical and analytical approach used to understand role and relationship of criminal justice system in today's society.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-2310 Criminal Investigation, or departmental approval: comparable knowledge or skills.*

## **LAWE-2360 Community Oriented Policing**

03 Semester Credits

Study of evolution of policing. In-depth analysis of origin of community oriented policing. Strategies, concerns, and evolution of community oriented policing. Nature and operations of community policing.

*Lecture 3 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1000 Introduction to Criminal Justice, or departmental approval: comparable knowledge or skills.*

## **LAWE-2400 Security Management**

04 Semester Credits

Comprehensive examination of organization, staffing, supervision and administration of security function. Concerned with general security management, supervision and operational management along with public relations.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1050 Introduction to Security, or departmental approval: prior knowledge or experience.*

## **LAWE-2410 Security Investigation**

03 Semester Credits

Intensive examination of investigative function as it relates to private security. Criminal and non-criminal investigations. Study of databanks, surveillance methods, interviews, backgrounds, and report preparation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1050 Introduction to Security, or departmental approval: comparable knowledge or skills.*

## **LAWE-2420 Legal Aspects of Private Security**

03 Semester Credits

Study of various Federal and State laws and impact on security management process. In-depth examination of state criminal code as applied to private security.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1050 Introduction to Security, or departmental approval: comparable knowledge or skills.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **LAWE-2430 Contemporary Security Problems**

03 Semester Credits

Analysis of current and special security problems. Provides opportunity for students to select areas of security for individual emphasis. Further study may include banking, retail, industrial, hotel, college and hospital.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1050 Introduction to Security, and LAW-1400 Assets Protection; or departmental approval: comparable knowledge or skills.*

### **LAWE-2510 Community Supervision and Aftercare**

04 Semester Credits

Reviews and examines various aspects of contemporary community-based corrections practices and aftercare programs.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1070 Introduction to Corrections, or departmental approval: comparable knowledge and skills.*

### **LAWE-2520 Criminology**

03 Semester Credits

Development of criminology, sociology of criminal law, legal order and crime control, and patterns of criminal law. Also deals with social reaction to crime and future crime control in American society.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1070 Introduction to Corrections, or departmental approval: comparable knowledge or skills.*

### **LAWE-2530 Correctional Case Management**

03 Semester Credits

Application of counseling interview techniques applicable to correctional offender. Field and clinical situations simulated so student can gain experience in interviewing, chronological recording, report writing, and oral presentation of cases.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): LAW-1070 Introduction to Corrections, or departmental approval: comparable knowledge or skills.*

### **LAWE-2540 Corrections: Principles and Practices**

03 Semester Credits

Pre-service student placed in criminal justice agency facility under guidance of experienced practitioner. Application of corrections principles. Class time spent in small group discussions of theories and applications.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Practicum: 8 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): LAW-2510 Community Supervision and Aftercare.*

### **LAWE-2800 Special Advanced Topics in Law Enforcement**

1-3 Semester Credits

Study of selected advanced topics or current issues in Law Enforcement. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **LAWE-281S Special Advanced Laboratory Topics in Law Enforcement**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Law Enforcement (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **LAWE-281T Special Advanced Laboratory Topics in Law Enforcement**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Law Enforcement (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **LAWE-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MANUFACTURING/INDUSTRIAL TECHNOLOGY - MIT

#### MIT-1100 Computer Applications and Programming

02 Semester Credits

Solving technological problems using microcomputer. Designing and debugging windows-based (16 bits and 32 bits) application software in Microsoft Visual Basic language. Applying designed software programs in technological problem solving. Programming spreadsheets and database application and development of front-end applications for spreadsheets and data base software using Microsoft Visual Basic. Course content updated as necessary to include additional functions in new versions of Microsoft Visual Basic.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-1160 Technical Mathematics I, or departmental approval: work experience.*

#### MIT-1200 Engineering Drawing

02 Semester Credits

Visualization skills utilized in application of principles and practices of orthographic projection and pictorial sketching and drawing. Applied geometry, use of scales, sections, and auxiliary views as applied to technical drawings. Dimensioning standards and conventions as related to detail and assembly drawings. Role that technical drawings play in relationships to processes of production and manufacturing along with design process studied.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-1160 Technical Mathematics I, or departmental approval: work experience.*

#### MIT-1220 Introduction to AutoCAD

02 Semester Credits

Introduction to computer-assisted drafting (CAD). Student learns to operate CAD system as tool of drafting. Develops drafting capabilities by combining existing manual drafting skills and concepts with intricacies of CAD software. Student should be able to apply basic and intermediate CAD commands to draw and edit engineering drawings. Provides basic overview of necessary computer knowledge needed to operate IBM compatible computer. Student becomes familiar with special terms and definitions used in computer-assisted drafting.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): MIT-1200 Engineering Drawing, or concurrent enrollment; or ARCH-1410 Architectural Drafting and CAD I, or concurrent enrollment; or departmental approval: work experience.*

#### MIT-1250 Materials and Machine Tools

03 Semester Credits

Basic knowledge of behavior and characteristics of metals and other materials used in industry, their structure, physical, mechanical and chemical properties. Includes polymers, ceramics and composites. Special emphasis on detailed study of traditional and contemporary methods of metals machining. Laboratory experiences include fundamentals of machine tool setup and operation, precision measurement techniques. Turning, milling and grinding operations.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-1160 Technical Mathematics I, or departmental approval: work experience.*

#### MIT-1300 Metallurgy and Manufacturing Processes

03 Semester Credits

Quantitative analysis and interpretation of microstructures in metals and metal alloys. Heat treatment of ferrous and non-ferrous materials and steel, crystallization structure and phase diagram. Metallographic microscope, micro hardness, tensile testing, and Charpy impact test. Manufacturing processes including foundry, hot and cold metal forming, extraction, welding, and machining. Surface protection processes, cleaning, painting, electroplating, galvanizing and anodizing.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1200 Engineering Drawing; and MIT-1250 Materials and Machine Tools, or concurrent enrollment; or departmental approval: work experience.*

#### MIT-1550 Industrial Drawing Essentials

03 Semester Credits

Analysis and application of drawing symbols, terminology, and notes as applied to mechanical drawings for industrial processes. Topics include working drawings, geometric dimensioning and tolerancing, drawing notes and revisions, and specialized drawing interpretation.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1200 Engineering Drawing, and MET-1100 Technology Orientation.*

#### MIT-1600 CNC Programming

03 Semester Credits

Fundamentals of computers and computer applications as aid to manufacturing processes. Emphasis on blueprint analysis, using trigonometry and other forms of mathematics to determine programming points; ascertaining implied part dimensions; determination of machining parameters: calculation of speeds; feeds and tool offset; establishment of work zero and tools home positions. Manual programming of computer numerical control (CNC) machines using G-codes; tooling and set-up of CNC lathes and milling machines for machining operations; verification of toolpaths by simulation; operating CNC machines to produce mechanical parts.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1250 Materials and Machine Tools, or concurrent enrollment; and MIT-1220 Introduction to AutoCAD, or concurrent enrollment.*

#### MIT-1700 CAD/CAM I

03 Semester Credits

Geometric modeling, using selected CAD/CAM packages to graphically model parts in 2D, 3D wire-frame and solid; graphic display manipulation; geometrical analysis; graphic and data files management; exchange and conversion of graphic files to standardized formats such as DXF, IGES. Generating G-codes, postprocessing G-codes into formats interpretable by given CNC controllers. Editing G-Codes with verification of validity of toolpaths in 3D and solid graphical simulation. Downloading path programs into CNC's MCU; tooling and setting up parts on CNC lathe and milling machines. Operating CNC machines to produce parts.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1250 Materials and Machine Tools, or concurrent enrollment; and MIT-1600 CNC Programming, or concurrent enrollment.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MIT-1950 Industrial CAD I

03 Semester Credits

Advanced engineering drawing concepts used with computer-aided drafting software. Drawing applications include size tolerancing, thread specifications and standardized drawing formats. Isometric drawing and 3D wireframe models introduced as component for Industrial CAD II course.

*Lecture 01 hour. Laboratory 06 hours.*

*Prerequisite(s): MIT-1220 Introduction to AutoCAD, or departmental approval: work experience.*

### MIT-2050 Industrial CAD II

03 Semester Credits

Application of computer using drafting/design software as tool for industrial drafting. Complete set of production drawings created using 2D and 3D drawing environments. Principles of parametric design, welding joint description and functional assemblies directly applied. Emphasis tailored to 3D modeling for enhanced part description. Students work on individual design projects to stimulate their spatial abilities and problem-solving techniques.

*Lecture 01 hour. Laboratory 06 hours.*

*Prerequisite(s): MIT-1250 Materials and Machine Tools; and MIT-1950 Industrial CAD I; or departmental approval: work experience.*

### MIT-2100 Advanced Machine Tools

03 Semester Credits

Advanced machining processes with additional experience in setup and operation of standard machine tools; more complex turning, milling, grinding, band sawing operations with shop maintenance and shop safety. Turning operations include taper turning, machine lathe internal and external threading, and boring. Milling includes gears, gang and straddle milling. Further topics cover electron discharge machine (EDM), laser, electronmechanical machining, ultrasonic machining and water jet cutting.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1200 Engineering Drawing, and MIT-1250 Materials and Machine Tools.*

### MIT-2150 Motion and Time Study

03 Semester Credits

Motion and time study of operations to create cost consciousness desired in reducing operations or production costs. Detailed analysis of work methods for improvement. Developing best work methods by identifying motions, limits of motions and basic motion times. Applying predetermined time standard system (PTSS) in analyzing work methods. Identifying and applying methods of work sampling and measurement. Using motion and time study to aid cost estimating, wage and incentive planning.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): MATH-1160 Technical Mathematics I, or departmental approval: work experience.*

### MIT-2200 Computer Integrated Manufacturing

03 Semester Credits

Analysis of computer integrated manufacturing (CIM) system. Emphasis on computer aided design (CAD) computer-aided production engineering (CAPE), computer-aided production planning (CAPP), computer-aided manufacture (CAM), and computer-aided transportation and storage (CATS). Other sub-components of CIM and CIM strategies, such as CIM design rules, general interface rules, data and data communication, sensor and graphic systems, flow charting conventions and selection process.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1100 Computer Applications and Programming.*

### MIT-2250 Welding Processes

03 Semester Credits

Study and application of modern welding processes including oxyacetylene, flux cored arc, welding, gas metal arc welding (GMAW), gas tungsten arc welding (GTAW), resistance welding, and arc cutting. Special processes and metal technology discussed.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1300 Metallurgy and Manufacturing Processes.*

### MIT-2400 Statistical Process Control

03 Semester Credits

Application of statistical quality control technique in analysis of data for control of process quality and quality cost. Using measures of central tendencies and measures of dispersion, problem solving techniques, pareto charts, histograms, polygons, control charts, sampling procedures and probability theories as decision making tools for process and quality control.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1360 Technical Mathematics II, or departmental approval: work experience.*

### MIT-2700 CAD/CAM II

03 Semester Credits

Parametric and non-parametric geometric modeling: graphic display manipulation; geometrical analysis; graphic and data files management; exchange and conversion of graphic files to standardized formats such as DXF, IGES; 3D wireframe modeling; solid modeling (CSG or B-Reps) using SolidWorks and other CAD software; surface modeling (Lofting, Sweeping, Blending) using SolidWorks and SurfCam. Generating G-codes using SurfCam and MasterCam packages and other CAM software.

Postprocessing G-Codes into formats interpretable by given CNC controllers; editing G-Codes and verification of validity of toolpaths in Solid-3D graphical simulation; tooling and setting up of parts on CNC lathe and milling machines; downloading of path programs to MCU.

Operating CNC machines to produce parts.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1700 CAD/CAM I.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MIT-2730 Introduction to Manufacturing Management**

03 Semester Credits

Basic planning for manufacturing costs and materials. Management of work force, production and inventory. Personnel and public relations. Basic sequence of manufacturing, automatic and computer integrated manufacturing. Safety and protection of employees and company property. Occupational Safety and Health Act. *Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MIT-2150 Motion and Time Study, or departmental approval: work experience.*

### **MIT-2740 Quality Manufacturing**

03 Semester Credits

Total quality management and leadership; application of statistical quality; quality cost; reliability; computers and quality; customer satisfaction; employee involvement and other quality control tools. *Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MIT-2150 Motion and Time Study, or departmental approval: work experience.*

### **MIT-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued a maximum of nine credits. *Lecture 00 hours. Laboratory 00 hours.*  
*Other Required Hours: 180 clock hours of approved work per credit hour.*  
*Prerequisite(s): Formal application into the Cooperative Education Program.*

## **MARKETING - MARK**

### **MARK-1800 Special Topics in Marketing**

1-3 Semester Credits

Study of selected topics or current issues in Marketing. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.) *Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*  
*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **MARK-1820 Independent Study in Marketing**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Marketing. Specific content arranged between instructor and student. May be repeated for a maximum of three credits. *Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*  
*Prerequisite(s): Must be taken concurrently with a 1000-level course in Marketing.*

### **MARK-2010 Principles of Marketing**

03 Semester Credits

Introduction to basic principles of marketing involved in selling of goods and services. Focus on marketing mix which includes creation of product, pricing, channels of distribution, and promotion. *Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): BADM-1020 Introduction to Business, or departmental approval: comparable knowledge or skills.*

### **MARK-2020 Principles of Salesmanship**

03 Semester Credits

Skill development in techniques used by successful professional sales persons. Sales management also addressed in context of self management and organizational management. *Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MARK-2010 Principles of Marketing, or concurrent enrollment in INTD-2300 Interior Design Studio I; or departmental approval: comparable knowledge or skills.*

### **MARK-2110 Introduction to World Trade**

03 Semester Credits

Overview of world trade with examination of foreign environments (economic, cultural, and legal) in which global companies operate. Study of documents and procedures required to import and export goods; international transportation modes; payments and collections. *Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MARK-2010 Principles of Marketing, or departmental approval: previous coursework and/or experience.*

### **MARK-2120 Import/Export Procedures and Documentation**

03 Semester Credits

Procedures and documentation required for import and export activities. Includes shipment of goods and payment for foreign sales, rules for importing cargo into the U.S., and Customs regulations and processes. *Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MARK-2010 Principles of Marketing, or departmental approval: previous coursework and/or experience.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MARK-2130 International Payments, Credits and Collections**

03 Semester Credits

Procedures and regulations for payments, credits, and collections in international business. Topics include banking procedures, currency exchange, international payment terms and conditions, and letters of credit.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MARK-2010 Principles of Marketing, or departmental approval: previous coursework and/or experience.*

### **MARK-2240 Effective Selling Practices**

03 Semester Credits

Advanced course in professional selling. Student must have minimal selling skills to be improved. Various selling environments will be explored as well as in-depth consumer behavior patterns analyzed. Role playing, case analysis and research will serve to evaluate.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MARK-2020 Principles of Salesmanship.*

### **MARK-2260 Sales Promotion and Public Relations**

03 Semester Credits

Study of promotion methods and techniques supplementary to advertising and personal selling. Focus on both consumer and trade promotions. Topics include publicity and public relations, trade shows and exhibits, point-of-purchase displays, couponing, contests, sweepstakes, rebates and premiums.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MARK-2010 Principles of Marketing.*

### **MARK-2270 Principles of Advertising**

03 Semester Credits

Introduction to advertising as element of promotion mix in marketing. Focuses on strategic, quantitative, and creative processes by which advertising message is planned and produced.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MARK-2010 Principles of Marketing.*

### **MARK-2500 Business-to-Business/Organizational Marketing**

03 Semester Credits

Principles and practices involved in marketing of materials, equipment, supplies, and services to organizational markets, such as manufacturers, resellers, service providers, institutions, and the government. Focus on unique characteristics of organizational market and how to profitably sell in this market by developing proper marketing mix. Includes product management, pricing policies, channels of distribution, and promotional practices.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MARK-2010 Principles of Marketing.*

### **MARK-2660 Sales Management**

03 Semester Credits

Strategic sales planning, implementation, and controlling ongoing sales program. Market assessment, staffing, and training included. Case study and practical applications enhance learning process.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MARK-2010 Principles of Marketing.*

### **MARK-2800 Special Advanced Topics in Marketing**

1-3 Semester Credits

Study of selected advanced topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **MARK-2820 Independent Advanced Study in Marketing**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Marketing. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Marketing.*

### **MARK-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for n accrued a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MATHEMATICS – MATH

#### **MATH-0910 Basic Arithmetic and Pre-Algebra**

03 Semester Credits

Review of basic arithmetic and introduction to algebraic concepts. Includes basic review of whole numbers and decimals, addition, subtraction, multiplication and division of fractions, order of operations, ratio and proportion, percents, the United States and metric systems of measurement, and estimation. Introduction to integers and simple linear equations and some definitions in geometry. Includes applications and activities to build skills in estimation, problem solving, and study techniques.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): None.*

#### **MATH-0950 Beginning Algebra I**

04 Semester Credits

First of two-semester sequence. Includes study of real numbers, basic algebraic operations and simplification of polynomials, linear equations and inequalities and factoring. Includes applications and activities to build skills in problem solving.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): Math-0910 Basic Arithmetic and Pre-Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

#### **MATH-0960 Beginning Algebra II**

04 Semester Credits

Second of two-semester sequence. Includes rational expressions, rectangular coordinate system, graphs of linear equations, linear systems, quadratic equations, radicals, and exponents. Includes applications and activities to build skills in problem solving.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-0950 Beginning Algebra I; or sufficient score on assessment exam; or departmental approval: equivalent coursework.*

#### **MATH-0980 Intensified Beginning Algebra**

05 Semester Credits

Intensive review of basic algebra. Topics include real numbers, basic algebraic operations and simplification of polynomials, factoring, linear equations and inequalities, rectangular coordinate system, solution of linear systems, rational expressions, exponents and radicals, and solutions of quadratic equations. Includes applications and activities to build skills in problem solving.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): Sufficient score on assessment test, or departmental approval: previous algebra class in high school or college.*

#### **MATH-1060 Survey of Mathematics**

03 Semester Credits

Mathematics in problem solving. Problem solving using the scientific method, algebra, geometry, descriptive statistics, probability and calculator/computer applications.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-0950 Beginning Algebra I; or MATH-0980 Intensified Beginning Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

#### **MATH-1140 Applied Algebra**

02 Semester Credits

Includes rational expressions, metric system and denominate numbers, functions and graphs, exponents and radicals, scientific notation, quadratic equations, and descriptive geometry or descriptive statistics. Includes applications and activities to build skills in problem solving.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-0960 Beginning Algebra II; or MATH-0980 Intensified Beginning Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

#### **MATH-1150 Mathematics for Technology**

03 Semester Credits

For Tech Prep students in Automotive Technology Program. Includes review of real number system including operations, absolute value and inequalities as well as study of algebraic formulas, linear, quadratic, exponential and logarithmic functions, descriptive geometry and descriptive statistics. Applications and techniques of problem solving stressed. Use of graphics calculator/computer an integral component of course.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Identified Tech Prep Student in Automotive Technology program with: sufficient score on assessment test; or MATH-0960 Beginning Algebra I; or MATH-0980 Intensified Beginning Algebra.*

#### **MATH-1160 Technical Mathematics I**

04 Semester Credits

First of two-semester sequence. Stresses relationship of mathematics to engineering applications and development of appreciation of precision in mathematical thought. Topics include graphics calculator usage, functions, solutions of linear and quadratic equations, exponents, radicals, laws of sine and cosine, trigonometric functions, graphs and identities, vectors, systems of linear equations and determinants, ratios, proportion and variation.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-0960 Beginning Algebra II; or MATH-0980 Intensified Beginning Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

#### **MATH-1180 Intermediate Algebra for Technologies**

04 Semester Credits

Study of algebraic operations, functions, and solving equations; fitting linear, quadratic, power, exponential and logarithmic functions to data and developing predictions from the established function; matrices, systems of equations and inequalities. Applications and techniques of problem solving stressed. Use of graphics calculator/computer an integral part of course.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-0960 Beginning Algebra II; or MATH-0980 Intensified Beginning Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MATH-1200 Intermediate Algebra**

04 Semester Credits

Algebraic operations; solving linear and quadratic equations and inequalities; lines, inequalities, and their graphs; introduction to conic sections; introduction to functions; systems of linear and non-linear equations; exponential and logarithmic functions; applications and activities to build skills in problem solving; calculator/computer applications.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH 0960 Beginning Algebra II; or MATH-0980 Intensified Beginning Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

### **MATH-1360 Technical Mathematics II**

05 Semester Credits

Second of two-semester sequence. Exponential and logarithmic functions and complex numbers. Basic concepts of plane analytical geometry and integral and differential calculus. Topics include the straight line, conic sections, differentiation and graphical applications of derivative, integration and applications of the definite integral. Graphics calculator/computer usage.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1160 Technical Mathematics I, or departmental approval: equivalent coursework.*

### **MATH-1410 Elementary Probability and Statistics I**

03 Semester Credits

First of two-semester introductory sequence in probability and statistics. Sequence is intended for students majoring in liberal arts, business, sciences, engineering, and education. Includes study of descriptive statistics, elementary probability, probability distributions, normal distribution, binomial distribution, sampling concepts, sampling distribution of sample mean, estimation, and hypothesis testing.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1180 Intermediate Algebra for Technologies; or MATH-1200 Intermediate Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

### **MATH-1420 Elementary Probability and Statistics II**

03 Semester Credits

Second of two-semester introductory sequence in probability and statistics. Intended for students majoring in liberal arts, business, sciences, engineering, and education. Includes study of Chi-square distribution and F distribution and their applications, inferences on variances and proportions, comparing two means, categorical data, correlation, simple and multiple regression, analysis of variance, nonparametric tests and use of statistical software packages.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH 1410 Elementary Probability and Statistics I, or departmental approval: equivalent coursework.*

### **MATH-1470 Modern Mathematics for Business and Social Sciences I**

04 Semester Credits

First of two-semester sequence. Includes linear systems, functions, matrix algebra and linear programming techniques as applied to business problems and simplex method. Math of finance and basic theory of probability and statistics.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1180 Intermediate Algebra for Technologies; or MATH-1200 Intermediate Algebra; or sufficient score on assessment exam; or departmental approval: equivalent coursework.*

### **MATH-1480 Modern Mathematics for Business and Social Sciences II**

04 Semester Credits

Second of two-semester sequence. Includes fundamentals of differential and integral calculus and applications of these topics to business and economics.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1470 Modern Mathematics for Business and Social Sciences I, or departmental approval: equivalent coursework.*

### **MATH-1510 Trigonometry**

03 Semester Credits

Topics include trigonometric functions and their values for all angles, vectors and oblique triangles, graphs of trigonometric functions, trigonometric identities and equations. Applications and activities to build skills in problem solving included.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1180 Intermediate Algebra for Technologies; or MATH-1200 Intermediate Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

### **MATH-1520 College Algebra**

03 Semester Credits

Topics include polynomial, rational, exponential and logarithmic functions and graphs, conic sections, inequalities, matrices and determinants, theory of equations, series, sequences, the binomial theorem and mathematical induction. Includes study of applications and activities to build skills in problem solving.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1180 Intermediate Algebra for Technologies; or MATH-1200 Intermediate Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MATH-1580 Precalculus**

05 Semester Credits

Intensified course designed to prepare students for calculus. Study of real numbers, equations and inequalities, functions and graphs, sequences and series, theory of equations, systems of equations and inequalities, mathematical induction, conic sections, exponential and logarithmic functions, trigonometric functions and complex numbers. Applications and activities to build skills in problem solving also included.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1180 Intermediate Algebra for Technologies; or MATH-1200 Intermediate Algebra; or sufficient score on assessment test; or departmental approval: previous trigonometry or algebra/trigonometry course in high school or college.*

### **MATH-1610 Calculus I**

05 Semester Credits

First of three-semester sequence designed for math, science, and engineering majors. Includes study of Cartesian coordinates, functions and graphs, limits and continuity, differentiation of algebraic and trigonometric functions, applications of derivative, differentials and antiderivatives, and definite integral and its applications.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1580 Precalculus; or MATH-1510 Trigonometry and MATH-1520 College Algebra; or sufficient score on assessment test; or departmental approval: equivalent coursework.*

### **MATH-1620 Calculus II**

05 Semester Credits

Second of three-semester sequence. Includes study of logarithmic and exponential functions, trigonometric and inverse trigonometric functions, techniques of integration, polar coordinates, conics, indeterminate forms, improper integrals, sequences and series.

*Lecture 05 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1610 Calculus I; or departmental approval: equivalent coursework.*

### **MATH-1800 Special Topics in Mathematics**

1-3 Semester Credits

Study of selected topics or current issues in Mathematics. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **MATH-1820 Independent Study in Mathematics**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Mathematics. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Mathematics.*

### **MATH-2310 Calculus III**

04 Semester Credits

Third of three-semester sequence. Topics include vectors, parametric equations, analytic geometry of space, partial differentiation, and multiple integrals, line and surface integrals.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-1620 Calculus II, or departmental approval: equivalent coursework.*

### **MATH-2410 Introduction to Linear Algebra**

03 Semester Credits

Includes the study of vector spaces, linear transformations and matrices, determinants, invariant subspaces, eigenvalues and eigenvectors, and applications.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-2310 Calculus III, or departmental approval: equivalent coursework.*

### **MATH-2520 Differential Equations**

03 Semester Credits

Includes study of differential equations of first and higher order, simultaneous, linear and homogeneous differential equations, solution by power series, Laplace transformations and computer applications.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MATH-2310 Calculus III, or departmental approval: equivalent coursework.*

### **MATH-2800 Special Advanced Topics in Mathematics**

1-3 Semester Credits

Study of selected advanced topics or current issues in Mathematics. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic*

### **MATH-2820 Independent Advanced Study in Mathematics**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Mathematics. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Mathematics.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MASSOTHERAPY - MT

#### MT-1100 Introduction to Massotherapy

03 Semester credits

Survey of massotherapy. History of massage; theory and principles of massage, including basic physiological effects, therapeutic applications, contraindications, indications for referral; scope of practice; code of ethics; credentialing and licensing; law and legislation. Training will also provide hands-on demonstrations by instructor regarding some of the basic techniques of massage.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### MT-1300 Basic Massotherapy I

04 Semester credits

Study and practice of the manipulations of massage according to Kellogg, including passive touch, pressure touch and nerve compression, stroking (effeurage), friction, kneading (petrissage), vibration and percussion (tapotement). Supplementary study and practice of manipulations of massage according to Fritz. Students learn the basic full-body massage, proper hygiene and sanitation practices, how to position and drape the client, and develop good body mechanics.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1430 Anatomy and Physiology I, MT-1100 Introduction to Massotherapy or concurrent enrollment.*

#### MT-1310 Applied Musculo-Skeletal Anatomy

02 Semester credits

Extensive practice in learning to palpate all bony landmarks of trunk and extremities; muscle, ligament, and tendon palpation by clinical zones. An introduction to postural analysis with practice in taking and interpreting postural measurements.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1430 Anatomy and Physiology I, MT-1300 Massotherapy I or concurrent enrollment, and MT-1100 Introduction to Massotherapy or concurrent enrollment.*

#### MT-1320 Functional Assessment in Massage Therapy

03 Semester credits

Recognizing and assessing common structural and postural deviations and common soft tissue injury to muscle, tendon, joint capsule, ligament, bursa, fascia and nerve in order to determine appropriateness of massage therapy.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MT-1300 Basic Massotherapy I, MT-1310 Applied Musculo-Skeletal Anatomy, and concurrent enrollment in MT-1330 Massotherapy II.*

#### MT-1330 Massotherapy II

04 Semester credits

Introduction to postural analysis: taking and interpreting postural measurements. Joint movements and range of motion assessment. Techniques to lengthen and stretch musculature. Methods to stabilize the pelvis. Massage of special regions according to Kellogg.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MT-1320 Functional Assessment in Massage Therapy or concurrent enrollment and MT-1300 Massotherapy I.*

#### MT-1400 Overview and Assessment in Geriatric Massage Therapy

03 Semester credits

Overview and the major concepts that comprise the study of Geriatric Massage Therapy. Includes demographic information and economic issues. Provides framework for understanding older adults and the effects of massage. Application of geriatric assessment, cautions and contraindications and geriatric practice.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): MT-1300 Massotherapy I, and MT-1320 Functional Assessment in Massage Therapy or concurrent enrollment.*

#### MT-2300 Pathology for Massage Therapists

04 Semester credits

Introduction to disease and basic mechanisms of disease for massage therapists. Diseases of skin, musculoskeletal system, nervous and endocrine systems. Other diseases to include cardiovascular, lymphatic, respiratory, digestive, urinary, reproductive, and immune systems. Role of stress in disease; mental, emotional and genetic.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1440 Anatomy and Physiology II, and MT-2310 Advanced Massotherapy I or concurrent enrollment, and MT-2320 Neuroanatomy for Massage Therapists or concurrent enrollment.*

#### MT-2310 Advanced Massotherapy I

03 Semester credits

Documentation for massage therapy sessions through S.O.A.P. (subjective, objective, assessment, plan) charting; interviewing and observational skills; use of thermal agents in massage therapy; theory and practice of trigger point and myofascial release therapy.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MT-2300 Pathology for Massage Therapists or concurrent enrollment, and MT-2320 Neuroanatomy for Massage Therapists or concurrent enrollment.*

#### MT-2320 Neuroanatomy for Massage Therapists

03 Semester credits

Review of relevant brain and nervous system anatomy and physiology with special emphasis on role of different parts of brain, cerebrospinal fluid system, cranial nerves, spinal cord and spinal nerves, sensory and motor pathways, somatic efferent and autonomic nervous systems. Some specific topics: understanding the reflexive effects of massage, nerve plexuses, endangerment sites, and implication for massage of neurological laws, diseases and applications of massage.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MT-2300 Pathology for Massage Therapists or concurrent enrollment, and MT-2310 Advanced Massotherapy I or concurrent enrollment.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MT-2330 Advanced Massotherapy II**

03 Semester credits

Continuation of trigger point therapy theory and practice, pelvic stabilization techniques, assessment and treatment of lower back, hip and lower extremities, and assessment and treatment of neck, facial muscles, shoulder, chest and upper back. Treatment modalities to include cranio-sacral, deep tissue, manual lymphatic drainage, applied kinesiology, and oriental and subtle healing approaches.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MT-2310 Advanced Massotherapy I.*

### **MT-2340 Massotherapy Practicum**

02 Semester credits

Massage of patients under supervision integrating interviewing, observational and massage therapy skills. Completion of S.O.A.P. notes on every patient seen.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): MT-1330 Massotherapy II.*

### **MT-2400 Geriatric Massage Techniques**

03 Semester credits

Study and practice of Geriatric Massage Techniques including effleurage, petrissage, friction, tapotement vibration, rocking and shaking, skin rolling and ROM. Supplementary study and practice of geriatric massage to include effects of massage, anatomy and massage, muscles on the back, arm, gluteal muscles, muscles of the thigh and leg, and critical areas in the lower limb. Chronic conditions in the elderly. Students learn the basic geriatric massage techniques, evaluation process, preparing the treatment, and position problems.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MT-2300 Pathology for Massage Therapists or concurrent enrollment, and MT-2410 Health and Aging or concurrent enrollment.*

### **MT-2410 Health and Aging**

02 Semester credits

Examination of the normal and expected age related physiological changes. Emphasis on understanding normal structure and function of body systems, changes as part of aging, and typical abnormal pathological conditions commonly observed in older individuals. Focus on disease prevention and wellness. Survey of the theories and principles of geriatric massage in normal and abnormal aging.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): MT-1420 Overview and Assessment in Geriatric Massage Therapy, and MT-2400 Geriatric Massage Techniques or concurrent enrollment.*

### **MT-2800 Special Advanced Topics in Massotherapy**

01-03 Semester credits

Study of selected advanced topics or current issues in Massotherapy. Provides student an opportunity to explore various topics in greater detail (see credit schedule for current offerings). No more than 6 credits of special topics courses may be applied toward fulfilling elective and/or program graduation degree requirements.

*Lecture 01-03 hours. Laboratory 00 hours.*

*Prerequisite(s): Dependent on special topic, Massotherapy counterparts will determine appropriate prerequisite when approving topical outline.*

### **MT-281T Special Advanced Laboratory Topics in Massotherapy**

01-03 Semester credits

Specialized three-hour lab per credit focusing on advanced topics or current issues (see credit schedule of classes for current offerings). Provides student an opportunity to explore various topics in greater detail. Repeatable for different topics. No more than 6 credits of special topics courses may be applied toward elective and/or program graduation degree requirements.

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Dependent on special topic, Massotherapy counterparts will determine appropriate prerequisite when approving topical outline.*

### **MT-2850 Massotherapy Practicum**

04 Semester credits

Massage of patients under supervision integrating interviewing, observational and massotherapy skills.

Completion of S.O.A.P. notes on every patient seen. Seminar to include group discussion of lab work.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 21 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): MT-2310 Advanced Massotherapy I.*

### **MT-2860 Geriatric Massage Practicum**

04 Semester credits

Massage of geriatric patients under supervision integrating interviewing, observational and massotherapy skills.

Completion of S.O.A.P. notes on every patient seen. Seminar to include group discussion of lab work.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 21 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): MT-2400 Geriatric Massage Techniques and MT-2410 Health and Aging.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MECHANICAL ENGINEERING TECHNOLOGY - MET

#### **MET-1100 Technology Orientation**

02 Semester Credits

Orientation and exploration of technician's role as part of industrial team. Familiarizes student with technical careers, opportunities and basic skills needed for success in technical programs. Includes introduction to computer and its uses as creative and technical tool. Oral, written and graphic methods of communication for technician. Provides practical approach to technical writing.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **MET-1600 Technical Statics**

02 Semester Credits

Study of forces on structures and machines at rest. Topics include composition and resolution of forces, moments, freebody diagrams, trusses, frames, simple machines, friction, centers of gravity, centroids, and plane and polar moments of inertia.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MATH-1160 Technical Mathematics I; and PHYS-1210 College Physics I, or concurrent enrollment.*

#### **MET-1620 Technical Dynamics**

02 Semester Credits

Study of motion and forces on rigid members. Topics include plane and curvilinear motion, kinetics, work, energy, power, efficiency, impact and momentum. Introduction to balancing and vibrations.

*Lecture 01 hour. Laboratory 02 hours*

*Prerequisite(s): MET-1600 Technical Statics, or concurrent enrollment.*

#### **MET-2200 Strength of Materials**

03 Semester Credits

Study of stress, strain and deformation of mechanical bodies due to static tensile, compressive, torsional, bending and combined loading. Deflection of beams and columns, design of beam for strength and structural connections.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): MET-1600 Technical Statics.*

#### **MET-2300 Fluid Power**

03 Semester Credits

Concepts and practices related to modern hydraulic and pneumatic systems. Includes basics of fluid flow, fluid dynamics, properties of hydraulic fluid, components of hydraulic system, hydraulic circuit, design, operation and control of hydraulic/pneumatic system.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): PHYS-1210 College Physics I.*

#### **MET-2600 Mechanical Computer-Aided Engineering**

03 Semester Credits

Introduction to computer-aided engineering, design of mechanical component and system using computer-aided design technique, AutoCAD solid and surface model for product development, analysis of geometric properties, stress, deformation and temperature distribution using finite element technique, optimization of design and design documentation.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MIT-1200 Engineering Drawing, MIT-1220 Introduction to AutoCAD, and MET-2200 Strength of Materials; or departmental approval: mechanical drafting experience.*

#### **MET-2700 Machine Design**

04 Semester Credits

Study of mechanical motion and design of machine elements. Topics include displacement, velocity and acceleration in linkages, cams and power transmission devices. Design of machine elements include checking of assembled machines, fasteners, weldments, springs, bearings, belts, chains, shafts, clutches and brakes. Laboratory consists of using CAD, computer programming and manufacturer's catalogs to aid in design.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): MET-2200 Strength of Materials, and MET-1620 Technical Dynamics.*

#### **MET-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for n accrued a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MEDICAL ASSISTING - MA

#### MA-1010 Introduction to Medical Terminology

02 Semester Credits

Introduction to medical terminology used by health care professionals with emphasis on basics of word building, defining, spelling, reading practice, and pronunciation. Designed to provide students with foundation for medical word building and to help students who intend to enroll in Medical Terminology I and/or Anatomy and Physiology in Biology.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### MA-1020 Medical Terminology I

03 Semester Credits

Terminology utilized by health care professionals. Emphasis on correct spelling, definition, and pronunciation. Usage of basic and complex medical terms related to body as a whole, and to musculoskeletal, digestive, respiratory, urinary, female reproductive, male reproductive and cardiovascular systems. Proficient use of medical dictionary emphasized.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### MA-1030 Medical Terminology II

02 Semester Credits

Terminology utilized by health care professionals. Emphasis on spelling, definition, pronunciation, and usage of basic and complex medical terms related to hematology, lymphatic, integumentary, special senses, nervous, psychiatric and endocrine systems. Emphasis on reading, translating and composing medical documents. Proficient use of medical dictionary emphasized.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MA-1020 Medical Terminology I, or departmental approval: related work experience.*

#### MA-1300 Medical Office Lab I

02 Semester Credits

Theory and techniques required by medical assistant to perform laboratory tests in medical office. Theory and implementation of OSHA and CLIA '88 regulations and CDC guidelines for body and fluid precautions. Emphasis on patient preparation for laboratory tests, completion and charting of laboratory forms, performing laboratory tests and reporting results. Proper specimen collection, quality control and safety in medical office lab. Principles and practice of microscopy and physical, chemical and microscopic examination of urines. Practice using metric system.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to Medical Assisting Program.*

#### MA-1310 Medical Office Lab II

02 Semester Credits

Theory of and practice in obtaining venous and capillary blood specimens. Basic microbiology including morphology of bacteria, collection of clinical specimens, gram staining and sensitivity testing. Introduction to hematological, serological and chemical blood testing. Normal lab values and significance of abnormal laboratory test results.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): MA-1300 Medical Office Lab I.*

#### MA-1400 Basic Clinical Medical Assisting

02 Semester Credits

Introductory theory and techniques required by medical assistant to perform fundamental clinical assisting procedures in physician's office, clinic or family practice center. Procedures employed in patient examination including medical asepsis, vital signs, positioning and draping, and measuring height, weight and visual acuity. Preparation and care of examination room. Preparing and assisting with exam. Theory of and practice in patient triage, obtaining patient symptoms, charting, and completing health history. Multicultural awareness and assisting patients with special needs. Fundamental concepts of patient education.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to Medical Assisting Program.*

#### MA-1410 Advanced Clinical Medical Assisting

03 Semester Credits

Theory and techniques required by medical assistants to perform advanced procedures in doctor's office, clinic or family practice center. Emphasis on principles and practices in aseptic techniques which include sanitation, disinfection, and sterilization. Assisting with minor surgery, preparation of basic surgical setups, and understanding of and applying concepts of universal precautions. Principles and practice of electrocardiography and injections. Assisting with specialty exams, with special emphasis on pediatric and gynecological examinations. Applied principles of patient education.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): MA-1400 Basic Clinical Medical Assisting.*

#### MA-1500 Medical Office Communication

03 Semester Credits

Specific application of administrative duties and responsibilities relating to effective communication in medical office. Basic information concerning communication and psychology of communication covered. Writing skills stressed. Emphasis placed on composing business letters, composing memoranda, composing and editing office policy manuals and office procedures manual in correct form. Office communication simulated by typing minutes, agenda, physician's speeches, and preparing itinerary for physician, with additional emphasis on typing and editing of manuscripts.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to Medical Assisting Program.*

#### MA-1510 Medical Office Procedures

04 Semester Credits

Administrative aspects of Medical Assisting profession stressed. Emphasis on integrating following administrative procedures: maintaining office environment, telephoning techniques, patient scheduling, management of medical records, processing mail, bookkeeping, banking procedures, petty cash, medical insurance, billing and collections of fees and payroll.

*Lecture 02 hours. Laboratory 04 hours.*

*Prerequisite(s): MA-1500 Medical Office Communication.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MA-1520 Medical Billing and Coding

03 Semester Credits

Specific application of universal concepts of medical insurance and billing procedures. Understanding insurance terminology, types of insurance coverage, obtaining consent for release of information, assignment of insurance benefits and claim forms preparation. Beneficial for updating medical billing skills of those persons practicing in medical assisting or allied fields. Focus on skills required to code Medical procedures (CPT-4, HCPCS) and Diagnoses (ICD9) for accurate claim form completion.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MA-1010 Introduction to Medical Terminology; or MA-1020 Medical Terminology I; or departmental approval: appropriate work experience.*

### MA-1700 Sterile Processing Tech I

04 Semester Credits

Principles of sterilization; basic microbiology and fundamentals of cleaning in central service; instrumentation and maintenance of equipment used in central service.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, and departmental approval.*

### MA-1710 Sterile Processing Tech II

04 Semester Credits

Basics of packaging and wrapping; biological monitoring and record keeping; steam sterilization; ethylene oxide sterilization; dry heat, chemical and alternative sterilization; inventory control and distribution of supplies; legal aspects; work simplification; and management.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): MA-1700 Sterile Processing Tech I, or departmental approval.*

### MA-1800 Special Topics in Medical Assisting

1-3 Semester Credits

Study of selected topics or current issues in Medical Assisting. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### MA-181S Special Laboratory Topics in Medical Assisting

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Medical Assisting (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### MA-1860 Sterile Processing Practicum

02 Semester Credits

Supervised clinical experience in central service/materials management department of health care facility covering principles and practices of cleaning, decontamination and sterilization of medical instruments and apparatus. Fundamentals of wrapping, sterile set-ups, safety rules and regulations, inventory control, record keeping and quality assurance. Seminar discussion of clinical experience. (Course may be repeated for a maximum of 4 credits.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 112 hrs./semester. Seminar: 1 hour per week.*

*Prerequisite(s): MA-1710 Sterile Processing Tech II.*

### MA-1980 Practitioner/Patient Interaction Seminar

02 Semester Credits

Development of self-examination and personal insight relative to health care provider-patient interaction. Students engage in series of learning activities covering such topics as wellness and health, communication skills, values as determinants of behavior, personal and professional self-esteem, stress management skills and professional burnout.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 2 hours per week.*

*Prerequisite(s): Departmental approval: admission to a health career program.*

### MA-2800 Special Advanced Topics in Medical Assisting

1-3 Semester Credits

Study of selected advanced topics or current issues in Medical Assisting. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### MA-2860 Medical Assisting Practicum

02 Semester Credits

Supervised clinical experiences in physician's office, clinic or family practice center. Students perform duties of medical assistant while rotating through administrative and clinical areas of physician's office, clinic or family practice center.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 224 hours per semester.*

*Prerequisite(s): MA-1410 Advanced Clinical Medical Assisting; MA-1510 Medical Office Procedures; and concurrent enrollment in MA-2980 Medical Assisting Seminar.*

### MA-2980 Medical Assisting Seminar

01 Semester Credit

Principles, procedures, and practical application of administrative, clinical and special medical assisting procedures. Opportunity to compare and contrast practices in various clinical settings. Discussion of certification and preparation to function as certified medical assistant. Discussion of future trends in medical assisting profession.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): Concurrent enrollment in MA-2860 Medical Assisting Practicum, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MEDICAL LABORATORY TECHNOLOGY - MLT

#### **MLT-1300 Introduction to Blood Collection**

03 Semester Credits

Introduction to theory and practice of phlebotomy. Principles of aseptic technique and familiarity with phlebotomy equipment. Performance of venipunctures and capillary punctures. Universal precautions and safety of phlebotomist and patient are strictly enforced.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I, or departmental approval: admission to health career/Nursing program.*

#### **MLT-1460 Hematology I**

03 Semester Credits

Introduction to hematology. Principles and applications of manual cell counting, leukocyte differential counts, sedimentation rate, micro-hematocrit, and selected coagulation studies.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection, or departmental approval: related work experience.*

#### **MLT-1470 Blood Bank and Serology I**

03 Semester Credits

Introduction to immunology, blood banking and serology. Laboratory testing based on antigen-antibody reactions. Diagnostic uses of serological tests. Principles and applications of antigen and antibody testing for ABO, Rh and other major blood group systems including compatibility testing.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection, or departmental approval: related work experience.*

#### **MLT-1480 Clinical Microbiology I**

03 Semester Credits

Principles, procedures, and applications of introductory clinical microbiology emphasizing identification of bacteria, pathogenesis and serologic detection of selected infectious agents. Culture media, identification, safety, asepsis, sterilization, and sensitivity testing.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection, or departmental approval: related work experience.*

#### **MLT-1490 Urinalysis**

03 Semester Credits

Laboratory safety and universal precautions. Introduction and proper use of centrifuge, microscope, and manual and automated pipets. Review of urinary system and its pathology. Performance of physical, chemical and microscopic components of routine urinalysis.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection, or concurrent enrollment; or departmental approval: related work experience.*

#### **MLT-1500 Clinical Chemistry I**

03 Semester Credits

Introduction to basic theory and laboratory techniques in clinical chemistry. Statistics related to quality control, chemistry reagents and standards, laboratory safety, and universal precautions.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection, or departmental approval: related work experience.*

#### **MLT-1800 Special Topics in Medical Laboratory Technology**

1-3 Semester Credits

Study of selected topics or current issues in Medical Laboratory Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **MLT-181S Special Laboratory Topics in Medical Laboratory Technology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Medical Laboratory Technology (see Credit Schedule of classes for current offerings).

Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **MLT-2460 Hematology II**

02 Semester Credits

Principles, procedures and applications of complex, advanced diagnostic tests performed by medical laboratory personnel at Medical Laboratory Technician level. Principles of advanced hematology and coagulation, including case studies.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MLT-1460 Hematology I, or departmental approval: related work experience.*

#### **MLT-2470 Blood Bank and Serology II**

02 Semester Credits

Advanced applications of serological testing procedures used in problem solving in clinical laboratory transfusion service. Transfusion practices including component therapy, component production, acceptable donor criteria and transfusion transmitted diseases.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MLT-1470 Blood Bank and Serology I, or departmental approval: related work experience.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MLT-2480 Clinical Microbiology II**

03 Semester Credits

Principles, procedures and applications of advanced clinical microbiology diagnostic tests and practices. Emphasis on clinical microbiology, mycology, parasitology and virology. Seminar discussion of clinical experience.

*Lecture 02 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): MLT-1480 Clinical Microbiology I, or departmental approval: related work experience.*

### **MLT-2500 Clinical Chemistry II**

03 Semester Credits

Principles, procedures and application of complex advanced diagnostic tests in clinical chemistry and urinalysis. Seminar discussion of practicum experience.

*Lecture 02 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): MLT-1500 Clinical Chemistry I, or departmental approval: related work experience.*

### **MLT-2800 Special Advanced Topics in Medical Laboratory Technology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Medical Laboratory Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **MLT-281S Special Advanced Laboratory Topics in Medical Laboratory Technology**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Medical Laboratory Technology (see Credit Schedule of classes for current offerings.).

Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **MLT-2860 Medical Laboratory Practicum**

08 Semester Credits

Supervised clinical experience. Students rotate through hematology, or urinalysis, or chemistry, or microbiology, or serology, or immunohematology laboratories, or phlebotomy departments for fifty- six (56) hours per week meeting performance objectives of medical laboratory or laboratory phlebotomy personnel at MLT level.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 56 hours per week.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection; and concurrent enrollment in MLT-2970 Advanced Phlebotomy, or MLT-2500 Clinical Chemistry II, or MLT-2480 Clinical Microbiology II; and departmental approval.*

### **MLT-286A Medical Laboratory Practicum**

02 Semester Credits

Supervised clinical experience. Students rotate through microbiology for 14 hours per week meeting performance objectives of medical laboratory personnel at MLT level.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection; and concurrent enrollment in MLT-2500 Clinical Chemistry II, or MLT-2480 Clinical Microbiology II; and departmental approval.*

### **MLT-286B Medical Laboratory Practicum**

02 Semester Credits

Supervised clinical experience. Students rotate through urinalysis or phlebotomy departments for 14 hours per week meeting performance objectives of medical laboratory or laboratory phlebotomy personnel at MLT level.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection, or concurrent enrollment; and concurrent enrollment in MLT-2970 Advanced Phlebotomy, or MLT-2500 Clinical Chemistry II, or MLT-2480 Clinical Microbiology II; and departmental approval.*

### **MLT-286C Medical Laboratory Practicum**

02 Semester Credits

Supervised clinical experience. Students rotate through chemistry, or serology for 14 hours per week meeting performance objectives of medical laboratory or laboratory phlebotomy personnel at MLT level.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection; and concurrent enrollment in MLT-2500 Clinical Chemistry II, or MLT-2480 Clinical Microbiology II; and departmental approval.*

### **MLT-286D Medical Laboratory Practicum**

02 Semester Credits

Supervised clinical experience. Students rotate through hematology, or blood bank laboratories, for 14 hours per week meeting performance objectives of medical laboratory or laboratory phlebotomy personnel at MLT level.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection; and concurrent enrollment in MLT-2500 Clinical Chemistry II, or MLT-2480 Clinical Microbiology II; and departmental approval.*

### **MLT-2970 Advanced Phlebotomy**

01 Semester Credit

Review of theory and techniques for phlebotomy procedures. Presentation of basic procedures involved in point-of-care testing and unregulated laboratory test procedures. Emphasis on universal precautions, safety, communication, interpersonal skills, and ethical considerations relating to patients. Seminar discussion of practicum experience.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): MLT-1300 Introduction to Blood Collection; and concurrent enrollment in MLT-286B Medical Lab Practicum; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### MUSIC - MUS

#### **MUS-1010 Survey of European Classical Music**

03 Semester Credits

Introduction to elements and styles of European classical music. Composers, works, instrumentation and forms studied in their cultural and historical context. Focus on listening and understanding European classical music.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1020 Survey of Jazz**

03 Semester Credits

Introduction to basic elements and techniques of jazz. Function of jazz instrumentation, forms, improvisation and other musical elements and conventions indigenous to jazz. Characteristic features of various styles and artists studied. Focus on listening to and understanding jazz.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1030 Survey of Rock and Roll**

03 Semester Credits

Survey of most influential and innovative works and artists of rock music from origins to present. Includes terminology, techniques, style, instrumentation and lyrics, with references to cultural and historical context. Course involves listening to, reading and discussing of artists and recordings. Focus on listening to and understanding rock and roll music.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1040 Survey of African-American Music**

03 Semester Credits

Chronological study of history of African-American music from eighteenth century through 1920s. Oral traditions and performance practices studied in cultural and historical context. Sacred, folk, popular, and classical music, and precursors of jazz discussed. Focus on listening to and understanding African-American music.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1050 Survey of World Music**

03 Semester Credits

Introduction to elements and styles of musics of diverse ethnic cultures. Instruments, forms, and concepts of music explored through art and folk music to develop an understanding of how basic materials of music work together. Focus on listening to and understanding musics of diverse cultures.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1100 Music for Elementary Education**

03 Semester Credits

Designed to orient elementary teachers to role of music in growth and development of children. Emphasis on creating musical environment in elementary school classroom. Study of young voice, basic theory, piano keyboard, music symbols and terms, and use of elementary classroom instruments.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1110 Music Business I**

03 Semester Credits

Examination of multiple facets of music industry. Includes exploration of career options, recording industry, performance and promotion, music business contracts, marketing of songs, music publishing, copyrights, and retail.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1120 Music Business II**

03 Semester Credits

Artist promotion, management, music agents, music in advertising, concert promotion, arts administration, and music entrepreneurship.  
*Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MUS-1110 Music Business I.*

#### **MUS-1130 MIDI Technology I**

03 Semester Credits

Basic audio signal flow, MIDI (Music Instrument Digital Interface) principles and techniques, the virtual studio concept, computer-based sequencing and notation software and operation of modern keyboard equipment.  
*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **MUS-1140 MIDI Technology II**

03 Semester Credits

Further development of concepts and skills introduced in MIDI technology I. Advanced sequencing and editing techniques, synchronization, digital audio recording, music notation and MIDI studio organization.  
*Lecture 02 hours. Laboratory 02 hours.*  
*Prerequisite(s): MUS-1130 MIDI Technology I.*

#### **MUS-1170 Songwriting I**

02 Semester Credits

Instruction in art of contemporary songwriting. Includes consideration of form, rhythm, melody, lyric content, harmony, arranging, and development of individual style. Development of listening skills and criticism utilizing songs of class members and established artists.  
*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1200 Music Reading Skills**

03 Semester Credits

Introduction to concepts and skills of reading music and music theory for pre-music and non-music majors. Includes study of notation, rhythm, scales, key signatures, intervals and triads.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **MUS-1210 Introduction to Music Theory**

03 Semester Credits

Terminology, symbols, skills, and concepts of music theory for pre-music and non-music majors. Includes study of intervals, chords, voice leading and figured bass, compositional devices, transposition, analysis, and basic forms.  
*Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MUS-1200 Music Reading Skills, or departmental approval.*

#### **MUS-1220 Basic Ear Training**

02 Semester Credits

Introduction to development of aural skills for pre-music and non-music majors. Students develop discrimination skills including pitch and rhythm perception through sight singing and dictation.  
*Lecture 01 hour. Laboratory 02 hours.*  
*Prerequisite(s): MUS-1200 Music Reading Skills, or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-1250 Class Keyboard I**

02 Semester Credits

Basic piano techniques and performance skills for pre-music and non-music majors. Emphasis on keyboard development in sight reading, improvising, transposing and harmonizing melodies in various styles. Includes solo and ensemble literature.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

### **MUS-1260 Class Keyboard II**

02 Semester Credits

Functional piano techniques and keyboard skills for pre-music and non-music majors. Keyboard development in second level sight reading, transposing, improvising, and ensemble playing in various styles. Development of second level solo and ensemble repertoire.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1250 Class Keyboard I.*

### **MUS-1270 Class Voice**

02 Semester Credits

Basic techniques of voice production. Includes breath control, diction, projection, tone-color, and interpretation for pre-music and non-music majors. Progressive vocal exercises and studies. Application of principles to performance of simple songs.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

### **MUS-1290 Basic Applied Music I**

01 Semester Credit

Individual instruction for pre-music and non-music majors on any standard band, orchestral instrument or voice. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: A private lesson and 7 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval.*

### **MUS-1301 Applied Piano Minor I**

01 Semester Credit

Private piano instruction for music majors with piano as minor instrument. Development of technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: A private lesson and 7 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1302 Applied Piano Minor II**

01 Semester Credit

Second level private piano instruction for music major with piano as minor instrument. Development of technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: A private lesson and 7 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1301 Applied Piano Minor I.*

### **MUS-1311 Applied Bass I**

02 Semester Credits

Private bass instruction for bass majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1312 Applied Bass II**

02 Semester Credits

Second level private bass instruction for bass majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice per week*

*Prerequisite(s): MUS-1311 Applied Bass I.*

### **MUS-1321 Applied Clarinet I**

02 Semester Credits

Private clarinet instruction for clarinet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1322 Applied Clarinet II**

02 Semester Credits

Second Level private clarinet instruction for clarinet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1321 Applied Clarinet I.*

### **MUS-1331 Applied Flute I**

02 Semester Credits

Private flute instruction for flute majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-1332 Applied Flute II**

02 Semester Credits

Second Level private flute instruction for flute majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1331 Applied Flute I.*

### **MUS-1341 Applied French Horn I**

02 Semester Credits

Private French horn instruction for French horn majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): Departmental approval: audition.*

### **MUS-1342 Applied French Horn II**

02 Semester Credits

Second level private French horn instruction for French horn majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1341 Applied French Horn I.*

### **MUS-1351 Applied Guitar I**

02 Semester Credits

Private guitar instruction for guitar majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): Departmental approval: audition.*

### **MUS-1352 Applied Guitar II**

02 Semester Credits

Second level private guitar instruction for guitar majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1351 Applied Guitar I.*

### **MUS-1361 Applied Oboe I**

02 Semester Credits

Private oboe instruction for oboe majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): Departmental approval: audition.*

### **MUS-1362 Applied Oboe II**

02 Semester Credits

Second level private oboe instruction for oboe majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1361 Applied Oboe I.*

### **MUS-1371 Applied Percussion I**

02 Semester Credits

Private percussion instruction for percussion majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): Departmental approval: audition.*

### **MUS-1372 Applied Percussion II**

02 Semester Credits

Second level private percussion instruction for percussion majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1371 Applied Percussion I.*

### **MUS-1381 Applied Piano I**

02 Semester Credits

Private piano instruction for piano majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): Departmental approval: audition.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-1382 Applied Piano II**

02 Semester Credits

Second level private piano instruction for piano majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1381 Applied Piano I.*

### **MUS-1391 Applied Saxophone I**

02 Semester Credits

Private saxophone instruction for saxophone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1392 Applied Saxophone II**

02 Semester Credits

Second level private saxophone instruction for saxophone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1391 Applied Saxophone I.*

### **MUS-1401 Applied Trombone I**

02 Semester Credits

Private trombone instruction for trombone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1402 Applied Trombone II**

02 Semester Credits

Second level private trombone instruction for trombone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1401 Applied Trombone I.*

### **MUS-1411 Applied Trumpet I**

02 Semester Credits

Private trumpet instruction for trumpet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1412 Applied Trumpet II**

02 Semester Credits

Second level private trumpet instruction for trumpet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1411 Applied Trumpet I.*

### **MUS-1421 Applied Tuba I**

02 Semester Credits

Private tuba instruction for tuba majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1422 Applied Tuba II**

02 Semester Credits

Private tuba instruction for tuba majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1421 Applied Tuba I.*

### **MUS-1431 Applied Viola I**

02 Semester Credits

Private viola instruction for viola majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-1432 Applied Viola II**

02 Semester Credits

Second level private viola instruction for viola majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1431 Applied Viola I.*

### **MUS-1441 Applied Violin I**

02 Semester Credits

Private violin instruction for violin majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1442 Applied Violin II**

02 Semester Credits

Second level private violin instruction for violin majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1441 Applied Violin I.*

### **MUS-1451 Applied Voice I**

02 Semester Credits

Private voice instruction for voice majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for first semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1452 Applied Voice II**

02 Semester Credits

Second level private voice instruction for voice majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight reading skills. Development of standard repertoire including selected solo and method literature for second semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1451 Applied Voice I.*

### **MUS-1500 Choir**

01 Semester Credit

Performance class with concentration on standard repertoire, both sacred and secular, accompanied and a cappella for mixed voices. Public performance required. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1510 Choral Ensemble**

01 Semester Credit

Performance of choral literature from Renaissance through 20th Century for small select ensemble. Public performance required. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1520 Jazz Ensemble**

01 Semester Credit

Study and experimentation in performance of jazz ensemble literature and styles. Public performance required. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1530 Concert Band**

01 Semester Credit

Performance of band and wind ensemble literature by woodwinds, brass, and percussion players. Public performance required. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 0 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1540 Orchestra**

01 Semester Credit

Performance of selected orchestral literature by string, woodwind, brass and percussion players. Public performance required. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: audition.*

### **MUS-1550 Instrumental Ensemble**

01 Semester Credit

Performance of traditional and contemporary ensemble literature. Public performance required. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: audition.*

## **MUS-1570 Technology Tools I**

02 Semester credits

Designed to give music students practical knowledge and skills in the use of current computer, MIDI (Musical Instrument Digital Interface), and electronic instrument technologies for application in music theory, arranging, composition and performance. Includes basic computer, MIDI principles and techniques, computer-based notation and sequencing software, and the operation of modern electronic keyboard instruments.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): MUS-1210, Introduction to Music Theory, or departmental approval.*

## **MUS-1580 Technology Tools II**

02 Semester credits

Designed to give music students practical knowledge and skills in the use of current computer, MIDI (Musical Instrument Digital Interface), and electronic instrument technologies for application in music theory, arranging, composition and performance. Includes advanced notation and sequencing editing techniques, digital audio recording and MIDI studio organization.

*Lecture 01 hours. Laboratory 02 hours.*

*Prerequisite(s): MUS-1570, Technology Tools I, or departmental approval.*

## **MUS-1600 Traditional Theory I**

03 Semester Credits

Manipulation of musical materials including harmonic, melodic, rhythmic, and basic formal procedures with correlated creative works and analysis. Harmonization of figured bass and chorale writing including diatonic harmony and voice leading, melodic procedures and all non-harmonic tones. Analysis of common-practice literature. Integrates harmonic and contrapuntal approaches to analysis and composition.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1210 Introduction to Music Theory.*

## **MUS-1610 Ear Training I**

02 Semester Credits

Identification of diatonic and chromatic intervals, triad qualities, scales and phrases. Melodic and rhythmic dictation, sight singing, analytic listening. Introduction to harmonic function and holistic listening.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1220 Basic Ear Training.*

## **MUS-1620 Traditional Theory II**

03 Semester Credits

Introduction of modulation, chromatic materials and 20th century techniques. Integrates harmonic and contrapuntal approaches to analysis and composition.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1600 Traditional Theory I, and MUS-1610 Ear Training I.*

## **MUS-1630 Ear Training II**

02 Semester Credits

Second level identification of intervals, chord qualities, scales, phrases and harmonic function. Melodic and rhythmic dictation, sight singing, analytic and holistic listening.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1610 Ear Training I.*

## **MUS-1650 Jazz Theory I**

02 Semester Credits

Introduction to theoretical foundations of jazz including systematic examination of scales, hybrid modes and their practical applications, chord construction and notation, chord/scale relationships and applications, melodic construction and development, and analysis of transcribed solos and compositions from jazz repertoire including American standard song.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1600 Traditional Theory I.*

## **MUS-1670 Jazz Performance & Improvisation I**

02 Semester Credits

Improvisation within jazz style and presentation as performance. Investigates essential relationship of blues, American standard song and swing rhythm as central to character of jazz. Memorization of standard repertoire.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1210 Introduction to Music Theory, and audition.*

## **MUS-1680 Jazz Performance & Improvisation II**

02 Semester Credits

Improvisation within jazz style and presentation as performance. Includes modal combinations and chord change sequences, scale- tone 7th, harmonic movement within blues and standard song, phrasing, paraphrasing, playing in various keys and memorization of standard repertoire.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1670 Jazz Performance & Improvisation I.*

## **MUS-1720 Arranging I**

02 Semester Credits

Writing and arranging for the modern rhythm section including piano (keyboards), guitar, bass, drums and auxiliary percussion; writing and arranging techniques address the rhythm section as a unit and as part of a small or large ensemble.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1600, Traditional Theory I, or departmental approval.*

## **MUS-1800 Special Topics in Music**

1-3 Semester Credits

Study of selected topics or current issues in Music. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-181T Special Topics in Music Lab**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Music (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours. Other Required Hours: 0. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **MUS-1820 Independent Study in Music**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Music. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00. Prerequisite(s): Must be taken concurrently with a 1000-level course in Music.*

### **MUS-1970 Music Seminar**

01 Semester Credit

Discussion of current topics related to music careers including presentations, performances, recitals and clinics, music academic and career exploration. (May be repeated for an accrued maximum of six credits.)

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: 1 seminar hour per week. Prerequisite(s): Departmental approval.*

### **MUS-2030 British Invasion**

02 Semester Credits

Survey of influential and representative works and artists of British Invasion beginning in 1964 including the Beatles, Who, Rolling Stones, Kinks, and their contemporaries. Aesthetics, terminology, technique, style, instrumentation, lyrics, and technology.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): MUS-1030 Survey of Rock and Roll.*

### **MUS-2130 Music Production for Video and Film**

03 Semester Credits

Using tools of modern MIDI studio to write and produce appropriate musical score for video and film. Topics include music scoring techniques and sound design, role of music in advertising and film industries, and communicating with client to determine musical direction.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): MUS-1140 MIDI Technology II.*

### **MUS-2290 Basic Applied Music II**

02 Semester Credits

Individual instruction for pre-music and non-music majors on any standard band, orchestral instrument or voice. (May be repeated for credit; however, no more than 4 credits may be applied to degree requirements.)

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): Departmental approval.*

### **MUS-2301 Applied Piano Minor III**

01 Semester Credit

Third level private piano instruction for music major with piano as minor instrument. Development of technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 7 hours of concentrated practice each week. Prerequisite(s): MUS-1302 Applied Piano Minor II.*

### **MUS-2302 Applied Piano Minor IV**

01 Semester Credit

Fourth level private piano instruction for music major with piano as minor instrument. Development of technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 7 hours of concentrated practice each week. Prerequisite(s): MUS-2301 Applied Piano Minor III.*

### **MUS-2311 Applied Bass III**

02 Semester Credits

Third level private bass instruction for bass majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1312 Applied Bass II.*

### **MUS-2312 Applied Bass IV**

02 Semester Credits

Fourth level private bass instruction for bass majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-2311 Applied Bass III.*

### **MUS-2321 Applied Clarinet III**

02 Semester Credits

Third level private clarinet instruction for clarinet majors. Development of tone production, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week. Prerequisite(s): MUS-1322 Applied Clarinet II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-2322 Applied Clarinet IV**

02 Semester Credits

Fourth level private clarinet instruction for clarinet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2321 Applied Clarinet III.*

### **MUS-2331 Applied Flute III**

02 Semester Credits

Third level private flute instruction for flute majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1332 Applied Flute II.*

### **MUS-2332 Applied Flute IV**

02 Semester Credits

Fourth level private flute instruction for flute majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2331 Applied Flute III.*

### **MUS-2341 Applied French Horn III**

02 Semester Credits

Third level private French horn instruction for French horn majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1342 Applied French Horn II.*

### **MUS-2342 Applied French Horn IV**

02 Semester Credits

Fourth level private French horn instruction for French horn majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2341 Applied French Horn III.*

### **MUS-2351 Applied Guitar III**

02 Semester Credits

Third level private guitar instruction for guitar majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1352 Applied Guitar II.*

### **MUS-2352 Applied Guitar IV**

02 Semester Credits

Fourth level private guitar instruction for guitar majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2351 Applied Guitar III.*

### **MUS-2361 Applied Oboe III**

02 Semester Credits

Third level private oboe instruction for oboe majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1362 Applied Oboe II.*

### **MUS-2362 Applied Oboe IV**

02 Semester Credits

Fourth level private oboe instruction for oboe majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2361 Applied Oboe III.*

### **MUS-2371 Applied Percussion III**

02 Semester Credits

Third level private percussion instruction for percussion majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1372 Applied Percussion II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-2372 Applied Percussion IV**

02 Semester Credits

Fourth level private percussion instruction for percussion majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2371 Applied Percussion III.*

### **MUS-2381 Applied Piano III**

02 Semester Credits

Third level private piano instruction for piano majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1382 Applied Piano II.*

### **MUS-2382 Applied Piano IV**

02 Semester Credits

Fourth level private piano instruction for piano majors. Development of technical facility, rhythmic control, tone production, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2381 Applied Piano III.*

### **MUS-2391 Applied Saxophone III**

02 Semester Credits

Third level private saxophone instruction for saxophone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1392 Applied Saxophone II.*

### **MUS-2392 Applied Saxophone IV**

02 Semester Credits

Fourth level private saxophone instruction for saxophone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2391 Applied Saxophone III.*

### **MUS-2401 Applied Trombone III**

02 Semester Credits

Third level private trombone instruction for trombone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1402 Applied Trombone II.*

### **MUS-2402 Applied Trombone IV**

02 Semester Credits

Fourth level private trombone instruction for trombone majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2401 Applied Trombone III.*

### **MUS-2411 Applied Trumpet III**

02 Semester Credits

Third level private trumpet instruction for trumpet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1412 Applied Trumpet II.*

### **MUS-2412 Applied Trumpet IV**

02 Semester Credits

Fourth level private trumpet instruction for trumpet majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-2411 Applied Trumpet III.*

### **MUS-2421 Applied Tuba III**

02 Semester Credits

Third level private tuba instruction for tuba majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*

*Prerequisite(s): MUS-1422 Applied Tuba II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-2422 Applied Tuba IV**

02 Semester Credits

Fourth level private tuba instruction for tuba majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-2421 Applied Tuba III.*

### **MUS-2431 Applied Viola III**

02 Semester Credits

Third level private viola instruction for viola majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-1432 Applied Viola II.*

### **MUS-2432 Applied Viola IV**

02 Semester Credits

Fourth level private viola instruction for viola majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-2431 Applied Viola III.*

### **MUS-2441 Applied Violin III**

02 Semester Credits

Third level private violin instruction for violin majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-1442 Applied Violin II.*

### **MUS-2442 Applied Violin IV**

02 Semester Credits

Fourth level private violin instruction for violin majors. Development of tone production, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-2441 Applied Violin III.*

### **MUS-2451 Applied Voice III**

02 Semester Credits

Third level private voice instruction for voice majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for third semester. End of semester performance jury required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-1452 Applied Voice II.*

### **MUS-2452 Applied Voice IV**

02 Semester Credits

Fourth level private voice instruction for voice majors. Development of tone production, breath control, intonation, technical facility, rhythmic control, phrasing, stylistic interpretation and sight-reading skills. Development of standard repertoire including selected solo and method literature for fourth semester. End of semester performance recital required.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours: A private lesson and 14 hours of concentrated practice each week.*  
*Prerequisite(s): MUS-2451 Applied Voice III.*

### **MUS-2500 Music History and Literature I**

03 Semester Credits

Chronological study of history and development of European classical music from origins through 18th century. Detailed attention to selected pieces from Medieval, Renaissance, Baroque, and Classical periods.

*Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MUS-1620 Traditional Theory II.*

### **MUS-2510 Music History & Literature II**

03 Semester Credits

Chronological study of history and development of European classical music from 19th century through present time. Detailed attention to selected pieces.

*Lecture 03 hours. Laboratory 00 hours.*  
*Prerequisite(s): MUS-1620 Traditional Theory II.*

### **MUS-2520 Jazz History I**

02 Semester Credits

Chronological study of history and development of classic jazz from origins through Swing period. Detailed attention to selected jazz masters and analysis of their most important works.

*Lecture 02 hours. Laboratory 00 hours.*  
*Prerequisite(s): MUS-1650 Jazz Theory I.*

### **MUS-2530 Jazz History II**

02 Semester Credits

Chronological study of history and development of modern jazz from Bebop through present time. Detailed attention to selected jazz masters and analysis of their most important works.

*Lecture 02 hours. Laboratory 00 hours.*  
*Prerequisite(s): MUS-1650 Jazz Theory I.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **MUS-2600 Traditional Theory III**

03 Semester Credits

Theory, analysis, and composition of European classical music from origins through 18th century. Detailed attention to selected pieces from Medieval, Renaissance, Baroque and Classical periods.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1620 Traditional Theory II, and MUS-1630 Ear Training II.*

### **MUS-2610 Ear Training III**

02 Semester Credits

Third level identification of intervals, seventh chords, scales, phrases and harmonic function. Melodic and rhythmic dictation, sight singing, analytic and holistic listening.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1630 Ear Training II.*

### **MUS-2620 Traditional Theory IV**

03 Semester Credits

Theory, analysis, and composition of European classical music from 19th century through present time. Detailed attention to selected pieces.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-2600 Traditional Theory III, and MUS-2610 Ear Training III.*

### **MUS-2630 Ear Training IV**

02 Semester Credits

Fourth level identification of intervals, seventh chords, scales, phrases and harmonic function. Melodic and rhythmic dictation, sight singing, analytic and holistic listening.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-2610 Ear Training III.*

### **MUS-2650 Jazz Theory II**

02 Semester Credits

Second level study of theoretical foundations of jazz. Includes diatonic and chromatic harmony, harmonic embellishment and substitution, voicings, rhythm, blues progressions and forms, phrase analysis, lyric import and analysis of transcribed solos and compositions from jazz repertoire.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1650 Jazz Theory I.*

### **MUS-2660 Jazz Theory III**

02 Semester Credits

Third level study of theoretical foundations of jazz. Includes modal structures, rhythm changes and substitutions; composition and improvisation; implications of lyrics on structure and articulation; and analysis of transcribed solos and compositions from jazz repertoire, including American standard song.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-2650 Jazz Theory II.*

### **MUS-2670 Jazz Performance & Improvisation III**

02 Semester Credits

Third level study of improvisation within jazz style and presentation as performance. Includes phrasing, minor ii-V-i, modal minor, chord structures and common progressions in all keys, and memorization of standard repertoire.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-1680 Jazz Performance & Improvisation II.*

### **MUS-2680 Jazz Performance & Improvisation IV**

02 Semester Credits

Fourth level study of improvisation within jazz style and presentation as performance. Includes performance of accumulated repertoire, blues composition, refined group playing and performance of memorized standard repertoire in all keys.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): MUS-2670 Jazz Performance & Improvisation III.*

### **MUS-2710 Arranging II**

02 Semester credits

Building on the rhythm section, this study concentrates on writing for trumpet, trombone and saxophone individually, in combination and as instrumental families. Ranges, tonal color, combinations in the context of an arrangement are investigated. Further development of skills introduced in Arranging I.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-1720, Arranging I, or departmental approval.*

### **MUS-2720 Arranging III**

02 Semester credits

Development of the linear approach of multiple horn scoring, focusing on backgrounds, supporting lines, and contrapuntal devices as well as melodic presentation; further development of the skills introduced in Arranging II. Elements of arranging for the large ensemble and studio orchestra will be introduced.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): MUS-2710, Arranging II, or departmental approval.*

### **MUS-2820 Independent Advanced Study in Music**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Music. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Music.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### NURSING - NURS

#### **NURS-1300 Health Assessment**

02 Semester Credits

Focuses on development of assessment skills including obtaining a health history, performing physical assessment of the adult, and evaluating physiologic changes related to aging. Major emphasis on developing interviewing skills, assessing cultural factors, and utilizing basic assessment techniques. Documentation and reporting of findings discussed. Laboratory screening procedures introduced.

*Lecture 01 hour. Laboratory: On-campus: 03 hours.*

*Prerequisite(s): Departmental approval: admission to Associate Degree Nursing program or Practical Nursing program.*

#### **NURS-1400 Self-Care Needs**

03 Semester Credits

Focuses on basic nursing care of adults with self-care deficits. Introduces major nursing curriculum themes: nursing process, communication, human development, cultural diversity, and role of associate degree nurse. Basic concepts of pharmacology and normal nutrition presented.

*Lecture 01 hour.*

*Laboratory: On-campus and Clinical: 06 hours.*

*Prerequisite(s): NURS-1300 Health Assessment, or concurrent enrollment; BIO-1430 Anatomy and Physiology I, or concurrent enrollment; and PSY-2020 Lifespan Development, or concurrent enrollment; and departmental approval: admission to Associate Degree Nursing Program.*

#### **NURS-1500 Self-Care -- Elderly**

04 Semester Credits

Study of specialized care of elderly and nursing care of chronic conditions which occur most commonly in elderly. Emphasis on major curriculum themes: nursing process, communication, human development, cultural diversity and role of associate degree nurse.

*Lecture 02 hours.*

*Laboratory: On-campus and Clinical: 06 hours.*

*Prerequisite(s): NURS-1300 Health Assessment, or concurrent enrollment; NURS-1400 Self-Care Needs, or concurrent enrollment; BIO-1430 Anatomy and Physiology I, or concurrent enrollment; and PSY-2020 Lifespan Development, or concurrent enrollment.*

#### **NURS-1600 Health Deviations I**

08 Semester Credits

Focuses on patient with acute and chronic health deviations. Orem's principles of self-care and nursing process provide framework for delivery of nursing care to patients from puberty throughout adulthood. Emphasis on health deviations related to respiratory and musculoskeletal function, fluid and electrolyte balance, reproductive, infectious and urologic disorders, surgery, diabetes, pain and oncology.

*Lecture 04 hours.*

*Laboratory: On-campus and Clinical: 12 hours.*

*Prerequisite(s): NURS-1500 Self-care - Elderly; BIO-1440 Anatomy and Physiology II, or concurrent enrollment; and BIO-2500 Microbiology, or concurrent enrollment.*

#### **NURS-160A Access to Registered Nursing**

03 Semester Credits

Designed to facilitate transition of Licensed Practical Nurses into Associate Degree Nursing program. Concepts related to role of associate degree nurse, therapeutic communication, nursing process and teaching/learning.

*Lecture 02 hours. Laboratory: On-campus: 02 hours.*

*Prerequisite(s): Departmental approval.*

#### **NURS-160B Health Deviations I for LPNs**

04 Semester Credits

Designed for Licensed Practical Nurses entering the Associate Degree Nursing program with advanced credit. Introduces nursing curriculum themes. Focuses on health deviations related to fluid and electrolyte balance, urologic disorders, diabetes and oncology.

*Lecture 02 hours.*

*Laboratory: On-campus and Clinical: 06 hours.*

*Prerequisite(s): NURS-160A Access to Registered Nursing, or concurrent enrollment; BIO-1440 Anatomy and Physiology II, or concurrent enrollment; BIO-2500 Microbiology, or concurrent enrollment; PSY-2020 Life Span Development, or concurrent enrollment; and departmental approval: admission to Associate Degree Nursing Program.*

#### **NURS-1700 Home Health Care**

01 Semester Credit

Principles and competencies needed to care for patients in their home.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): NURS-1600 Health Deviations I, or concurrent enrollment, or NURS-160B Health Deviation I for LPN's, or concurrent enrollment.*

#### **NURS-214Z Self-Care Children and Childbearing: Transition Course**

06 Semester Credits

Transition Course. Must have completed NURS-110 Deviations in Mental Health and NURS-111 Self-Care - Elderly. Replaces NURS-214 Self-Care - Childbearing, and NURS-217 Self-Care - Children. Fulfills prerequisite for NURS-2400 Health Management, and NURS-2500 Health Deviations II. Emphasis on the nursing process, developmental self-care needs, and health deviation/self-care needs of patients throughout childbearing cycle, the neonate, the child ages infant through adolescence, and the family. Communication theory including teaching/learning strategies, cultural diversity, human growth and development, and role of the nurse integrated throughout course as related to nursing care of childbearing family, and children and families.

*Lecture 03 hours. Laboratory 09 hours.*

*Prerequisite(s): NURS-110 Deviations in Mental Health, and NURS-111 Self-Care Elderly.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **NURS-215Z Health Deviations II: Transition Course**

04 Semester Credits

Transition Course. Must have completed NURS-109 Health Deviations I. Replaces NURS-215 Health Deviations II. Fulfills prerequisite for NURS-2300 Specialized Health Care Needs. Focuses on health promotion and selected self-care deficits of patients and families from onset of puberty through adulthood. Additional content includes reproductive disorders, fertility, infertility, and family planning, infectious disorders, family violence, chronic congestive heart failure, and chronic essential hypertension.

*Lecture 02 hours. Laboratory 06 hours.*

*Prerequisite(s): NURS-109 Health Deviations I.*

### **NURS-217Z Self-Care-Children: Transition Course**

03 Semester Credits

Transition Course. Must have completed NURS-214 Self-Care - Childbearing, and NURS-215 Health Deviations II. Replaces NURS-217 Self-Care - Children. Fulfills prerequisite for NURS-2400 Health Management, and NURS-2500 Health Deviations II. Emphasis on the nursing process, developmental self-care needs, and health deviation/self-care needs of the child ages infant through adolescence, and the family. Communication theory including teaching/learning strategies, cultural diversity, human growth and development, and role of the nurse integrated throughout course as related to nursing care of child and family.

*Lecture 01 hour. Laboratory 06 hours.*

*Prerequisite(s): NURS-214 Self-Care - Childbearing, and NURS-215 Health Deviations II.*

### **NURS-218Z Health Deviation III: Transition Course**

05 Semester Credits

Transition Course. Must have completed NURS-216 Health Deviations III, NURS-217 Self-Care - Children, and concurrent enrollment in NURS-2400 Health Management. Replaces NURS-218 Health Deviations IV. Focuses on the acute and critically ill patient. Utilizes Orem's principles of self-care and the nursing process for provision of care to culturally diverse patients and groups of patients. Emphasis on care required to meet preventive, therapeutic and rehabilitative self-care deficits. Principles of management applied through a nursing leadership course.

*Lecture 02 hours. Laboratory 09 hours.*

*Prerequisite(s): NURS-216 Health Deviations III, NURS-217 Self-Care - Children, and concurrent enrollment in NURS-2400 Health Management.*

### **NURS-2300 Specialized Health Care Needs**

09 Semester Credits

Focuses on nursing process, developmental self-care needs, and health deviation self-care needs of specialized population which includes childbearing families, children and their families, and individuals with deviations in mental health. Therapeutic communication techniques, teaching/learning strategies, cultural diversity, human growth and development, and role of associate degree nurse integrated as related to nursing care.

*Lecture 05 hours.*

*Laboratory: On-campus and Clinical: 12 hours.*

*Prerequisite(s): NURS-1600 Health Deviations I, or NURS-160B Health Deviations I for LPN's and NURS-1700 Home Health Care.*

### **NURS-2400 Health Management**

01 Semester Credit

Exploration of role of associate degree nurse and transition into practice emphasizing major health care issues, trends and patterns of care. Presentation and analysis of management concepts in health care organizations.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): NURS-2300 Specialized Health Care Needs, and concurrent enrollment in NURS-2500 Health Deviations II.*

### **NURS-2500 Health Deviations II**

09 Semester Credits

Focuses on chronic, acute and critically ill patient. Utilizes Orem's principles of self-care and nursing process for provision of care to culturally diverse patients and groups of patients. Emphasizes care required to meet preventative, therapeutic and rehabilitative self-care deficits. Principles of management applied through nursing leadership experience.

*Lecture 04 hours.*

*Laboratory: On-campus and Clinical: 15 hours.*

*Prerequisite(s): NURS-2300 Specialized Health Care Needs; and concurrent enrollment in NURS-2400 Health Management.*

### **NURS-2820 Independent Advanced Study in Nursing**

1-3 Semester Credits

Specific content and objectives to be arranged between instructor and student. (May be repeated for a maximum of six credits.)

*Lecture 0-3 hours. Laboratory 0-9 hours.*

*Prerequisite(s): Departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### OCCUPATIONAL THERAPY ASSISTING - OTAT

#### **OTAT-1300 Occupational Therapy Principles**

02 Semester Credits

History and foundational theory of occupational therapy. Overview of health care system, areas of practice, ethics and legal issues.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### **OTAT-1310 Occupational Therapy Media**

02 Semester Credits

Development of skills in use of selected media as basic approach to occupational therapy practice. General concepts of activity analysis and problem solving applied to therapeutic process.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): BIO-1430 Anatomy and Physiology I, or concurrent enrollment; and departmental approval.*

#### **OTAT-1320 Fundamentals of Developmental Disabilities**

02 Semester Credits

Overview of developmental disabilities including physical and psychosocial conditions commonly referred to and treated by occupational therapists.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): OTAT-1300 Occupational Therapy Principles, and departmental approval.*

#### **OTAT-1330 Techniques in Developmental Disabilities**

03 Semester Credits

Application of occupational therapy skills and techniques used in treatment programs planned for persons with developmental disabilities.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OTAT-1310 Occupational Therapy Media, and departmental approval.*

#### **OTAT-1420 Fundamentals of Psychosocial Dysfunction**

02 Semester Credits

Overview of psychosocial issues and psychiatric diagnoses in mental health and other clinical settings commonly referred to occupational therapy for treatment. Focuses on signs, symptoms and effects that mental illness and psychosocial issues have on an individual's life tasks and roles.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-2020 Life Span Development, or concurrent enrollment; and OTAT-1320 Fundamentals of Developmental Disabilities.*

#### **OTAT-142Z Fundamentals of Psychosocial Dysfunction: Transition Course**

01 Semester Credit

Transition Course. Must have completed PSY-102 General Psychology, and OTAT-123 Fundamentals of Physical Dysfunction, and obtain departmental approval. Replaces OTAT-213 Fundamentals of Psychosocial Dysfunction. Fulfills prerequisite for OTAT-232Z Fundamentals of Physical Disabilities, OTAT-233Z Techniques of Physical Disabilities, and OTAT-286Z Practicum III. Overview of psychosocial dysfunctions commonly seen in adults referred to occupational therapy for treatment.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): PSY-102 General Psychology; OTAT-123 Fundamentals of Physical Dysfunction; and departmental approval.*

#### **OTAT-1430 Techniques in Psychosocial Dysfunction**

03 Semester Credits

Designed to familiarize student with a variety of therapeutic techniques, processes, and programming used by occupational therapists treating individuals with psychosocial dysfunction. Emphasis on self awareness and group dynamics relevant to clinical settings serving clients with psychological and psychiatric disorders.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OTAT-1330 Techniques in Developmental Disabilities, and departmental approval.*

#### **OTAT-143Z Techniques for Psychosocial Dysfunction: Transition Course**

03 Semester Credits

Transition Course. Must have completed PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and obtain departmental approval. Replaces OTAT-215 Techniques in Psychosocial Dysfunction. Fulfills prerequisite for OTAT-232Z Fundamentals of Physical Disabilities, OTAT-233Z Techniques of Physical Disabilities, and OTAT-286Z Practicum III. Application of skills and techniques used in treatment programs for patients with psychosocial dysfunction.

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and departmental approval.*

#### **OTAT-1850 Practicum I**

02 Semester Credits

Under supervision of assigned agency personnel, students apply knowledge, skills and techniques learned in concurrent OTAT courses and weekly discussion seminar. Assignment to agencies includes traditional and non-traditional settings serving clients with developmental disabilities.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 105 hrs./semester. Seminar: 15 hrs./semester.*

*Prerequisite(s): OTAT-1310 Occupational Therapy Media, and departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **OTAT-1860 Practicum II**

02 Semester Credits

Under supervision of assigned agency personnel, students apply knowledge, skills and techniques learned in concurrent OTAT courses and weekly discussion seminar. Assignment to agency includes traditional and non-traditional settings serving clients with psychosocial dysfunctions.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 105 hrs./semester. Seminar: 15 hrs./semester.*

*Prerequisite(s): PSY-2020 Life Span Development, or concurrent enrollment; and departmental approval.*

### **OTAT-186Z Practicum II Psychosocial Dysfunction:**

**Transition Course**

02 Semester Credits

Transition Course. Must have completed PSY-102 General Psychology, OTAT-125 Techniques in Physical Dysfunction, and obtain departmental approval. Replaces OTAT-217 Psychosocial Field Practice. Fulfills prerequisite for OTAT-232Z Fundamentals of Physical Disabilities, OTAT-233Z Techniques of Physical Disabilities, and OTAT-286Z Practicum III. Practice of knowledge and techniques learned in concurrent courses at clinical sites under supervision of health care personnel.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 105 hrs./semester. Seminar: 15 hrs./semester.*

*Prerequisite(s): PSY-102 General Psychology, OTAT-125*

*Techniques in Physical Dysfunction, and departmental approval.*

### **OTAT-2320 Fundamentals of Physical Dysfunction**

04 Semester Credits

Overview of physical disabilities including physical and psychosocial conditions commonly referred to and treated by occupational therapist. Presented within developmental frame of reference covering adult through old age.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): PTAT-1300 Functional Anatomy; OTAT-1420 Fundamentals of Psychosocial Dysfunction; and OTAT-1430 Techniques in Psychosocial Dysfunction.*

### **OTAT-232Z Fundamentals of Physical Disabilities:**

**Transition Course**

01 Semester Credit

Transition Course. Must have completed OTAT-215 Techniques in Psychosocial Dysfunction, and obtain departmental approval. Replaces OTAT-223 Fundamentals of Long Term Care. Completes a degree requirement. Overview of clinical conditions of geriatric patients and those in long-term care who are commonly referred to occupational therapy for treatment.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): OTAT-215 Techniques in Psychosocial Dysfunction, and departmental approval.*

### **OTAT-2330 Techniques in Physical Disabilities**

04 Semester Credits

Overview of occupational therapy treatment strategies and techniques for physically disabled adults from late adolescence to end of life. Emphasis on current, authentic and effective occupational therapy practice.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): PTAT-1300 Functional Anatomy, and OTAT-1430 Techniques for Psychosocial Dysfunction.*

### **OTAT-233Z Techniques of Physical Disabilities:**

**Transition Course**

02 Semester Credits

Transition Course. Must have completed OTAT-213 Fundamentals of Psychosocial Dysfunction, and obtain departmental approval. Replaces OTAT-225 Techniques in Long-Term Care. Completes a degree requirement. Overview of occupational therapy treatment strategies and techniques for physically disabled adults from late adolescence to the end of life. Emphasis on current, authentic and effective occupational therapy practice.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): OTAT-213 Fundamentals of Psychosocial Dysfunction, and departmental approval.*

### **OTAT-2340 Occupational Therapy Issues**

03 Semester Credits

Integrates knowledge and skills acquired in academic work and field practice placements to clarify role and function of Certified Occupational Therapy Assistant; evolving issues, concepts and responsibility to professional organizations; credentialing process; research; continuing education and public relations. Role of COTA as activities director.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): OTAT-2330 Techniques in Physical Disabilities, or concurrent enrollment.*

### **OTAT-2860 Practicum III**

02 Semester Credits

Under supervision of assigned agency personnel, students apply knowledge, skills and techniques learned in concurrent OTAT courses and weekly discussion seminar. Assignments to health care agencies include, but are not limited to, hospitals, nursing homes, and rehabilitation centers serving adult and/or geriatric populations with physical conditions referred to occupational therapy.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 105 hrs./semester. Seminar: 15 hrs./semester.*

*Prerequisite(s): OTAT-1860 Practicum II, and departmental approval.*

### **OTAT-286Z Practicum III**

02 Semester Credits

Transition Course. Must have completed OTAT-217 Psychosocial Field Practice, and obtain departmental approval. Replaces OTAT-227 Long-Term Care Field Practice. Completes a degree requirement. Application of skills and techniques in treatment programs planned for patients and those in long-term care facilities.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Practicum: 105 hrs./semester. Seminar: 15 hrs./semester.*

*Prerequisite(s): OTAT-217 Psychosocial Field Practice, and departmental approval.*

### **OTAT-2940 Field Experience**

03 Semester Credits

Students assigned to two consecutive 8-week full-time field placements under supervision of licensed occupational therapists. Provides student opportunities to apply principles and techniques learned in previous entry level practice.

*Lecture 00 hours. Laboratory 00 hours. Other Required Hours:*

*Field experience: 576 hours per semester.*

*Prerequisite(s): OTAT-2320 Fundamentals of Physical Dysfunction; OTAT-2330 Techniques in Physical Disabilities; OTAT-2860 Practicum III; and departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### OFFICE ADMINISTRATION - OADM

#### **OADM-1000 Business Language Skills**

02 Semester Credits

Fundamentals of business language with emphasis on grammatical correctness, acceptable usage, spelling, vocabulary, punctuation, capitalization, correct number usage, and proofreading. Limited writing involves choice of correct word usage, effective sentence structure, and paragraph construction.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **OADM-1010 Keyboarding**

02 Semester Credits

Mastery of alphabetic and numeric keyboard using touch system. Formatting, speed and skill development, and keying basic business documents emphasized. Minimum goal of 30 words a minute with not more than five errors on a three-minute timed writing. Instruction on microcomputer.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### **OADM-1020 Microcomputer Applications**

03 Semester Credits

Development of techniques and skills used on microcomputer, combining four computer applications: word processing, database management, spreadsheet analysis and electronic communication. Practical application in creating and printing documents with graphics, charting, and reporting capabilities.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **OADM-1030 Speed Building**

02 Semester Credits

For individuals with ability to type by touch. Focuses on improving speed and accuracy in keyboarding at microcomputer. (May be repeated.)

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### **OADM-1040 Basic Filing with Microcomputer Applications**

03 Semester Credits

Fundamentals of records, including basic rules for filing, five basic methods, and records handling from creation to destruction or archival storage. Includes study of electronic office filing, micrographics, electronic media, and optical storage. Applications on microcomputer.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **OADM-1050 Electronic Spreadsheet Applications**

03 Semester Credits

Hands-on applications with spreadsheet software. Skill development in creating, manipulating, and utilizing spreadsheets. Topics include spreadsheet functions, graphic capabilities, and database management. Concepts, features, and commands of electronic spreadsheet system applied to various practical business applications.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **OADM-1060 Introduction to Windows**

02 Semester Credits

In-depth study of graphical user interface using Windows operating environment. Emphasis on windowing concepts and commands, running application programs, managing files and transferring data. Application programs, Windows utilities, file managing and data transfer.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### **OADM-1300 Beginning Shorthand**

03 Semester Credits

Introduction to theory and principles of Gregg shorthand with emphasis on reading, writing, and transcription in preparation for speed dictation and transcription in more advanced shorthand courses. Instruction in taking dictation and preparation of typed transcripts from shorthand notes. Speed and accuracy development. Course assumes student demonstrates touch typing.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): OADM-1010 Keyboarding, or departmental approval.*

#### **OADM-1310 Basic Business Formatting**

03 Semester Credits

Formatting and keying business letters, interoffice memorandums, tables, business forms, outlines, and advanced reports containing footnotes/endnotes with emphasis on word processing techniques. Minimum goal of 45 words a minute with not more than 5 errors on a 5-minute timed writing. Instruction on microcomputer. Course assumes student demonstrates touch typing.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): OADM-1010 Keyboarding, or departmental approval.*

#### **OADM-1320 Intermediate Shorthand**

03 Semester Credits

Brief and intensive review of Gregg shorthand and presentation of additional theory. Instruction in taking dictation and transcription of mailable documents from shorthand notes. Emphasis on development of speed and accuracy and production of mailable documents.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): OADM-1300 Beginning Shorthand, or departmental approval: comparable knowledge or skills.*

#### **OADM-1800 Special Topics in Office Administration**

1-3 Semester Credits

Study of selected topics or current issues in Office Administration. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **OADM-181S Special Laboratory Topics in Office Administration**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Office Administration (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours. Other Required Hours: 0. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **OADM-181T Special Laboratory Topics in Office Administration**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Office Administration (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours. Other Required Hours: 0. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **OADM-1820 Independent Study in Office Administration**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Office Administration. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 0. Prerequisite(s): Must be taken concurrently with a 1000-level course in Office Administration.*

### **OADM-2010 Business Communications**

03 Semester Credits

Study of oral, written and electronic business communication theory. Includes business correspondence writing, job preparation, research techniques, and formal and informal report preparation.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): ENG-1010 College Composition I or concurrent enrollment.*

### **OADM-2300 Word Processing**

03 Semester Credits

Basic and intermediate techniques and skills using word processing software applied to practical business applications.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): OADM-1010 Keyboarding, or departmental approval: equivalent proficiency.*

### **OADM-2310 Desktop Publishing**

03 Semester Credits

Hands-on applications using desktop publishing software package. Application of desktop publishing techniques and design concepts, applied to variety of business publications. Course assumes prior word processing experience/knowledge.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): OADM-2300 Word Processing, or departmental approval: comparable knowledge or skills.*

### **OADM-2320 Machine Transcription**

03 Semester Credits

Emphasis on development of proficiency in transcribing business, legal, and medical documents from machine dictation. Operation of transcription equipment and development of speed and accuracy in transcription. Course assumes prior word processing experience/knowledge.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): OADM-1000 Business Language Skills, and OADM-2300 Word Processing.*

### **OADM-2800 Special Advanced Topics in Office Administration**

1-3 Semester Credits

Study of selected advanced topics or current issues in Office Administration. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **OADM-281S Special Advanced Laboratory Topics in Office Administration**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Office Administration (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **OADM-281T Special Advanced Laboratory Topics in Office Administration**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Office Administration (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **OADM-2820 Independent Advanced Study in Office Administration**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Office Administration. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00. Prerequisite(s): Must be taken concurrently with a 2000-level course in Office Administration.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **OADM-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

### **OADM-2990 Office Procedures and Practices**

03 Semester Credits

Capstone course for Office Administration majors. Designed to update knowledge of rapidly changing office environment and preparation for initial employment as well as promotion to supervisory and administrative positions.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: sophomore standing.*

## **OPTICAL TECHNOLOGY - OPT**

### **OPT-1310 Theoretical Optics I**

02 Semester Credits

History of optical field, manufacturing of glasses and plastic lenses. Introduction to modern lens theory and construction and basis for design.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

### **OPT-1320 Theoretical Optics II**

02 Semester Credits

Study of types of astigmatic refraction errors, optics of cylinder, transposition, and neutralization.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): OPT-1310 Theoretical Optics I.*

### **OPT-1410 Mechanical Optics I**

02 Semester Credits

Introduction to ophthalmic laboratory procedures. Abrasive cutting, lapping, surface inspection, and calculations for prisms and spheres. Care of laboratory equipment.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

### **OPT-1420 Mechanical Optics II**

02 Semester Credits

Accommodations, visual fields, and multifocal types. Anisometropia and bicentric grinding calculations. Surfacing techniques for various bifocal types.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): OPT-1410 Mechanical Optics I.*

### **OPT-1510 Optical Dispensing I**

03 Semester Credits

Introduction, history, and development of modern opticianry, spectacles, fitting procedures. Principles of interpersonal relationships. Instruction in basic frame types and parts.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to Optical Technology Program.*

### **OPT-1520 Optical Dispensing II**

03 Semester Credits

Verification of prescription, ordering correct absorptive or tinted lenses, basic frame markings and measurements, inserting into frame, and keeping accurate records for future use.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-1510 Optical Dispensing I.*

### **OPT-1610 Contact Lens I**

02 Semester Credits

Focuses on history of contact lenses, differences between hard and soft contact lenses, and physical and physiological properties of contact lenses.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to the program.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **OPT-1620 Contact Lens II**

03 Semester Credits

Principles of operation and design of instruments applicable to fitting of contact lenses. Optical principles and materials applicable to design processes and relationship to physical condition and structure of eye in its abnormal state.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-1610 Contact Lens I.*

### **OPT-2330 Theoretical Optics III**

02 Semester Credits

Bifocal and trifocal lenses. Difference between near and intermediate fields; use of Snelling Chart; ability to match prescription to lens style.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): OPT-1320 Theoretical Optics II.*

### **OPT-2430 Mechanical Optics III**

03 Semester Credits

Beginning and intermediate finishing process, ophthalmic prism, their effects, and designations. Lens, aberrations, analysis of visible spectrum, absorptive lenses, and theory as it applies to finished glasses. Edging process practiced as it relates to single vision sphere, single vision cylinders, and utility segmented lens designs in sphere and cylindrical forms.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-1420 Mechanical Optics II.*

### **OPT-2440 Mechanical Optics IV**

03 Semester Credits

Intermediate and advanced finishing process, ophthalmic prism, their effects, and designations. Lens aberrations, analysis of visible spectrum, absorptive lenses, and theory as it applies to finished glasses. Edging process practiced as it relates to single vision sphere, single vision cylinders, and utility segmented lens designs in sphere and cylindrical forms, progressive lens designs, occupational lens designs. Special lens treatments discussed.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-2430 Mechanical Optics III.*

### **OPT-2500 Optical Business**

02 Semester Credits

Responsibilities in optical department: performance reviews, hiring personnel, scheduling work hours, inventory control, financial data, and goal emphasis.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval.*

### **OPT-2530 Optical Dispensing III**

03 Semester Credits

Cataract lens fitting, vertex distance, progressive lenses, invisible lenses and clinical practice adjusting frames to patients.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-1520 Optical Dispensing II.*

### **OPT-2540 Optical Dispensing IV**

03 Semester Credits

On-site clinical practice and individual instruction in fitting, adjusting, and dispensing of eyeglasses.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-2530 Optical Dispensing III.*

### **OPT-2630 Contact Lens III**

03 Semester Credits

Techniques of contact fitting and application of these techniques in fitting process. Practice in fitting contact lenses. Fitting rules, wearing schedules, and optics of contact lenses. Hard and soft contacts.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): OPT-1620 Contact Lens II.*

### **OPT-2640 Contact Lens IV**

02 Semester Credits

Advanced techniques of contact lenses fitting and practical application of these techniques in fitting process. Practice in fitting contact lenses. Fitting rules, wearing schedules, and optics of contact lenses. Hard and soft contacts, bifocal contact lens designs and full range of toric lens designs.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): OPT-2630 Contact Lens III.*

### **OPT-2700 Refraction**

03 Semester Credits

Entry level knowledge of theory and performance of refraction as it relates to human eye. Study of ocular media, ametropia neutralization, astigmatism, objective and subjective refraction, anomalies of vision, and clinical refraction and retinoscopy. Pitfalls, aids to refractionist and didactic refraction.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): OPT-2860 Optical Practicum; or departmental approval: licensed optician.*

### **OPT-2860 Optical Practicum**

02 Semester Credits

Work in selected optical departments, performing general duties associated with optical field. Each student assigned to clinical site by completing resume and contacting site selected. Each student rotates through contact lenses and spectacle dispensing, learning hands-on skills and communication skills needed to function in field of opticianry.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): OPT-1320 Theoretical Optics II; OPT-1420 Mechanical Optics II; OPT-1520 Optical Dispensing II; and OPT-1620 Contact Lens II.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PARALEGAL STUDIES - PL

#### PL-1000 Introduction to Paralegal Profession

02 Semester Credits

Discussion of practical realities of legal field; special emphasis on legal status of paralegals and ethical constraints placed upon those involved in legal profession. Students introduced to specific paralegal skills, various legal settings, overview of U.S. legal system, and organization of typical law case. Students expected to begin professional development, including exploring employment opportunities and paralegal organizations.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### PL-1300 Civil Procedure

03 Semester Credits

Study of Rules of Civil Courts which govern civil lawsuits, with emphasis on Ohio Rules of Procedure. Examination of reading, interpretation, and commencement of action, service, motion practice and discovery. Students begin portfolio of legal documents developed throughout program of study. Study alternatives to litigation such as arbitration, negotiation, and mediation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### PL-1400 Basic Legal Research and Writing

03 Semester Credits

Introduction to skills essential to effective identification, analysis and research of legal issues. Students learn to formulate research plans that require efficient use of basic research tools to locate primary and secondary authority. Practice in accessing sources commonly used by state court system, and drafting projects, such as in-house legal memorandum and opinion letter, consistent with professional standards of style and citation. Emphasis on validating research and quickly accessing statutory and case law.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### PL-1420 Probate Law

03 Semester Credits

Study of common forms for estate administration, including study of Ohio Probate Code relating to post-mortem estate administration. Focus on procedure for estate administration including discovery and determination of assets, appointment of fiduciary, taxation and transfer of property from decedent to beneficiaries. Study of forms of ownership of property.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### PL-1440 Business Law for Paralegals

04 Semester Credits

Study of business relationships such as agency, contracts, sales, secured transactions and commercial paper. Introduces paralegal's role in law firm/corporation for drafting related documents. Introduction to various business entities including sole proprietorships, partnerships, corporations, and licensed professional associations. Drafting of partnership agreements and incorporation documents. Introduction to tax and Securities & Exchange Commission ramifications.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### PL-1460 Workers' Compensation Law

03 Semester Credits

Study of Ohio Bureau of Workers' Compensation and Industrial Commission of Ohio, with emphasis on claims and procedures involving injured workers and benefits available. Preparation of forms to access compensation for injuries, employer defenses, and appeal procedures.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### PL-1500 Legal Computer Applications

03 Semester Credits

Students become familiar with software that supports daily tasks handled in law office such as record-keeping, financial management, marketing, office administration (personnel and practice) systems, and billing and docketing procedures. Students explore legal applications in word processing, database, spreadsheet, scheduling, billing and indexing programs. Importance of resource and data management in law practice setting discussed.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### PL-1800 Special Topics in Paralegal Studies

1-3 Semester Credits

Study of selected topics or current issues in Paralegal Studies. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### PL-2300 Torts and Evidence

03 Semester Credits

Fundamental principles of tort law (personal injury, malpractice, intentional tort, and products liability) to explore paralegal responsibilities in trial setting. Students collect and prepare evidence according to Ohio and Federal rules of evidence.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PL-1300 Civil Procedure.*

#### PL-2400 Computer Assisted Legal Research

03 Semester Credits

Explores differences between traditional and electronically-accessed legal research. After reviewing traditional research and citation techniques, students examine theory and practical aspects of computer-assisted legal research (CALR), formulating research requests and processing, compiling and evaluating research using commercial data base, CD-ROM databases, and Internet. Students use both Boolean and "Natural Language" searches in different systems. Will locate and use "The Ohio Rules of Appellate Procedure" and prepare appellate brief using Ohio citation format.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PL-1400 Basic Legal Research and Writing.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **PL-2520 Debtor/Creditor Law**

03 Semester Credits

Study of basic legal principles governing rights and duties of debtors and creditors. Introduction to Law of Bankruptcy, specifically Chapters 7, 11, and 13 of the United States Bankruptcy Code and applicable Ohio law. Preparation of bankruptcy petitions, related schedules and documents needed for initial filing of petitions. Debt counseling protection, compromise and collection techniques including garnishment, foreclosure and attachment of personal property explored.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PL-1300 Civil Procedure, or departmental approval: admission to program.*

### **PL-2540 Family Law**

03 Semester Credits

Basic principles and trends in Family Law including marriage, annulment, dissolution, divorce, child support, child custody, visitation, paternity, surrogacy and adoption. Emphasis on ethical issues, drafting of appropriate documents, preparing discovery, court proceedings, computer-assisted calculation, and conducting interviews to obtain sensitive client information.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PL-1300 Civil Procedure, or departmental approval: admission to program.*

### **PL-2560 Advanced Litigation**

03 Semester Credits

Preparation of case for litigation using creation of trial notebook and mock trial. Students gather, draft, organize and summarize trial documents and prepare for courtroom demonstration of litigation process.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PL-1300 Civil Procedure; and PL-2300 Torts and Evidence, or concurrent enrollment.*

### **PL-2850 Paralegal Practicum**

02 Semester Credits

Provides supervised work experience in law firm or other legal setting. Student obtains actual work experience by performing paralegal duties under direct supervision of attorney and/or paralegal. Students meet in seminar format to discuss experiences encountered in work place.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 10 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): Departmental approval: completion of all required courses and completion of all program requirements.*

## PHARMACY TECHNOLOGY - PHM

### **PHM-1300 Introduction to Pharmacy Practice**

03 Semester Credits

Overview of fundamentals of pharmacy practice including technician's role in drug distribution in various settings; and pharmacy abbreviations and terminology, history, management, organizations, information resources, regulations, law and ethics, and basic job search skills.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **PHM-1350 Pharmacy Practice I**

03 Semester Credits

Overview of fundamentals of pharmacy practice in various practice settings with respect to safe and accurate preparation and distribution of sterile and non-sterile topical and parenteral medications. Students learn the technician's role in drug preparation, drug packaging, and drug labeling.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

### **PHM-1360 Pharmacy Practice II**

03 Semester Credits

Fundamentals of pharmacy practice including technician's role in drug distribution in community, home health care, nursing home, and alternative practice settings. Focuses on oral and topical dosage forms including handling, preparation, packaging, labeling, and distribution.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PHM-1350 Pharmacy Practice I, or departmental approval.*

### **PHM-1450 Pharmacology and Therapeutic Principles I**

03 Semester Credits

Overview of fundamentals of pharmacology including drug classification, brand and generic drug nomenclature, common drug therapy associated with various disease states, drug indications, side effects, and parameters for safe drug usage.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

### **PHM-1460 Pharmacology and Therapeutic Principles II**

03 Semester Credits

Fundamentals of pharmacology including drug classification, brand and generic drug nomenclature, common drug therapy associated with various disease states, drug indications, side effects, and parameters for safe drug usage.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PHM-1450 Pharmacology and Therapeutic Principles I, or departmental approval.*

### **PHM-1800 Special Topics in Pharmacy**

1-3 Semester Credits

Study of selected topics or current issues in Pharmacy Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

### **PHM-181T Special Laboratory Topics in Pharmacy**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Pharmacy (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours. Other Required Hours: 0. Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **PHM-1860 Pharmacy Technology Practicum I**

03 Semester Credits

Supervised practical field experience designed to emphasize role of technician in various traditional practice settings. Students assigned to practicum training sites and work under direct supervision of registered pharmacists and certified pharmacy technicians to gain exposure to professional practices. Required for students in one-year certificate program, and prerequisite course for students in associate degree program.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): PHM-1300 Introduction to Pharmacy Practice; PHM-1350 Pharmacy Practice I; PHM-1450 Pharmacology and Therapeutic Principles II; and departmental approval: site assignments.*

### **PHM-2700 Advanced Topics in Pharmacy Practice**

03 Semester Credits

Current topics and changes in practice of pharmacy detailed. Among topics discussed: current advances in medications, changing role of pharmacist and pharmacy technician, review of pharmaceutical calculations, substance abuse, biotechnology, AIDS and other communicable diseases, current health issues facing men and women, and drug approval process.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PHM-1350 Pharmacy Practice I; PHM-1360 Pharmacy Practice II; PHM-1860 Pharmacy Technology Practicum I; and departmental approval.*

### **PHM-2860 Pharmacy Technology Practicum II**

03 Semester Credits

Supervised practical field experience. Emphasis on role of technician in various traditional and non-traditional practice settings. Students assigned to practicum training sites and work under direct supervision of registered pharmacists and certified pharmacy technicians to gain exposure to professional pharmacy practices. Students expected to assume more responsibility and work with less individualized attention.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): PHM-1860 Pharmacy Technology Practicum I; PHM-2700 Advanced Topics in Pharmacy Practice, or concurrent enrollment; and departmental approval.*

### **PHM-2870 Pharmacy Technology Practicum III**

03 Semester Credits

Supervised practical field experience. For students who need additional experience in IV admixture, sterile technique, or other advanced pharmacy practice.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 14 hours per week. Seminar: 1 hour per week.*

*Prerequisite(s): PHM-2860 Pharmacy Technology Practicum II, and departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PHILOSOPHY - PHIL

#### **PHIL-1000 Critical Thinking**

03 Semester Credits

Study of principles of critical and creative thinking with emphasis on practical applications.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **PHIL-1010 Introduction to Philosophy**

03 Semester Credits

Introduction to basic concepts, reasoning skills, and attitudes employed in philosophical inquiry. Study and analysis of perennial philosophical problems through critical examination of writings of classical and contemporary philosophers. Prepares students for further work in philosophy and any area of learning requiring reasoned views.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **PHIL-1020 Introduction to Logic**

03 Semester Credits

Introduction to evaluation of arguments. Concentration on basic principles of formal logic and application to evaluation of arguments. Explores notions of implication and proof and use of modern techniques of analysis.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **PHIL-2010 Comparative World Religions**

03 Semester Credits

Study of origin, nature, and meaning of major world religions: Judaism, Christianity, Islam, Buddhism, Hinduism, and Confucianism.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **PHIL-2020 Ethics**

03 Semester Credits

Study of systems and problems of human conduct with applications to moral problems and decisions.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **PHIL-2030 Introduction to the Philosophy of Science**

03 Semester Credits

Study of concept formation in science and examination of patterns of scientific investigation and method. Treatment of concepts such as observation, classification, causality, law of nature, explanation, and theory.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **PHIL-2040 Philosophy of Art**

03 Semester Credits

Examination of types of art theories, their implications for art interpretation, art criticism, creative activity of artist, and appreciation of art objects.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **PHIL-2050 Bioethics**

03 Semester Credits

Study and analysis of moral philosophy as applied to issues in health and life sciences with emphasis on developing students' abilities to correctly identify moral problems and defend their moral judgments.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

#### **PHIL-2800 Special Advanced Topics in Philosophy**

1-3 Semester Credits

Study of selected advanced topics or current issues in Philosophy. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PHYSICAL EDUCATION - PE

#### PE-1000 Personal Fitness

02 Semester Credits

Introduction to techniques, principles and benefits of personal conditioning program including flexibility, cardiovascular fitness and muscle endurance training.  
*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1010 Personal Strength Development

02 Semester Credits

Activities which incorporate five components of fitness: body composition, cardiovascular fitness, muscle strength, muscle endurance and flexibility with emphasis on strength training.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1020 Weight Training

01 Semester Credit

Basic instruction in theory of using weights to improve muscular fitness and in fundamentals of correct lifting techniques using dumbbells, nautilus, universal and/or various other machines.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1010 Personal Strength Development, or departmental approval.*

#### PE-1030 Individual Circuit Fitness I

02 Semester Credits

Participation in basic total wellness/fitness education program. Through instruction, supervision, and evaluation, student will exercise with increased knowledge on how to develop a safe fitness program for his/her goals and needs. Additional fees required.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1040 Individual Circuit Fitness II

01 Semester Credit

Designed for students who have completed Individual Circuit Fitness I and desire a more individualized total wellness/fitness education program. Additional fees required.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1030 Individual Circuit Fitness I.*

#### PE-1050 Adapted Individualized Circuit Training

01 Semester Credit

Designed for student who desires to participate in individualized circuit training program and has physical limitations which prevent participation in individualized current fitness courses. Students must be registered with Access Office to enroll. Contact Director for Physical Education. Additional fees required.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: must be registered with Access Office.*

#### PE-1060 Cardio-Fitness

01 Semester Credit

Cardio/respiratory conditioning class, consisting of flexibility and aerobic conditioning exercises and use of variety of training machines.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1000 Personal Fitness, or departmental approval.*

#### PE-1070 Walking/Jogging

01 Semester Credit

Introduces walking/jogging activities including warm-up, stretching, and cool down.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1080 Low Impact Aerobics

01 Semester Credit

Instruction and practice in aerobic dance movements which involve minimum stress of joints. Includes exercises to improve cardiovascular fitness, flexibility, and muscle tone.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1090 High-Low Aerobics

01 Semester Credit

Instruction and practice in high-low aerobic movements with emphasis on individual performance levels and ways to improve cardiovascular endurance, flexibility and muscle tone.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1100 Step Aerobics

01 Semester Credit

Instruction and practice in aerobic dance movements utilizing a step with emphasis on individual performance levels including techniques to improve cardiovascular fitness, flexibility, muscle tone and strength.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1110 Intermediate Step Aerobics

01 Semester Credit

Emphasizes aerobic dance movements utilizing a step with emphasis on individual performance levels. Students should have step aerobics experience and knowledge of basic step movements and terminology.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Department approval: comparable skills.*

#### PE-1120 Adapted Physical Education

01 Semester Credit

Individualized program for students with temporary or permanent physical limitations. Contact campus director of Physical Education for registration procedures.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: must be registered with Access Office.*

#### PE-1130 Archery

01 Semester Credit

Instruction and practice for skill development, safety procedures, equipment care and value as a lifetime activity.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1140 Bowling

01 Semester Credit

Instruction and participation in bowling fundamental skills course. Additional fee required.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### PE-1150 Golf for Beginners

01 Semester Credit

Instruction in and development of skills, fundamentals of swing and physical skills of the game. Additional fees required.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PE-1160 Golf for Players

01 Semester Credit

Advanced class in golf emphasizing playing game of golf and improving already learned skills. Most of class time scheduled off campus. Additional fees required.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1150 Golf for Beginners, or departmental approval: comparable skill.*

### PE-1170 Racquetball for Beginners

01 Semester Credit

Introduction to fundamentals of racquetball. Opportunities to participate and specialize. Rules, safety, and skills stressed.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1180 Racquetball for Players

01 Semester Credit

Provides advanced instruction and opportunities for students to increase level of skill while playing racquetball in competitively structured class.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1170 Racquetball for Beginners, or departmental approval: comparable skill.*

### PE-1190 Self-Defense I

01 Semester Credit

Instruction, practice and skill development in basic self-defense. Students gain appreciation of fitness and self-discipline.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1200 Self-Defense II

01 Semester Credit

Advanced participation and practice in understanding martial arts concept. Emphasis on practice and participation in Korean Tae-Kwon-Do.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1190 Self-Defense I, or departmental approval.*

### PE-1210 Self-Protection (Women)

01 Semester Credit

Individualized instruction in practical self-protection techniques with emphasis on using prevention skills to avoid physically threatening situations and/or personal attacks.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1220 Skiing

01 Semester Credit

Development of basic skiing techniques and safety practices and appreciation of skiing as lifetime activity. Extra fee required for off-site skiing.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1230 Tennis for Beginners

01 Semester Credit

Instruction, practice and skill development of tennis as lifetime activity. Scoring, rules and etiquette of tennis included.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1240 Tennis for Players

01 Semester Credit

Instruction, practice and skill development in tennis with emphasis on Singles and Doubles competition. Additional instruction and drills of beginners skills included.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1230 Tennis for Beginners, or departmental approval.*

### PE-1250 Track and Field

01 Semester Credit

Introduction to fundamentals of track and field events for men and women. Opportunities to participate and specialize in events.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1260 Basketball

01 Semester Credit

Introduction to fundamentals of basketball for men and women. Rules, safety, and basketball skills stressed.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1270 Softball

01 Semester Credit

Instruction and participation in softball for men and women. Basic softball skills, rules and game strategy stressed.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1280 Soccer

01 Semester Credit

Instruction and participation in soccer for men and women. Basic soccer skills, rules and game strategy stressed.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1290 Volleyball

01 Semester Credit

For men and women. Instruction and practice of volleyball skills including safety procedures, competitive experience, and appreciation of volleyball as lifetime activity.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1310 Shallow Water Exercises

01 Semester Credit

Shallow water exercises to improve aerobic fitness, muscle tone and flexibility.

*Lecture 0 hours Laboratory 02 hours. Prerequisite(s): None.*

### PE-1320 Deep Water Exercise

01 Semester Credit

Cardiovascular exercises, muscle toning, strengthening, and flexibility in deep water.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: comfort in deep water.*

### PE-1330 Swimming I

01 Semester Credit

Fundamental swimming skills for non-swimmers and shallow water swimmers including water adjustment, floating, breathing techniques, strokes, and water safety skills.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PE-1340 Swimming II

01 Semester Credit

Designed for individuals able to swim at least one length of pool using any stroke on front or back. Instruction in swimming strokes: front crawl, back crawl, elementary back stroke, side stroke and breast stroke; and endurance swimming, breathing techniques and deep water safety skills.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1330 Swimming I, or departmental approval: equivalent skill.*

### PE-1350 Swim Conditioning

01 Semester Credit

Designed for students completing Swimming II, or who have equivalent skill and are able to swim length of pool continuously.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): PE-1340 Swimming II, or departmental approval: comparable skill.*

### PE-1360 Skin and Scuba

02 Semester Credits

Instruction and participation in basic skills necessary for safe underwater diving. Additional fee required.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): PE-1340 Swimming II, or departmental approval: equivalent skills.*

### PE-1400 Whitewater Rafting

02 Semester Credits

Introduction to outdoor activities including instruction and participation in specific areas such as whitewater rafting, canoeing, or sailing. Includes lecture sessions in preparation for outdoor experience. Activity may include weekend and/or overnight participation. Additional laboratory fees vary according to activity. Check course schedule for specific information.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

### PE-1410 Backpacking

02 Semester Credits

Introduction to outdoor activities, including instruction and participation in specific areas such as backpacking, hiking and orienteering. Includes lecture sessions in preparation for outdoor experience. Weekend and/or overnight participation required.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: physical fitness test.*

### PE-1420 Family Camping

02 Semester Credits

Fundamental class in camping designed to develop basic knowledge and skills pertinent to safe and enjoyable family camping. Activity may include weekend and/or overnight participation. Additional laboratory fees vary according to activity. Check course schedule for specific information.

*Lecture 01 hour. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1430 Physical Relaxation Techniques

01 Semester credits

Introduces the student to basic physical techniques of relaxation including breathing, Jon Kabut-Zinn's body scan method, active and passive meditation. Includes awareness of body tension and stressors.

*Lecture 00 hours. Laboratory 02 hours. Prerequisite(s): None.*

### PE-1800 Special Topics in Physical Education

1-3 Semester Credits

Study of selected topics or current issues in Physical Education. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### PE-181S Special Topics in Physical Education Laboratory Experience

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in Physical Education (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### PE-2000 Lifeguard Training

02 Semester Credits

Minimum skills training to qualify individuals as nonsurf lifeguard with certification from American Red Cross in Lifeguard, First Aid and CPR for the Professional Rescuer. Additional fees required.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: Prerequisite swimming test defined by Red Cross.*

### PE-2010 Lifeguard Instructor

02 Semester Credits

Focuses on teaching skills contained in American Red Cross Lifeguarding, First Aid, CPR for the Professional Rescuer and Community Water Safety courses with American Red Cross certification as Lifeguard and CPR for Professional Rescuer Instructor. Additional fees required.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: 17 years of age by end of class; demonstrate knowledge of lifeguarding and CPR skills.*

### PE-2020 Water Safety Instructor

02 Semester Credits

Instruction in teaching all skills and courses in American Red Cross Learn-To-Swim program, Infant and Pre-school classes, Community Water Safety and Longfellow's Whale Tales. Includes American Red Cross certification. Additional fees required.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: 17 years of age by end of course.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PHYSICAL SCIENCE - PSCI

#### **PSCI-1010 Astronomy**

03 Semester Credits

Survey of astronomy which includes study of history of astronomy, planets, asteroids and comets, the sun, stars, galaxies, and cosmology. Contemporary issues and developments in astronomy and space science. Intended for non-science majors. To fulfill laboratory science requirements, students should enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **PSCI-101L Astronomy Laboratory**

01 Semester Credit

Intended for non-science majors. Exercises on measurements, optics, telescopes, the sun, constellations, and other related astronomy topics. Laboratory activities complement and enrich related lecture course.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): PSCI-1010 Astronomy, or concurrent enrollment.*

#### **PSCI-1020 Chemistry**

03 Semester Credits

Survey of chemistry as related to environment, health and nutrition, and application of chemical knowledge that affect quality of life. Basic concepts and applications of chemistry: consumer chemistry, periodicity, acids and bases, medicines and drugs, pollution and conservation. Intended for non-science majors. To fulfill laboratory science requirement, students should enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **PSCI-102L Chemistry Laboratory**

01 Semester Credit

Intended for non-science majors. Exercises on measurements, separation and synthesis methods, reaction rates, water analysis, household chemistry, forensic and environmental issues, and other related chemistry topics. Laboratory activities complement and enrich related lecture course.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): PSCI-1020 Chemistry, or concurrent enrollment.*

#### **PSCI-1030 Earth**

03 Semester Credits

Survey of geology of Earth and its impact on the environment. Earth's structure and composition, earthquakes, plate tectonics, hydrologic cycle, weather, resources and energy alternatives, and current related issues. Intended for non-science majors. To fulfill laboratory science requirements, students should enroll in related laboratory course.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **PSCI-103L Earth Laboratory**

01 Semester Credit

Intended for non-science majors. Exercises on rocks and minerals, soils, weather, plate tectonics, energy and may include other related earth science activities. Laboratory activities complement and enrich related lecture course.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): PSCI-1030 Earth, or concurrent enrollment.*

#### **PSCI-1800 Special Topics in Physical Science**

1-3 Semester Credits

Study of selected topics or current issues in Physical Science. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 0 hours. Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **PSCI-181T Special Laboratory Topics in Physical Science**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Physical Science (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **PSCI-2800 Special Advanced Topics in Physical Science**

1-3 Semester Credits

Study of selected advanced topics or current issues in Physical Science. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### **PSCI-281T Special Advanced Laboratory Topics in Physical Science**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Physical Science (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PHYSICAL THERAPIST ASSISTING TECHNOLOGY – PTAT

#### PTAT-1100 Introduction to Physical Therapist Assisting

02 Semester Credits

History and principles of physical therapy. Role of physical therapist assistant in relation to physical therapist. Survey of physical therapy treatment procedures. Legal and ethical responsibilities relating to health care service. Discussion of stress, its symptoms and behaviors as related to physical therapy.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program; and ENG-1010 College Composition I; and MA-1020 Medical Terminology I.*

#### PTAT-1300 Functional Anatomy

04 Semester Credits

Study of anatomy and function of human body to include head, neck, shoulder girdle, trunk, and upper and lower extremities. Study of motion of human body as basic to application of exercise with emphasis on study of functional problems for analysis of body movement.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): BIO-1430 Anatomy and Physiology I; and departmental approval: admission to Physical Therapy Program or Occupational Therapy Program.*

#### PTAT-1310 Fundamentals of Physical Therapy

03 Semester Credits

Fundamental procedures and theory for practice of physical therapy. Posture, movement, body mechanics, lifting and moving patients. Normal gait, joint movement and vital signs. Wheelchair measurement, maintenance and mobility.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to Physical Therapy Program or Occupational Therapy Program; and concurrent enrollment in PTAT-1300 Functional Anatomy; and BIO-1430 Anatomy and Physiology I.*

#### PTAT-1400 Clinical Pathophysiology

03 Semester Credits

Introduction to medical conditions commonly encountered in practice of physical therapy that affect integumentary, cardiovascular, endocrine and musculoskeletal systems. Disease and injury and process of inflammation and repair of tissue.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PTAT-1300 Functional Anatomy; and PTAT-1310 Fundamentals of Physical Therapy.*

#### PTAT-1410 Physical Therapy Procedures

05 Semester Credits

Physical therapy procedures, emphasizing treatment utilizing physical agents. Use and application of modalities that emanate from electromagnetic and acoustic spectra.

*Lecture 03 hours. Laboratory 04 hours.*

*Prerequisite(s): PTAT-1310 Fundamentals of Physical Therapy.*

#### PTAT-1420 Therapeutic Exercise

03 Semester Credits

Physical therapy techniques and principles utilized in therapeutic exercise.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PTAT-1300, Functional Anatomy.*

#### PTAT-1800 Special Topics in Physical Therapy

1-3 Semester Credits

Study of selected topics or current issues in Physical Therapy. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Other Required Hours: 00.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

#### PTAT-2300 Physical Therapy Rehabilitation Procedures

03 Semester Credits

Physical therapy techniques and procedures required for adult rehabilitation in selected disabilities.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PTAT-1420, Therapeutic Exercise.*

#### PTAT-2310 Pediatric Physical Therapy

02 Semester Credits

Special considerations of physical therapy approaches, role, and procedures regarding infants and children. Normal fetal and postnatal growth and development. Examination of wide range of disease and disabilities affecting infants and children, and physical therapy skills necessary for interaction and treatment of this patient population.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1440 Anatomy & Physiology II; PTAT-1400 Clinical Pathophysiology; PTAT-1410 Physical Therapy Procedures; and PTAT-1420 Therapeutic Exercise.*

#### PTAT-2320 Functional Anatomy of the Nervous System.

03 Semester Credits

Study of neuroanatomy and physiology and associated neurological conditions seen in physical therapy department.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PTAT-1300 Functional Anatomy, and BIO-1440 Anatomy & Physiology II.*

#### PTAT-2330 Geriatric Physical Therapy

02 Semester Credits

Special considerations of physical therapy approaches, role, and procedures regarding older adult population. Statistics, myths, and legislation regarding aging population. Normal aging and its effects and implications for treatment, wellness, and psychosocial implications.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): PTAT-2300 Physical Therapy Rehabilitation Procedures; PTAT-2310 Pediatric Physical Therapy; and PTAT-2320 Functional Anatomy of the Nervous System.*

#### PTAT-2340 Psychosocial Issues in Physical Therapy

01 Semester Credit

Psychosocial issues for physical therapy including diagnosis and treatment of common mental illnesses, abuse, and therapeutic use of self.

### **PTAT-2800 Special Advanced Topics in Physical Therapy** 1-3 Semester Credits

Study of selected advanced topics or current issues in Physical Therapy. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **PTAT-2940 Field Experience I**

01 Semester Credit

Application of learned physical therapy techniques in clinical setting.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 180 hours per semester.*

*Prerequisite(s): PTAT-1420 Therapeutic Exercise, and PTAT-1410 Physical Therapy Procedures.*

### **PTAT-2950 Field Experience II**

03 Semester Credits

Application of learned physical therapy techniques in clinical setting.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 36 hours per week.*

*Prerequisite(s): PTAT-2300 Physical Therapy Rehabilitation Procedures, and PTAT-2940 Field Experience I.*

## **PHYSICIAN ASSISTANT - PA**

### **PA-1300 History and Physical Exam Techniques I**

02 Semester Credits

Instruction and practice in fundamental skills required for effective patient-practitioner communication and development of therapeutic interpersonal relations. Introduction to lifelong learning skills and cultural diversity effects on all aspects of medical practice. Includes discussion of basic counseling theory and techniques, obtaining and recording a complete medical history, and introduction to study and practice of skills required to perform physical exam.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval, or admission to Physician Assistant or Surgical Physician Assistant program.*

### **PA-1310 History and Physical Exam Techniques II**

02 Semester Credits

Instruction, study and practice of skills required to perform physical examination, including recognition of normal and abnormal results. Includes instruction and practice for refinement of skills related to medical history and medical record-keeping, and how different cultures view and treat abnormalities as related to physical findings and disease process.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): PA-1300 History and Physical Exam Techniques I, or departmental approval.*

### **PA-1400 Clinical Pharmacology**

03 Semester Credits

Review of modern drug therapy including issues related to drug classification and discussion of key concepts involved in use of pharmacological agents for treatment of disease and other specific medical disorders. Presentations on proper selection and administration of drugs, pharmacodynamics, and desirable and adverse effects of drugs. Legal and regulatory aspects of drug therapy, prescription writing, and role of Physician Assistant and Surgical Physician Assistant in pharmacotherapeutics discussed.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval, or admission to the Physician Assistant or Surgical Physician Assistant program.*

### **PA-1450 The Physician Assistant Profession and Health Care Issues**

02 Semester Credits

Introduction to Physician Assistant profession, health care system, patient education, and issues encountered in primary-care and surgical practice settings. Includes discussion of health maintenance and disease prevention measures; psychiatric/social problems and their management; use of community resources; cultural diversity; home health, inner city, and rural health care; and current issues in health care.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval, or admission to the Physician Assistant or Surgical Physician Assistant program.*

## **PA-1500 Clinical Medicine I**

01 Semester Credit

Presentation of medical problems and diseases encountered in primary care practice. Etiology, signs, symptoms, diagnostic data interpretation, clinical course, methods of management, and potential complications discussed. Differential diagnosis of related and similar diseases and geriatrics included.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval, or admission to the Physician Assistant or Surgical Physician Assistant program.*

## **PA-1510 Clinical Medicine II**

04 Semester Credits

Presentation of medical problems and diseases encountered in primary care practice. Emphasis on cardiovascular disorders, endocrine abnormalities, gastrointestinal disorders and other related or similar diseases. Etiology, signs, symptoms, diagnostic data interpretation, clinical course, methods of management, and potential complications discussed. Differential diagnosis of related and similar diseases included.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): PA-1500 Clinical Medicine I, or departmental approval.*

## **PA-1520 Clinical Medicine III**

02 Semester Credits

Presentation of medical problems and diseases encountered in primary care practice, emphasizing obstetrics, gynecology, and pediatrics. Etiology, signs, symptoms, diagnostic data interpretation, clinical course, methods of management, and potential complications provide framework for lecture and discussion. Differential diagnosis of related and similar diseases included.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): PA-1510 Clinical Medicine II, or departmental approval.*

## **PA-2300 Primary Care Patient Management**

01 Semester Credit

Instruction in primary care patient management. Includes selection and interpretation of diagnostic and therapeutic procedures, correlation of medical history and physical examination data, and integration of diagnostic skills through simulated case studies and problem-solving activities.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): PA-1510 Clinical Medicine II, or departmental approval.*

## **PA-2940 Field Experience I**

04 Semester Credits

Supervised field experience in clinical health care setting designed to emphasize role of Physician Assistant to primary care physician. Students assigned to clinical rotations, and under direct supervision of medical personnel gain exposure to professional practices. Students expected to demonstrate advancing assessment skills and assume more individual responsibility as member of medical team as clinical rotations continue. Rotations in surgery and emergency room may be included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 720 hours per semester.*

*Prerequisite(s): PA-2300 Primary Care Patient Management, or departmental approval.*

## **PA-2950 Field Experience II**

04 Semester Credits

Supervised field experience in clinical health care setting designed to emphasize role of Physician Assistant to primary care physician. Students assigned to clinical rotations and under direct supervision of medical personnel gain exposure to professional practices. Students expected to perform in expanded, competent and professional role, assuming more responsibility with less direct supervision from medical personnel. Rotations in surgery and emergency room may be included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 720 hours per semester.*

*Prerequisite(s): PA-2940 Field Experience I, or departmental approval.*

## **PA-2970 Field Experience Seminar I**

02 Semester Credits

Integrates concepts and knowledge gained from field experience rotations into total learning process. Focus on patient and professional communication, lifelong learning, and organization of health care delivery system. Other discussions on current issues included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 30 hours per semester.*

*Prerequisite(s): Concurrent enrollment in PA-2940 Field Experience I.*

## **PA-2980 Field Experience Seminar II**

02 Semester Credits

Integrates concepts and knowledge gained from field experience rotations into total learning process. Focus on professional associations, political/legislative issues and job searching skills. Other discussions on current issues included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 30 hours per semester.*

*Prerequisite(s): Concurrent enrollment in PA-2950 Field Experience II.*

## PHYSICS - PHYS

### PHYS-1050 Everyday Physics

02 Semester Credits

Explores application of various fields of physics to everyday living. Household applications, sports applications and other applications discussed. Some modern physics topics introduced.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): ENG-1010 College Composition I; and MATH-0960 Beginning Algebra II, or MATH-0980 Intensified Beginning Algebra.*

### PHYS-1100 Physics of Ultrasound

02 Semester Credits

Basic physics and related mathematics as applied to ultrasound. Study of basic acoustical principles, sound transmission, signal processing, instrumentation and bioeffects covered.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Admission to Cardiovascular Technology program or Radiography/Diagnostic Medical Sonography program; and MATH-1140 Applied Algebra, or concurrent enrollment, or higher level; or departmental approval: equivalent coursework.*

### PHYS-1210 College Physics I

04 Semester Credits

Kinematics, vectors, and Newtonian mechanics (forces and motion, gravitation, energy, momentum, rotational motion, simple harmonic motion), fluids, heat, and thermodynamics. Emphasis on problem solving using algebra.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): MATH-1160 Technical Mathematics I; or MATH-1200 Intermediate Algebra; or departmental approval.*

### PHYS-1220 College Physics II

04 Semester Credits

Electricity, magnetism, waves, sound, light, special relativity, atomic and nuclear physics.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): PHYS-1210 College Physics I.*

### PHYS-1300 Physics of Optical Materials

04 Semester Credits

Study of basic structure and properties of materials related to opticianry. Includes structure, density, conductivity, and effects of mechanical forces on materials. Special emphasis given to nature and theory of light and application to ophthalmic optics. Demonstrations by use of optical bench, blackboard optics, and other instruments used to facilitate understanding of how light functions.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): MATH-1060 Survey of Mathematics.*

### PHYS-2250 Radiographic Physics and Quality Control

04 Semester Credits

Study of x-ray circuitry, x-ray generators, mobile radiographic equipment, radiographic quality control, and use of automatic exposure devices. Includes laboratory application of quality assurance testing tools.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): RADT-1350 Radiographic Technique, and departmental approval: admission to Radiography Program.*

### PHYS-2290 Advanced Sonography Physics and Vascular Color Flow

03 Semester Credits

Ultrasound physics and principles including instrumentation equipment standards, calibration, operation and quality control. Biological effects of ultrasound. Study of Doppler and Color Flow ultrasound of arteries and veins of body. Abdominal flow and measurements demonstrated. In-depth material on carotid-cerebral vascular system examined along with techniques and measurements utilized. Practical applications of Color Flow Doppler principles in campus lab and/or weekly clinical experiences.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Admission to Radiography/Diagnostic Medical Sonography program; and PHYS-1100 Physics of Ultrasound; or departmental approval.*

### PHYS-2310 General Physics I

05 Semester Credits

Physics for students majoring in science or engineering. Kinematics and dynamics in one, two, and three dimensions. Conservation laws (energy, momentum, angular momentum); gravitation; simple harmonic motion; heat and thermodynamics. Emphasis on problem solving using algebra and calculus.

*Lecture 04 hours. Laboratory 03 hours.*

*Prerequisite(s): MATH-1610 Calculus I, or departmental approval.*

### PHYS-2320 General Physics II

05 Semester Credits

Second semester course for students majoring in science or engineering. Electricity and magnetism; light and optics; waves in elastic media; sound.

*Lecture 04 hours. Laboratory 03 hours.*

*Prerequisite(s): PHYS-2310 General Physics I, and MATH-1620 Calculus II; or departmental approval.*

### PHYS-2400 Modern Physics

03 Semester Credits

Twentieth-century physics: special relativity, the quantum nature of light, matter waves, the uncertainty principle, hydrogen and hydrogen-like atoms, electron spin, the nucleus.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PHYS-2320, General Physics II, or departmental approval.*

### PHYS-2800 Special Advanced Topics in Physics

1-3 Semester Credits

Study of selected advanced topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## PLANT SCIENCE AND LANDSCAPE TECHNOLOGY – PST

### PST-1300 Horticultural Botany

03 Semester Credits

Plant terminology, taxonomy, histology, anatomy, morphology, and physiology examined. Emphasis on horticultural practices, plant growth principles, and cultural requirements for plant growth.

*Lecture 02 hours. Laboratory 03 hours. Prerequisite(s): None.*

### PST-1310 Landscape Plants I

03 Semester Credits

Techniques for correct identification, cultural needs and landscape uses of deciduous trees and shrubs and needle leaf evergreens in landscape.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PST-1300 Horticultural Botany, or concurrent enrollment; or departmental approval: equivalent or work related experience.*

### PST-1320 Landscape Plants II

03 Semester Credits

Identification, cultural requirements, and growth habits of evergreens, ground covers, annuals, perennials, and hardy bulbs. Includes plant selection, soil needs, and perennial garden layout.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PST-1300 Horticultural Botany; or PST-1310 Landscape Plants I; or departmental approval: equivalent or work related experience.*

### PST-1350 Plant Production

02 Semester Credits

Examination of sexual/asexual propagation of plant material. Emphasis on basic greenhouse and nursery operations from harvesting to selling.

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

### PST-1410 Equipment Operations and Maintenance

03 Semester Credits

Review of and practical experience operating common horticultural hand tools, power tools, and large equipment. Safety and maintenance emphasized.

*Lecture 02 hours. Laboratory 03 hours. Prerequisite(s): None.*

### PST-1420 Landscape Practices

03 Semester Credits

Study of and practical experience in proper techniques of landscape installation and maintenance. Specifications of American Nursery Association standards emphasized. Diagnosis and resolution of plant problems considered.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PST-1410 Equipment Operations & Maintenance; or departmental approval: equivalent or work related experience.*

### PST-1820 Independent Study in Plant Science and Landscape

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Plant Science and Landscape Technology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Plant Science and Landscape Technology.*

### PST-2300 Interior Foliage Identification and Culture

02 Semester Credits

Identification, culture, and uses of tropical and other interior plants in the interior plantscape, workplace, and home.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval.*

### PST-2310 Soil Technology

03 Semester Credits

Exposure to various types of soils including factors which affect them. Soil testing and judging extensions of basic topics.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PSCI-1020 Chemistry; or CHEM-1010*

*Introduction to Inorganic Chemistry.*

### PST-2330 Entomology

03 Semester Credits

Identification, classification, life cycles and body structures of insect pests of landscape, greenhouse, nursery, foliage, and turf with emphasis on integrated pest management.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval.*

### PST-2340 Plant Pathology

03 Semester Credits

Survey of common pathological conditions which commonly affect plants. Emphasis placed on disease identification and safe control methods.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): PST-1300 Horticultural Botany, or departmental approval: equivalent or work related experience.*

### PST-2350 Landscape Contracting

03 Semester Credits

Provides an operational knowledge of reading and implementing blueprints with emphasis on installation of plant materials, wood, contracting, and stone hardscape features. Includes local and state zoning laws and regulations.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Eligibility for MATH-1060 Survey of Mathematics.*

### PST-2360 Landscape Design

03 Semester Credits

Basic landscape design theories including site conditions and customer needs. Includes techniques to move from preliminary sketch to final design.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval.*

### **PST-2370 Introduction to Turfgrass**

02 Semester Credits

In-depth study of commercial lawn maintenance and installation including fertilization, spraying, mowing, irrigation, selection and establishment, weed and pest identification, and diagnosis of disorders as pertains to commercial, residential, and municipal applications.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): PST-1300 Horticultural Botany, or departmental approval: equivalent or work related experience.*

### **PST-2380 Arboriculture**

02 Semester Credits

Detailed study of commercial tree care including fertilization, spraying, pruning, cabling, equipment operation and diagnosis of disorders as pertains to commercial arboriculture, urban forestry, and others.

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

### **PST-2800 Special Advanced Topics in Plant Science and Landscape**

1-3 Semester Credits

Study of selected advanced topics or current issues in Plant Science and Landscape Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **PST-281T Special Advanced Laboratory Topics in Plant Science and Landscape**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Plant Science and Landscape Technology (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **PST-2950 Field Experience**

03 Semester Credits

Field experience in student's occupational objectives in plant science, landscaping and/or horticulture. Student and employer follow training agreement as developed by student, employer and supervising faculty.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 36 hours per week.*

*Prerequisite(s): Departmental approval: satisfactory completion of coursework deemed sufficient to prepare the student for entry level work in chosen work area.*

## **POLITICAL SCIENCE - POL**

### **POL-1010 American National Government**

03 Semester Credits

Nature, purpose, theories and forms of government of United States at national level. Relationships between structure, function and process. Dynamics of political change, including role and significance of U.S. Constitution. Current issues of American public policy.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **POL-1020 State and Local Government**

03 Semester Credits

Examination of state and local governments within federal system, intergovernmental relations, metropolitan problems, dynamics of electoral process, including impacts of public policy decisions on individual lives. Several policy areas may be studied.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): POL-1010 American National Government is recommended.*

### **POL-1030 Comparative Government**

03 Semester Credits

Examination of selected developed and developing nations throughout the world. Contrast between democratic, authoritarian, and totalitarian political systems.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): POL-1010 American National Government is recommended.*

### **POL-1070 International Relations and World Politics**

03 Semester Credits

Study of modern international relations and forces that confront policy makers. Special emphasis on current issues.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): POL-1010 American National Government is recommended.*

### **POL-1100 Introduction to Constitutional Law**

03 Semester Credits

Origins and development of American constitutional and legal system. Emphasizes role of Supreme Court in policy making and major decisions concerning important areas of litigation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): POL-1010 American National Government is recommended.*

### **POL-1820 Independent Research in Political Science**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Political Science. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Political Science.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **POL-2060 Political Systems of Africa**

03 Semester Credits

Comparative discussion of selected topics in Africa with particular focus on interrelationship between internal and external affairs. Examination of colonial policies, party systems, interest groups and modes of development.

*Lecture 3 hours Laboratory 00 hours.*

*Prerequisite(s): POL-1010 American National Government is recommended.*

### **POL-2800 Special Advanced Topics in Political Science**

1-3 Semester Credits

Study of selected advanced topics or current issues in Political Science. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **POL-2820 Independent Advanced Research in Political Science**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Political Science. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Political Science.*

## **PRACTICAL NURSING - PNUR**

### **PNUR-1310 Fundamentals of Nursing**

04 Semester Credits

Introduction to fundamentals of nursing care with emphasis on basic daily needs of patient utilizing nursing process. Nursing knowledge and skills necessary for safe and accurate delivery of nursing care stressed. Basic communication and mental health concepts within cultural context introduced.

*Lecture 02 hours.*

*Laboratory: On-campus and Clinical: 06 hours.*

*Prerequisite(s): Departmental approval: admission to Practical Nursing Program; BIO-1100 Introduction to Biological Chemistry, or concurrent enrollment; ENG-1010 College Composition I, or concurrent enrollment; MATH-1140 Applied Algebra, or concurrent enrollment.*

### **PNUR-1320 Nursing Management of Adults I**

04 Semester Credits

Use nursing process and scientific principles in providing care for patients with various health problems, body's response to illness and stress, and its adaptations. Identifies common nursing interventions to meet basic needs of adult patient.

*Lecture 02 hours.*

*Laboratory: On-campus and Clinical: 06 hours.*

*Prerequisite(s): PNUR-1310 Fundamentals of Nursing, or concurrent enrollment; and BIO-1100 Introduction to Biological Chemistry, or concurrent enrollment; and ENG-1010 College Composition I, or concurrent enrollment; and MATH-1140 Applied Algebra, or concurrent enrollment.*

### **PNUR-1330 Nursing Management of Adults II**

08 Semester Credits

Focuses on care of adults with acute and recurring medical and surgical conditions. Students develop skills in problem-solving through use of nursing process as applied to individual situations, with goal of providing safe, competent, and standard nursing interventions to individual adult patient.

*Lecture 04 hours.*

*Laboratory: On-campus and Clinical: 12 hours.*

*Prerequisite(s): PNUR-1320 Nursing Management of Adults I; NURS-1300 Health Assessment, or concurrent enrollment; BIO-1430 Anatomy and Physiology I, or concurrent enrollment; and PSY-1010 General Psychology, or concurrent enrollment.*

### **PNUR-1340 Nursing Care of Families**

04 Semester Credits

Designed to present basic concepts relating to human reproduction and childbearing cycle. Emphasis on nursing responsibility in assessment of normal and abnormal occurrences. Childbearing experience, nursing skills, and measures related primarily to ill newborn, children and adolescents considered in relation to entire family. Emotional and physical aspects incorporated.

*Lecture 02 hours.*

*Laboratory: On-campus and Clinical: 06 hours.*

*Prerequisite(s): PNUR-1330 Nursing Management of Adults II; and PSY-2020 Life Span Development, or concurrent enrollment.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### PSYCHOLOGY - PSY

#### **PSY-1010 General Psychology**

03 Semester Credits

Scientific study of human behavior. Topics include history of psychology, scientific methods, biological processes, sensation and perception, consciousness, learning, intelligence, human development, motivation and emotion, personality, abnormal behavior, social psychology and diversity.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **PSY-102Z General Psychology: Transition Course**

02 Semester Credits

Transition Course. Must have completed PSY-101 General Psychology. Replaces PSY-102 General Psychology. Completes the course sequence. Introduction to psychological concepts and principles derived from a scientific study of behavior. Topics include: motivation and emotion, personality, abnormal behavior, human development, social psychology and diversity.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-101 General Psychology.*

#### **PSY-2010 Child Growth and Development**

03 Semester Credits

Study of human growth and development from conception through puberty. Emphasis on biological, cognitive, social and emotional development. Physiological and psychological processes examined. Major developmental issues examined from diverse perspectives.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2020 Life Span Development**

04 Semester Credits

Study of human growth and development throughout life span. Emphasis on biological, cognitive, social and emotional development. Major issues examined from diverse perspectives.

*Lecture 04 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2030 Educational Psychology**

03 Semester Credits

Survey of psychological factors involving learning. Educative process examined, including educational objectives, instructional variables, learning processes, measurement and evaluation. Student, teacher and social variables affecting educational outcomes considered.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2040 Social Psychology**

03 Semester Credits

Social influence on individual's ideas and behaviors; emphasis on issues such as attraction, prejudice, conformity and interpersonal communication.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2050 Psychology of Personality**

03 Semester Credits

Scientific study of personality, including motivation and development. Normal and abnormal personality considered along with its clinical applications and relevance to business and industry.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2060 Adolescent Psychology**

03 Semester Credits

Examines human development from puberty to young adulthood from variety of perspectives. Variations in development related to gender, social and cultural factors considered. Topics include physical and sexual maturation; identity and self- image; family and peer relations; social, emotional and moral behavior; cognition and academic performance; work and leisure behavior; and transition to independence.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2070 Behavior Modification**

03 Semester Credits

Basic conditioning and learning principles emphasizing primary, social and token reinforcement. Applications to normal and abnormal behavior and uses in home, school, work, hospital and correctional settings. Implications and ethics of behavioral control examined.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2080 Abnormal Psychology**

03 Semester Credits

Descriptive survey of behavioral and psychological disorders. Topics include past and present views of abnormal behavior; diagnostic and assessment procedures; classification; and causes, prevention and remediation of disorders.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2100 Introduction to Aging**

03 Semester Credits

Overview of psychological aspects of maturation. Consideration of biological, emotional, perceptual, cognitive and psychosocial conditions encountered in young, middle-aged and senior adults.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): PSY-1010 General Psychology.*

#### **PSY-2800 Special Advanced Topics in Psychology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Psychology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **PSY-2820 Independent Advanced Research in Psychology**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Psychology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Psychology*

### **RADIOGRAPHY - RADT**

#### **RADT-1300 Fundamentals of Radiography**

04 Semester Credits

Basic study of ionizing radiation relative to its nature, production, interaction with matter and effect on Radiographic Quality; includes fundamentals of radiation protection and film processing.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### **RADT-1350 Radiographic Technique**

03 Semester Credits

Analysis and application of radiographic factors influencing recording and visibility of radiographic image. Students required to conduct x-ray exposure experiments, under supervision, using energized equipment.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): RADT-1300 Fundamentals of Radiography, or departmental approval.*

#### **RADT-1400 Radiographic Positioning**

03 Semester Credits

Introduction to and application of basic nursing skills required for direct patient care, fundamentals of Radiographic positioning for upper and lower extremities, chest, pelvis, abdomen, gastrointestinal examinations and intravenous urograms, and use of contrast media.

Additional hours required in practicing radiographic positioning under direct supervision of registered licensed radiographer.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### **RADT-1410 Intermediate Radiographic Positioning**

03 Semester Credits

Essentials of radiographic procedures involving cerebral and facial cranium, vertebral column, thoracic cage, and specific projections of upper extremity articulations. Techniques and positioning variations for trauma, pediatric, geriatric and age specific patients. Communication skills for patient-focused care. Additional hours required for practicing radiographic positioning assignments under direct supervision of registered radiographer.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): RADT-1400 Radiographic Positioning, and departmental approval: admission to program.*

### **RADT-1450 Abdominal Sonography I**

03 Semester Credits

Study of terminology, anatomical scanning planes, standard presentation, labeling scanning techniques, patient and procedural preparation as pertains to abdominal sonography. Study of anatomy, physiology and pathology of abdominal vessels and organs including liver, gallbladder, pancreas, and spleen as visualized by sonography. Doppler applications for liver, spleen, portal vein and great vessels.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

### **RADT-1910 Radiographic Procedures -- Applications I**

07 Semester Credits

Supervised sessions emphasizing practical application of radiographic positioning for routine diagnostic examinations; selection of appropriate radiographic exposures; methods of radiation protection; demonstration of skills related to departmental procedures fundamental to operation of Radiology department. Clinical experience in hospital environment for 16 weeks.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 36 hours per week.*

*Prerequisite(s): Departmental approval: admission to program.*

### **RADT-2350 Radiographic Pathology**

03 Semester Credits

Study of selected pathologic conditions of human body and radiographic appearance of those various diseases; adjustment of techniques due to pathologic changes.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): BIO-1220 Anatomy and Physiology for Radiographers, or departmental approval: admission to program.*

### **RADT-2360 Special Imaging Procedures**

02 Semester Credits

Introduction to specialized imaging procedures in diagnostic radiography to provide individuals with knowledge and skills to effectively contribute as member of specialized imaging teams.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1220 Anatomy & Physiology for Radiographers; and concurrent enrollment in RADT-2350 Radiographic Pathology; and departmental approval: admission to program.*

### **RADT-2400 Imaging Systems**

03 Semester Credits

Presentation of imaging systems and imaging modalities. Topics include fluoroscopy, image intensification, video-tape recorders, conventional tomography, computerized tomography and magnetic resonance.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): RADT-1350 Radiographic Technique, or departmental approval: admission to program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **RADT-2450 Abdominal Sonography II -- Small Parts Sonography**

03 Semester Credits

Continuation of abdominal anatomy, physiology and pathology as it pertains to diagnostic ultrasound. Emphasis on renal, adrenal, lymphatic and gastrointestinal systems. Anatomy, physiology and pathology of breast, thyroid, and male reproductive system including testicular ultrasound, prostate ultrasound (transabdominal and transrectal) and penile studies. Study of Doppler and Color Flow vascular applications of above mentioned organs. Slides, films and case studies will be presented.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): RADT-1450 Abdominal Sonography I, and departmental approval: admission to program.

### **RADT-2550 Gynecologic and Obstetrical Sonography**

03 Semester Credits

Study of anatomy, physiology and pathology of female pelvis (pregnant and non-pregnant) and reproductive system as related to sonography. Anatomy, physiology, anomalies and pathology of first trimester. Includes conception, implantation, embryonic development, ectopic pregnancy, molar pregnancy and monitoring infertile patient. Doppler applications of uterus and ovaries discussed. Anatomy and pathology of second and third trimester obstetrical ultrasound.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): Departmental approval: admission to program, or current equivalent educational/ clinical experience.

### **RADT-2560 Obstetrical Sonography**

03 Semester Credits

Sonographic anatomy and pathology of obstetrics. Fetal anatomy, pathology, congenital and anomalies reviewed. Continuation of obstetrical ultrasound anatomy and pathology of second and third trimester. Conditions involving sonographic procedures for mother and fetus examined, such as amniocentesis and chorionic villus sampling. Doppler procedures for uterine, placental, umbilical cord and fetal applications discussed.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): RADT-2550 Gynecologic and Obstetrical Sonography, and departmental approval: admission to program.

### **RADT-268Z Advanced Radiographic Clinical Practicum: Transition Course**

04 Semester Credits

Transition Course. Must have completed RADT-267 Intermediate Radiologic Clinical Experience or have departmental approval. Replaces RADT-268 Advanced Radiological Clinical Experience. Fulfills prerequisite for RADT-269Z Final Radiographic Clinical Practicum: Transition Course. Clinical experience emphasizing selected radiographic procedures. Includes use of specialized equipment.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Practicum: 405 hrs./semester. Seminar: 15 hrs./semester.

Prerequisite(s): RADT-267 Intermediate Radiologic Clinical Experience, or departmental approval.

### **RADT-269Z Final Radiographic Clinical Practicum: Transition Course**

04 Semester Credits

Transition Course. Must have completed RADT-268 Advanced Radiological Clinical Experience, or RADT-268Z Advanced Radiographic Clinical Practicum: Transition Course, or departmental approval. Replaces RADT-269 Final Radiological Clinical Experience. Completes the course sequence. Supervised clinical practice emphasizing surgical procedures and adjunct departmental rotations.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Practicum: 405 hrs./semester. Seminar: 15 hrs./semester.

Prerequisite(s): RADT-268 Advanced Radiological Clinical Experience, or RADT-268Z Advanced Radiological Clinical Practicum: Transition Course, or departmental approval.

### **RADT-2910 Radiographic Procedures -- Applications II**

07 Semester Credits

Supervised sessions emphasizing practical application of radiographic positioning with emphasis on vertebra, cranium and articulatory system for pediatric, ambulatory and geriatric patients. Clinical experience in hospital environment for 16 weeks.

Lecture 01 hour. Laboratory 00 hours.

Other Required Hours: Directed practice: 36 hours per week.

Prerequisite(s): Departmental approval: admission to program.

### **RADT-2920 Radiographic Applications**

05 Semester Credits

Supervised sessions emphasizing practical application of radiographic positioning with clinical experience emphasis on selected radiographic procedures including fluoroscopy, special procedures, ER/trauma, surgery, and mobiles and general radiography. Includes use of specialized equipment. Clinical experience in hospital environment.

Lecture 01 hour. Laboratory 00 hours.

Other Required Hours: Directed practice: 360 hours per semester.

Prerequisite(s): Departmental approval: admission to program.

### **RADT-2931 Directed Practice I**

03 Semester Credits

Supervised practical applications of sonography scanning techniques in hospital setting under direct supervision of Registered Diagnostic Medical Sonographer or qualified physician. Student develops skills related to Sonography Department procedures. Patient care and department procedures emphasized. Clinical experience.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Directed practice: 18 hours per week.

Prerequisite(s): Departmental approval: admission to program.

### **RADT-2934 Directed Practice II**

03 Semester Credits

Supervised practical applications of sonography scanning techniques in hospital setting under direct supervision of Registered Diagnostic Medical Sonographer or qualified physician. Student develops skills related to Sonography Department procedures. Patient care and department procedures emphasized. Clinical experience.

Lecture 00 hours. Laboratory 00 hours.

Other Required Hours: Directed practice: 18 hours per week.

Prerequisite(s): RADT-2931 Directed Practice I, or departmental approval.

## **RADT-2937 Directed Practice III**

05 Semester Credits

Supervised practical applications of sonography scanning techniques in hospital setting under direct supervision of Registered Diagnostic Medical Sonographer or qualified physician. Student develops skills related to Sonography Department procedures. Patient care and department procedures emphasized. Clinical experience.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 360 hours per semester.*

*Prerequisite(s): RADT-2934 Directed Practice II, or departmental approval: admission to program.*

## **REAL ESTATE - REAL**

### **REAL-1300 Principles and Practices of Real Estate**

02 Semester Credits

Acquaints students with real estate profession, covering wide range of subjects necessary to practice real estate. Topics include license law, ethics, purchase agreements, escrow and title work, appraisals, finance, investment techniques and civil rights.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-1400 Real Estate Law**

02 Semester Credits

Legal phase of real estate transactions. Documentation from listing to closing paper thoroughly reviewed. Application extends from brokers to owner desiring to buy or sell own property.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-1500 Valuation of Residential Properties**

02 Semester Credits

Explores elements of appraisal that affect value. Highest and best use site analysis and construction stressed. Appraisal techniques explored, leading to evaluation of real property. Students write appraisal report.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-1600 Real Estate Finance**

02 Semester Credits

Procedures and techniques requisite to analysis of risk in financing of real estate. Conventional lending explored along with creative lending. Sources of funds and qualification requirements become known with application process.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-2300 Real Estate Brokerage**

02 Semester Credits

Studies factors necessary for establishment and efficient operation of a sales and brokerage office. Salesperson-broker relationship, listing procedure, purchase offer writing and loans stressed. In-depth study of legal constraints in starting brokerage business.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-2400 Real Estate Sales**

02 Semester Credits

Current sales techniques studied. Stress of all sales contacts and disclosures blending with legal ramifications makes course most relevant. Particular emphasis on motivation and site location.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-2500 Commercial and Industrial Real Estate**

02 Semester Credits

Covers all aspects of ownership and operation of commercial and industrial properties including site location, purchase, sale, management, leasing, taxes, financing, and construction methods.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-2600 Real Estate Management**

02 Semester Credits

Basic management of properties embracing areas of leasing, maintenance, budgeting, creative market analysis, public relations, collections, office procedures, zoning and development. Special emphasis placed on legal aspects of real estate management company.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-2700 Valuation of Income Properties**

02 Semester Credits

Demonstrates value of income properties through three approaches to appraisal, and other factors which influence value. Highlights preparation of appraisal report utilizing cost and income approach with specific emphasis on construction, taxes, statement analysis, and site location.

*Lecture 02 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **REAL-2800 Special Advanced Topics in Real Estate**

1-3 Semester Credits

Study of selected advanced topics or current issues in Real Estate. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## RELIGIOUS STUDIES - REL

### REL-1010 Introduction to Religious Studies

03 Semester Credits

Comprehensive introduction to concepts of religion, attributes of God, myth and symbol, faith and reason, rituals, and overview of major historical religions.  
*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### REL-2010 Religious Traditions of Western Christianity

03 Semester Credits

Comprehensive introduction to history, writings, teachings, and liturgical practices of Western Christianity. Topics include historical Jesus, new testament church, patristic church, medieval church, Protestant Reformation, and Church today (including ecumenical concerns following Second Vatican Council).

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### REL-2020 Religious Traditions of Judaism

03 Semester Credits

Comprehensive introduction to history, writings, teachings, and liturgical practices of Judaism. Topics include historical background, Old Testament, special Jewish festivals, and Judaism's adaptation to modern society.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### REL-2030 Religious Traditions of Islam

03 Semester Credits

Comprehensive introduction to history, writings, teachings, and liturgical practices of Islam. Topics include historical background, Koran, special Islamic festivals, and Islam's adaptation to modern society.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### REL-2040 Religious Traditions of India

03 Semester Credits

Comprehensive introduction to history, writings, teachings, and liturgical practices of religious traditions of India. Focus on Hinduism, Jainism and Sikhism.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### REL-2050 Religious Traditions of China and Japan

03 Semester Credits

Comprehensive introduction to history, writings, teachings, and liturgical practices of Buddhism, Confucianism, Taoism, and Shinto. Topics include lives and teachings of Buddha, Confucius, and Lao Tzu.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Eligibility for ENG-1010 College Composition I.*

### REL-2800 Special Advanced Topics in Religious Studies

1-3 Semester Credits

Study of selected advanced topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## RESPIRATORY CARE - RESP

### RESP-1300 Respiratory Care Equipment

04 Semester Credits

Overview of application of physical principles pertaining to physiologic function and diagnostic and therapeutic modalities employed in field of Respiratory Care. Function and operation of respiratory care equipment: primary gas systems, gas regulating devices, oxygen controllers, humidifiers, nebulizers, oxygen administering devices, oxygen analyzers, airways, manual resuscitators, monitoring and measuring equipment, and sterilization methods.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): Concurrent enrollment in RESP- 1310 Cardiopulmonary Physiology and departmental approval: admission to program.*

### RESP-1310 Cardiopulmonary Physiology

03 Semester Credits

Physiology of cardiovascular and pulmonary systems with emphasis on electrophysiology of the heart, electrocardiography interpretation, blood flow characteristics and hemodynamics. Pulmonary system emphasis on lung volumes, dynamics of ventilation, pulmonary function tests, diffusion, ventilation to perfusion characteristics, gas transport, oxygenation studies and control of ventilation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Concurrent enrollment in RESP-1300 Respiratory Care Equipment and departmental approval: admission to program.*

### RESP-1320 Acid-Base and Hemodynamics

02 Semester Credits

Overview of acid-base regulation, integrating physiologic functions of renal and respiratory systems. Emphasis is on body buffer systems, oxygen and carbon dioxide transport systems, basic chemistry and circulating blood forces through the body. Patient analysis and principles of equipment used in analysis of acid base, oxygenation status, cardiac output and cardiac blood pressures addressed.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): RESP-1310 Cardiopulmonary Physiology, and concurrent enrollment in RESP-1330 Cardiopulmonary Assessment and Pulmonary Diseases; and concurrent enrollment in RESP-1340 Pharmacology for Respiratory Care; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **RESP-1330 Cardiopulmonary Assessment and Pulmonary Diseases**

05 Semester Credits

Theory and application of cardiopulmonary assessment, medical records, and charting. Includes physical assessment, assessment of lab values, radiologic evaluation, vital signs, EKG and pulmonary function testing and interpretation. Discussion of diseases including emphysema, chronic bronchitis, asthma, bronchiectasis, cystic fibrosis, pneumoconiosis, adult respiratory distress syndrome, pneumonia, pulmonary edema, cancer, acquired immune deficiency syndrome, tuberculosis, myasthenia gravis, Guillain-Barre and amyotrophic lateral sclerosis. Emphasis is on identifying signs and symptoms of pulmonary diseases, and basic respiratory management of patient.

*Lecture 04 hours. Laboratory 03 hours.*

*Prerequisite(s): RESP-1310 Cardiopulmonary Physiology; concurrent enrollment in RESP-1320 Acid-Base and Hemodynamics; concurrent enrollment in RESP-1340 Pharmacology for Respiratory Care; and BIO-1440 Anatomy and Physiology II, or concurrent enrollment.*

### **RESP-1340 Pharmacology for Respiratory Care**

02 Semester Credits

General principles of pharmacology and calculations of drug dosages. Discussion of pharmacologic principles and agents used in treatment of cardiopulmonary disorders.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): RESP-1310 Cardiopulmonary Physiology; and concurrent enrollment in RESP-1320 Acid-Base and Hemodynamics, and concurrent enrollment in RESP-1330 Cardiopulmonary Assessment and Pulmonary Diseases.*

### **RESP-1410 Beginning Polysomnography**

02 Semester credits

An overview of the field of Polysomnography including job responsibilities, credentialing, medical ethics and patient confidentiality. Normal and abnormal sleep disorders, integrating the physiologic functions of the nervous, respiratory and cardiovascular systems. Emphasis on basic sleep sciences, physiology, monitoring, electrical safety, diagnosis and treatment of sleep disorders.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval: admission to the Polysomnography program; and BIO-1430 Anatomy and Physiology II or concurrent enrollment.*

### **RESP-1420 Intermediate Polysomnography I**

03 Semester credits

Basic discussion of recording sleep apnea montage. Emphasis on equipment, principle of operation, associated activity related to normal and abnormal stages of sleep, placement and calibration of the following: electroencephalography (EEG), electro-oculography (EOG), electrocardiography (ECG), electromyography (EMG), pulse oximetry (SpO<sub>2</sub>), inductive plethysmography and airflow thermocouple.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): RESP-1410 Beginning Polysomnography, current enrollment in RESP-1934 Directed Practice I, and departmental approval: admission to program.*

### **RESP-1430 Intermediate Polysomnography II**

03 Semester credits

Presentation and discussion of psychomotor practices related to interpretation of the polysomnogram for adult and pediatric patients. Emphasis on continuous positive airway pressure (CPAP) and bi-level positive airway pressures (BiPAP) equipment, artifact and troubleshooting of sleep montage results. Includes digital data acquisition, parasomnias and nocturnal penile tumescence.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): RESP-1934 Directed Practice I, concurrent enrollment in RESP-2934 Directed Practice II, and departmental approval: admission to program.*

### **RESP-1440 Neurophysiology of Sleep**

02 Semester credits

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1440 Anatomy and Physiology II, concurrent enrollment in RESP-1430 Intermediate Polysomnography II, and departmental approval: admission to the program.*

### **RESP-1934 Directed Practice I**

03 Semester credits

Directed practice in the clinical setting in sleep laboratory or a sleep center. Departmental orientation, policies and procedures, individual body mechanics and patient transfer techniques. Emphasis in overseeing periodic cessation of respiratory activity based on placement and monitoring of the following: electroencephalography (EEG), electro-oculography (EOG), electrocardiography (ECG), electromyography (EMG), pulse oximetry (SpO<sub>2</sub>), inductive plethysmography and airflow thermocouple.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Directed Practice: 18 hours per week.*

*Prerequisite(s): RESP-1410 Beginning Polysomnography, concurrent enrollment in RESP-1420 Intermediate Polysomnography I, and departmental approval: admission to program.*

### **RESP-226Z Respiratory Care Directed Practice I: Transition Course**

03 Semester Credits

Transition Course. Must have completed RESP-155 Assessment of the Cardiopulmonary System. Replaces RESP-226 Respiratory Care Clinicals I. Fulfills prerequisite for RESP-2920 Respiratory Care Directed Practice II.

Directed practice in clinical setting on respiratory care equipment, policies, and procedures. Emphasis on patient assessment, bedside pulmonary function testing, aerosol therapy, incentive spirometry and oxygen therapy.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 180 hours per semester.*

*Prerequisite(s): RESP-155 Assessment of the Cardiopulmonary System.*

## **RESP-2300 Basic Therapeutic Procedures**

03 Semester Credits

Theory, clinical application and analysis of basic respiratory care procedures. Emphasis on oxygen therapy, medical gas therapy, tracheal suctioning, humidity and aerosol therapy, chest physical therapy, incentive spirometry, intermittent positive pressure breathing, airway management, bronchoscopy, and thoracotomy tubes.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): RESP-1330 Cardiopulmonary Assessment and Pulmonary Diseases; and concurrent enrollment in RESP-2910 Respiratory Care Directed Practice I.*

## **RESP-2310 Mechanical Ventilation**

04 Semester Credits

Theory and application of mechanical ventilation techniques with emphasis on mechanical ventilator characteristics, physiologic effects, patient set-up and evaluation, maintenance of oxygenation, weaning techniques, and nutritional concerns. Discussion on ventilator management and use of high frequency ventilation. Discussion on medicolegal issues involving life support systems.

*Lecture 03 hours. Laboratory 03 hours.*

*Prerequisite(s): RESP-2910 Respiratory Care Directed Practice I; and concurrent enrollment in RESP-2320 Pediatric/Neonatal Respiratory Care; and concurrent enrollment in RESP-2920 Respiratory Care Directed Practice II.*

## **RESP-2320 Pediatric/Neonatal Respiratory Care**

02 Semester Credits

Presentation of theory and its practical application to pediatric and neonatal respiratory disease states. Includes pathophysiology, etiology, patient assessment and treatment using equipment unique to this specialty area.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): RESP-2300 Basic Therapeutic Procedures; and concurrent enrollment in RESP-2310 Mechanical Ventilation; and concurrent enrollment in RESP-2920 Respiratory Care Directed Practice II.*

## **RESP-2330 Respiratory Home Care/Rehabilitation**

01 Semester Credit

Identification of therapist's role in home care and pulmonary rehabilitation. Presentation of oxygen therapy and delivery systems in private home. Procedure for institution and maintenance of home mechanical ventilation. Outline of new trends in homecare and pulmonary rehabilitation.

Guidelines on setting up hospital-based pulmonary rehabilitation programs along with patient management and follow-up strategies.

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): RESP-2920 Respiratory Care Directed Practice II; and concurrent enrollment in RESP-2340 Patient Management Problems and Research.*

## **RESP-2340 Patient Management Problems and Research**

02 Semester Credits

Reinforces clinical education components of information gathering and decision-making specific to assessment and treatment of cardiopulmonary impairment. Specific emphasis placed on methodologies involved in obtaining and prioritizing diagnostic information. Comprehensive self-assessment at advanced practitioner level of respiratory care administered. Introduction to clinical research and steps involved in research process. Emphasis on development of research question, literature review and data collection.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): RESP-2920 Respiratory Care Directed Practice II; concurrent enrollment in RESP-2930 Respiratory Care Directed Practice III; and departmental approval.*

## **RESP-2910 Respiratory Care Directed Practice I**

03 Semester Credits

Directed practice in clinical setting to respiratory care equipment, policies, and procedures. Emphasis on patient assessment, bedside pulmonary function testing, aerosol therapy, incentive spirometry and oxygen therapy.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 180 hours per semester. Prerequisite(s): RESP-1330 Cardiopulmonary Assessment and Pulmonary Diseases; RESP-1340 Pharmacology for Respiratory Care; and concurrent enrollment in RESP-2300 Basic Therapeutic Procedures.*

## **RESP-2920 Respiratory Care Directed Practice II**

05 Semester Credits

Directed practice in clinical setting on respiratory therapy equipment, policies, and procedures. Emphasis on intubation, arterial blood gas punctures and analysis, bronchopulmonary hygiene, intermittent positive pressure breathing, manual ventilation and suctioning, and mechanical ventilation. Clinical activities also include proficiencies completed in patient assessment, aerosol therapy, incentive spirometry, bedside pulmonary function testing, and oxygen therapy.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 24 hours per week. Prerequisite(s): RESP-2910 Respiratory Care Directed Practice I; and concurrent enrollment in RESP-2310 Mechanical Ventilation.*

## **RESP-2930 Respiratory Care Directed Practice III**

05 Semester Credits

Directed practice in clinical setting on respiratory therapy equipment, policies, and procedures. Emphasis on adult volume/pressure ventilation, and continuous positive airway pressure, pulmonary function testing in the laboratory, pediatric patient care, home care, rehabilitation, weaning from mechanical ventilation, respiratory care in extended care facility environment, and patient transport.

*Lecture 01 hour. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 24 hours per week. Prerequisite(s): RESP-2920 Respiratory Care Directed Practice II.*

## **RESP-2934 Directed Practice II**

03 Semester credits

Directed practice in the clinical setting in sleep laboratory or a sleep center. Departmental orientation, policies and procedures. Assist adult and pediatric patient setup and discontinuance in monitoring electroencephalography (EEG), electro-oculography (EOG), electrocardiography (ECG), electromyography (EMG), pulse oximetry (SpO<sub>2</sub>), inductive plethysmography and airflow thermocouple. Emphasis on scoring a sleep montage related to respiratory cessation.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Directed practice: 18 hours per week.*

*Prerequisite(s): RESP-1934 Directed Practice I, concurrent enrollment in RESP-1430 Polysomnography II and departmental approval: admission to the program.*

## **RUSSIAN - RUSS**

### **RUSS-1010 Beginning Russian I**

04 Semester Credits

Introduction to modern Russian language. Emphasis on speaking, understanding spoken Russian, reading and writing through multiple approaches including audio, video and computer components. Supporting study of basic principles of grammar.

*Lecture 03 hours. Laboratory 02 hours. Prerequisite(s): None.*

### **RUSS-1020 Beginning Russian II**

04 Semester Credits

Continued study of grammar and vocabulary. Oral and written exercises. Reading of texts of medium difficulty. Developing aural comprehension skills and ability for oral expression through patterns learned from audio-visual materials used in classroom.

*Lecture 3 hours Laboratory 02 hours.*

*Prerequisite(s): RUSS-1010 Beginning Russian I, or departmental approval.*

### **RUSS-1820 Independent Study in Russian**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Russian. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Russian.*

### **RUSS-2010 Intermediate Russian I**

03 Semester Credits

Introduction to more advanced vocabulary and speech patterns and continuation of in-depth study of grammar. Practical application of skills of understanding, speaking, reading and writing Russian. Cultural exposure through reading texts and using multi-media approaches. Attendance at various cultural events may be required.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): RUSS-1020 Beginning Russian II, or departmental approval.*

### **RUSS-2020 Intermediate Russian II**

03 Semester Credits

In-depth study of advanced vocabulary and speech patterns, complex sentence structures and grammar. Advanced skills in understanding, speaking, reading and writing. Continued cultural exposure through text reading, film viewing, audio, video and computer materials and discussions.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): RUSS-2010 Intermediate Russian I, or departmental approval.*

### **RUSS-2410 Russian Conversation and Composition**

03 Semester Credits

Conversation and composition revolve around topics of general interest taken from everyday life. In conversing, students develop pronunciation, intonation, fluency and comprehension skills. Writing fosters practice of familiar terminology mixed with new vocabulary and idioms.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): RUSS-2020 Intermediate Russian II, or departmental approval.*

### **RUSS-2420 Russian Literature and Culture**

03 Semester Credits

Survey of Russian literature, emphasizing 19th and 20th centuries, highlighting prose and verse of representative writers and their works in perspective of traditional and contemporary Russian culture.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): RUSS-2020 Intermediate Russian II, or departmental approval.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### SOCIAL SCIENCE - SSCI

#### SSCI-1030 Introduction to Social Science I

03 Semester Credits

Interdisciplinary approach to social sciences, outlining roles of separate disciplines as related to anthropological, sociological, and social psychological behavior. Current issues discussed.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### SSCI-1040 Introduction to Social Science II

03 Semester Credits

Interdisciplinary approach to study of social sciences outlining roles of separate disciplines as related to organizational, demographic, and historical analyses of behavior. Current issues discussed.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SSCI-1030 Introduction to Social Science I, or SOC-1010 Introductory Sociology, or ANTH-1010 Cultural Anthropology.*

#### SSCI-1800 Special Topics in Social Science

1-3 Semester Credits

Study of selected topics or current issues in Social Science. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### SOCIOLOGY - SOC

#### SOC-1010 Introductory Sociology

03 Semester Credits

Survey of principles, sociological perspectives, theories, concepts, and research methods used in the field. Intensive study of concepts such as culture, social interaction, organization, norms, statuses, roles, social stratification, and application of sociology to current events.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### SOC-1020 Social Institutions

03 Semester Credits

Examination of major social institutions; the family, religion, education, polity, economy, and mass communications; employing principles, concepts, theories and research methods.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or SSCI-1030 Introduction to Social Science I, or ANTH-1010 Cultural Anthropology.*

#### SOC-1210 Sociology of the Family

03 Semester Credits

Historical, comparative, and contemporary analysis of marriages and families and their relationship to other social institutions. Sociological perspectives used to understand social, psychological and economical aspects of intimate interpersonal relations across lifecourse and among variety of lifestyles and cultures.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or SSCI-1030 Introduction to Social Science I, or PSY-1010 General Psychology, or ANTH-1010 Cultural Anthropology.*

#### SOC-1820 Independent Research in Sociology

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in Sociology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Must be taken concurrently with a 1000-level course in Sociology.*

#### SOC-2010 Social Problems

03 Semester Credits

Analysis of contemporary American social problems such as race, poverty, drugs, sex, violence, crime and delinquency. Sociological approach used to understand underlying factors and history of problems and evaluate individual and societal solutions.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or PSY-1010 General Psychology, or SSCI-1030 Introduction to Social Science I, or ANTH-1010 Cultural Anthropology.*

#### SOC-2050 Introduction to Social Services and Social Work

03 Semester Credits

Surveys history, functioning, and social issues of social welfare system relating them to broader American socio-economic and political systems. Special focus on problems of economically and socially disadvantaged groups.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or PSY-1010 General Psychology.*

#### SOC-2060 Human Behavior and the Social Environment

03 Semester credits

Social work perspective on human development across the life cycle. Human diversity approach consistent with the needs of social work students preparing for practice.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology and PSY-1010 General Psychology.*

#### SOC-2070 Poverty in the United States

03 Semester credits

Survey of social and personal dimensions of life in the inner city and other areas of poverty in United States. For person wishing to develop an in-depth understanding and/or intending to work in such areas.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-2050 Introduction to Social Services and Social Work.*

## **SOC-2100 Aging and Society**

03 Semester Credits

Cross-cultural examination of social, biological and psychological processing of aging. Societies studied with regards to social characteristics of older citizens, their social roles and relations with various social institutions, friends and voluntary associations. Impact of social class, race, ethnicity, and religion on aging and ageism considered.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or PSY-1010 General Psychology, or SSCI-1030 Introduction to Social Science I, or ANTH-1010 Cultural Anthropology.*

## **SOC-2150 Deviance**

03 Semester credits

Examination of the nature of deviance, theories, social and societal reactions. Different types of deviant behavior are examined, including topics such as sexual deviance, criminal homicide, drugs, medical deviance and other forms of deviant behavior.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or SSCI-1030 Introduction to Social Science I, or PSY-1010 General Psychology.*

## **SOC-2310 Contemporary American Black-White Relations**

03 Semester Credits

Sociological and psychological analysis of contemporary American black-white relations. Study of minority-majority behavior patterns as related to social-historical structure, stratification, and power. Consideration of programs, movements and alternative solutions to present conditions.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or PSY-1010 General Psychology, or SSCI-1030 Introduction to Social Science I, or ANTH-1010 Cultural Anthropology.*

## **SOC-2510 Urban Sociology**

03 Semester Credits

Analysis of historical development of contemporary metropolis with its challenges to diversity, equality, inclusion, and change. Sociological concepts, theories and research methods used to characterize urban life and examine interrelatedness of social institutions typical of postmodern society. Cross-national comparisons drawn.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or SSCI-1010 Introduction to Social Science I, or PSY-1010 General Psychology, or ANTH-1010 Cultural Anthropology.*

## **SOC-2550 Race and Ethnic Relations**

03 Semester Credits

Analysis of sources, processes, and consequences of current intergroup relations in United States; identification of various segments of population, their history and patterns of adaptation to prejudice and discrimination; exploration of attempts to equalize power differences and structured social inequality. Includes cross-cultural comparisons.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SOC-1010 Introductory Sociology, or PSY-1010 General Psychology, or SSCI-1030 Introduction to Social Science I, or HIST-1720 African-American History 1877 to Present, or ANTH-1010 Cultural Anthropology.*

## **SOC-2800 Special Advanced Topics in Sociology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Sociology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **SOC-2820 Independent Advanced Research in Sociology**

1-3 Semester Credits

May be taken concurrently with any 2000-level course in Sociology. Specific content arranged between instructor and student. May be repeated for a maximum of three credits.

*Lecture 01 hour. Laboratory 00 hours. Other Required Hours: 00.*

*Prerequisite(s): Must be taken concurrently with a 2000-level course in Sociology.*

## **SOC-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for n accrued a maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### SPANISH - SPAN

#### **SPAN-1010 Beginning Spanish I**

04 Semester Credits

Introduction to Spanish through multiple approach with emphasis on speaking and understanding. Practice in conversational Spanish and aural comprehension on topics of daily interest. Some practice in writing basic sentences and small simple paragraphs on relevant topics, and reading short paragraphs.

*Lecture 03 hours. Laboratory 02 hours. Prerequisite(s): None.*

#### **SPAN-1020 Beginning Spanish II**

04 Semester Credits

Development of proficiency in speaking, understanding, reading, and writing in Spanish. Emphasis on strengthening conversational skills through discussions of selected readings, cultural topics and more conversational opportunities.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): SPAN-1010 Beginning Spanish I, or one year of high school Spanish, or departmental approval.*

#### **SPAN-112Z Beginning Spanish II: Transition Course**

03 Semester Credits

Transition Course. Must have completed SPAN-111 Beginning Spanish I. Replaces SPAN-112 Beginning Spanish II. Fulfills prerequisite for SPAN-1020 Beginning Spanish II. Study of Spanish language with emphasis on speaking. Continued practice in speaking, understanding, reading, and writing. Further development of conversational skills.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPAN-111 Beginning Spanish I.*

#### **SPAN-2010 Intermediate Spanish I**

03 Semester Credits

Intensive exercises in written and oral expression. Grammar review and vocabulary building. Study of Spanish and Mexican civilizations. Introduction to literature.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPAN-1020 Beginning Spanish II; or two years of high school Spanish; or departmental approval.*

#### **SPAN-2020 Intermediate Spanish II**

03 Semester Credits

Intensive exercises in written and oral expression. Additional grammar review and vocabulary building. Further exploration of Spanish.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPAN-2010, Intermediate Spanish I, or three years of high school Spanish, or departmental approval*

#### **SPAN-2410 Spanish Conversation and Composition**

03 Semester Credits

Discussion on topics of everyday life, colloquialisms, vocabulary augmentation, and improvement of speech patterns. Practice in writing compositions.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPAN-2020 Intermediate Spanish II, or concurrent enrollment with departmental approval: three years of high school Spanish.*

#### **SPAN-2420 Introduction to Spanish Culture, Civilization, and Literature**

03 Semester Credits

Introduction to Spanish civilization and literature from early beginning to present day. Special emphasis on interrelationship between history and geography, and literature of Spain and its culture.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPAN-2020 Intermediate Spanish II, or concurrent enrollment with departmental approval: three years of high school Spanish.*

#### **SPAN-2430 Civilization, Culture, Literature of Latin America**

03 Semester Credits

Instruction in Spanish. Civilization and literature of Latin America from pre-Columbian period to present.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPAN-2020 Intermediate Spanish II, or concurrent enrollment with departmental approval: three years of high school Spanish.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### SPEECH COMMUNICATION - SPCH

#### **SPCH-0910 Basic Communication Skills**

03 Semester Credits

Demonstrate ways communication can be processed, distorted, or shared. Special emphasis on personal communication growth, processing information, message; analysis and verbal expression as basic communication skills necessary for college achievement.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **SPCH-1000 Fundamentals of Interpersonal Communication**

03 Semester Credits

Involvement and experience in purpose and process of verbal and non-verbal communication to strengthen daily communication skills. Special emphasis given to perception, self concept, expressing feelings, empathy and listening as learned interpersonal skills. Combines theoretical concepts with experiential learning through lecture, discussion, and simulations.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **SPCH-1010 Fundamentals of Speech Communication**

03 Semester Credits

Effective speech communication. Application of principles of speech content and delivery to variety of practical speaking and listening situations.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **SPCH-1050 Voice and Articulation**

03 Semester Credits

Practical course in application of both theory and technique to conscious vocal control and development of articulation and pronunciation standards. Individual and group practice. Performance through exercises and readings.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **SPCH-1210 Group Discussion**

03 Semester Credits

Basic elements of communications and small group theory as employed in typical small group situation. Emphasis placed on individual's responsibility in discussion setting, focusing on development of leadership abilities within each group. Analysis of group interaction in problem-solving process for task-oriented groups.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

#### **SPCH-2010 Advanced Public Speaking**

03 Semester Credits

Organizing and presenting informative speeches, persuasive speeches and speeches for special occasions. Emphasis on using evidence and reasoning to support ideas, adapting to audience, developing effective oral style, and improving physical and vocal attributes of delivery.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPCH-1010, Fundamentals of Speech Communication, or departmental approval: comparable knowledge or skills.*

#### **SPCH-2050 Oral Interpretation**

03 Semester Credits

Development of student's oral ability to communicate various types of written material with understanding and appreciation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPCH-1010, Fundamentals of Speech Communication.*

#### **SPCH-2110 Argumentation and Debate**

03 Semester Credits

Discovering, selecting and evaluating evidence and arrangement into orderly persuasive oral and written argument. Special emphasis on causes and effects of prejudice, remedies and influence of language on human behavior.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPCH-1010, Fundamentals of Speech*

*Communication, or departmental approval: comparable knowledge or skills.*

#### **SPCH-2120 Forensics Activity**

01 Semester Credit

Participation in variety of forensic activities by assignment including intercollegiate debate, choral reading, reader theatre, and individual events. (May be repeated for a maximum of three credit hours.)

*Lecture 01 hour. Laboratory 00 hours.*

*Prerequisite(s): SPCH-2110 Argumentation and Debate; or SPCH-2050 Oral Interpretation; or departmental approval: comparable knowledge or skills.*

#### **SPCH-2130 Business and Professional Communication**

03 Semester Credits

Familiarizes students with theories and practices of oral communication which occur in organizational/ business environment in individual or group situations.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPCH-1000 Fundamentals of Interpersonal Communication; SPCH-1010 Fundamentals of Speech Communication; SPCH-1210 Group Discussion, or departmental approval: comparable knowledge or skills.*

#### **SPCH-2150 Introduction to Speech Pathology**

03 Semester Credits

Survey of profession of speech pathology and introduction to various organic and functional speech disorders including deviant articulation, delayed speech development, and stuttering. Techniques for diagnosis and treatment explored.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPCH-1050 Voice and Articulation, and departmental approval: sophomore standing or consent of instructor.*

#### **SPCH-2160 Intercultural Communication**

03 Semester Credits

Theory and application of communication concepts operating between people of different cultures.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Department approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **SURGICAL PHYSICIAN ASSISTANT - SPA (formerly Surgeon's Assistant - PSA)**

#### **SPA-1300 Electrocardiography**

01 Semester Credit

Designed to give students working knowledge of basic electrocardiography and basic cardiac arrhythmias, including their mechanism, ECG tracing presentation, clinical significance, and treatment modalities. Technique of 12-lead ECG recording and interpretation presented.

*Lecture 00 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval or admission to Physician Assistant or Surgical Physician Assistant program.*

#### **SPA -1310 Adjuncts to Diagnosis**

03 Semester Credits

Introduction to diagnostic and therapeutic procedures utilized to evaluate pulmonary, abdominal, cardiac, skeletal, genitourinary, neurological, and vascular systems. Includes laboratory, radiography, and respiratory methods and techniques, their indications and general principles of interpretation.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval or admission to Physician Assistant or Surgical Physician Assistant program.*

#### **SPA -1320 Basic Surgical and Technical Skills**

02 Semester Credits

Presentation and discussion of fundamental technical clinical and surgical skills required of Physician Assistant or Surgical Physician Assistant in diagnostic and therapeutic management of primary care and surgical patients. Focus on preparation for working in operating room or emergency room.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval or admission to Physician Assistant or Surgical Physician Assistant program.*

#### **SPA -1330 Advanced Surgical Skills**

02 Semester Credits

Presentation, discussion, and demonstration of surgical skills required to perform first assistant tasks during operative procedure in various surgical sub-specialties. Students problem-solve and research topics related to material covered in previous program courses and surgical sub-specialties through small group review and discussion of case studies. Includes participation in live tissue lab.

*Lecture 01 hour. Laboratory 02 hours.*

*Prerequisite(s): SPA-1320 Basic Surgical and Technical Skills, or departmental approval.*

#### **SPA-1340 Clinical Anatomy**

02 Semester Credits

In-depth study of clinical anatomy of human body. Emphasis on important anatomical landmarks required in physical evaluation of patient, anatomical relationships of structures to each other, anatomical components of body systems, and blood and nerve supply to organs and body regions. Includes common pathological processes and topical landmarks related to common surgical procedures.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): BIO-1440 Anatomy & Physiology II, or concurrent enrollment; and departmental approval.*

#### **SPA -2300 Surgical Patient Management**

01 Semester Credit

Instruction in surgical patient management, including selection and interpretation of diagnostic and therapeutic procedures, correlation of medical history and physical examination data. Integration of diagnostic skills through simulated case studies and problem solving activities.

Includes presentation and discussion of specific aspects of care and preparation of surgical patient in perioperative period, including risk factors affecting surgical morbidity and mortality.

*Lecture 00 hours. Laboratory 03 hours.*

*Prerequisite(s): SPA-1330 Advanced Surgical Skills, and PA-1510 Clinical Medicine II.*

#### **SPA-2500 Emergency Medicine**

02 Semester Credits

Presentation and discussion of patient assessment, management, and treatment of life threatening medical problems, psychosocial problems, and other common problems which may be encountered in Emergency Room or in critically ill patient.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): PA-1510, Clinical Medicine II.*

#### **SPA-2510 Fundamentals of Clinical Surgery**

03 Semester Credits

Study of pathophysiology, clinical manifestations, and therapeutic management of surgically related disorders of human body.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): SPA-1330 Advanced Surgical Skills, or departmental approval.*

#### **SPA-2940 Field Experience I**

04 Semester Credits

Supervised field experience rotations in clinical health care setting. Students assigned to medical/ surgical services with responsibility for history and physical examination, assisting in surgery, following clinical course of medical and surgical patients, carrying out pre-operative and post-operative procedures assigned by and under supervision of surgeon or resident surgical staff. Students expected to demonstrate advancing skills. Will assume more individual responsibility as member of medical/surgical team as clinical rotations continue. Rotations in emergency room, internal medicine, and family practice may be included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 720 hours per semester.*

*Prerequisite(s): SPA-2300 Surgical Patient Management; and concurrent enrollment in SPA-2970 Field Experience Seminar I; or departmental approval.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **SPA-2950 Field Experience II**

04 Semester Credits

Supervised field experience rotations in clinical health care setting. Students assigned to medical/surgical services with responsibility for history and physical examination, assisting in surgery, following clinical course of medical and surgical patients, and carrying out pre-operative and post-operative procedures assigned by and under supervision of surgeon or resident surgical staff. Students expected to perform in expanded, competent, and professional role, and assume more responsibility with less direct supervision from medical personnel. Rotations in emergency room, internal medicine, and family practice may be included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field Experience. 720 hours per semester.*

*Prerequisite(s): SPA-2940 Field Experience I; and concurrent enrollment in SPA-2980 Field Experience Seminar II; or departmental approval.*

### **SPA-2970 Field Experience Seminar I**

02 Semester Credits

Integrates concepts and knowledge gained from field experience rotations into total learning process. Focuses on patient and professional communication, lifelong learning, and organization of health care delivery system. Other discussions on current issues included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 30 hours per semester.*

*Prerequisite(s): Concurrent enrollment in SPA-2940 Field Experience I.*

### **SPA-2980 Field Experience Seminar II**

02 Semester Credits

Integrates concepts and knowledge gained from experience rotations into total learning process. Focuses on professional associations, political/legislative issues and job searching skills. Other discussions on current issues included.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 30 hours per semester.*

*Prerequisite(s): Concurrent enrollment in SPA-2950 Field Experience II.*

## **THEATRE ARTS - THEA**

### **THEA-1010 Theatre Appreciation**

03 Semester Credits

Examination of theatre as art form. Study of how playwrights, directors, actors, scenic designers, costumers, make-up artists, and technicians approach their crafts. Students not required to perform.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **THEA-1100 Survey and Appreciation of American Musical Theatre**

03 Semester Credits

Survey and appreciation of dramatic, musical and staging development of American musical theatre from 18th century through 20th century, including mega-musicals of 1990's.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **THEA-1210 Development of Theatre and Drama I**

03 Semester Credits

Origins and development of dramatic presentations, conventions and techniques from primitive ritual to Europe's Renaissance.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **THEA-1220 Development of Theatre and Drama II**

03 Semester Credits

Development of dramatic presentations, conventions and techniques from renaissance to present.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **THEA-1300 Fundamentals of Theatrical Makeup**

03 Semester Credits

Practical application of theory and techniques of makeup for performers.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

### **THEA-1400 Stage Design I--Scenery**

03 Semester Credits

Theory and practice of scenic design. Orientation to creating elements of stage scenery.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **THEA-1410 Stage Design II--Scenery and Lighting**

03 Semester Credits

Examination of scenic design styles. Preparation of floor plan, elevations and colored renderings to use in creating a scale model. Study and practice of stage lighting design.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): THEA-1400 Stage Design I-Scenery, or departmental approval: prior stage design experience.*

### **THEA-1500 Acting I**

03 Semester Credits

Exploration of theory and practice of basic tools of acting: body movement, vocal production, and imagination. Introduction to character analysis, scene study and improvisation.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **THEA-1510 Acting II**

03 Semester Credits

In-depth exploration of theory and application of basic techniques of acting: actor's tools, improvisation, character analysis and scene analysis. Introduction to auditioning. Focused emphasis on refining imaginative, vocal and physical skills required for creating character.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): THEA-1500 Acting I, or departmental approval: prior acting experience.*

### **THEA-1530 Stagecrafts**

02 Semester Credits

Workshop in technical theatre: scenery, lighting, costumes, properties and sound by classroom study and/or by assignment in campus theatrical productions. (Repeatable. No more than six credits may be applied to elective degree requirements.)

*Lecture 01 hour. Laboratory 03 hours. Prerequisite(s): None.*

### **THEA-1540 Rehearsal and Performance**

02 Semester Credits

Practical experience for students accepted as members of College theatre company as actors, stage managers or in positions created by needs of specific productions. (Repeatable. No more than six credits may be applied to elective degree requirements.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Concentrated practice: 14 hours per week.*

*Prerequisite(s): Departmental approval: by audition.*

### **THEA-1600 Acting for the Camera I**

03 Semester Credits

Studio situation to learn basic studio and on-location techniques, video performance training, audio broadcast techniques and to acquire mass media experience for use in professional settings or for personal advancement.

*Lecture 02 hours. Laboratory 02 hours. Prerequisite(s): None.*

### **THEA-1800 Special Topics in Theatre Arts**

1-3 Semester Credits

Study of selected topics or current issues in . Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **THEA-181S Special Laboratory Topics in Theatre Arts**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on selected topics or current issues in (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **THEA-181T Special Laboratory Topics in Theatre Arts**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on selected topics or current issues in Theatre Arts (see Credit Schedule of classes for current offerings). Repeatable for different topics. (no more than six credits of special topics may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours. Other Required Hours: 0.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **THEA-2100 Arts Management**

03 Semester Credits

Introduction to principles and methods of management of arts and cultural institutions. Detailed study of organizational structures, funding and revenue, facilities scheduling and production, marketing, community relations and legal issues.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **THEA-2500 Acting III**

03 Semester Credits

Advanced exploration and refinement of acting techniques as applied to various approaches to creating character. Refinement of audition technique. Focus on scene study and methods of characterization.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): THEA-1510 Acting II, or departmental approval: prior acting experience.*

### **THEA-2510 Acting IV**

03 Semester Credits

Application of scene analysis skills and methods of characterization to advanced scene styles. Consideration of period demands. Identification of individual approach to acting.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): THEA-2500, Acting III, or departmental approval: prior acting experience.*

### **THEA-2600 Acting for the Camera II**

03 Semester Credits

Video performance training leading to preparation of sample tapes; audition procedures and conduct; financial aspects of local and national market; director for camera; interaction and shot composition.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): THEA-1600 Acting for the Camera I or departmental approval: prior experience.*

### **THEA-2800 Special Advanced Topics in Theatre Arts**

1-3 Semester Credits

Study of selected advanced topics or current issues in Theatre Arts. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### **THEA-281S Special Advanced Laboratory Topics in Theatre Arts**

1-3 Semester Credits

Specialized two-hour lab per credit focusing on advanced topics or current issues in Theatre Arts (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 2-6 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **THEA-281T Special Advanced Laboratory Topics in Theatre Arts**

1-3 Semester Credits

Specialized three-hour lab per credit focusing on advanced topics or current issues in Theatre Arts (see Credit Schedule of classes for current offerings). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 00 hours. Laboratory 3-9 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

### **THEA-2830 Cooperative Field Experience**

1-3 Semester Credits

Limited to students in Cooperative Education Program. Employment in an approved training facility under College supervision. Requirement for one credit is 180 hours of approved work. Students may earn up to three credits in one semester. May be repeated for an accrued maximum of nine credits.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: 180 clock hours of approved work per credit hour.*

*Prerequisite(s): Formal application into the Cooperative Education Program.*

## **URBAN STUDIES - UST**

### **UST-1010 Introduction to Urban Studies**

03 Semester Credits

Examination of background of major urban problems, with overview of U.S. urban history; emphasis on description and analysis of roots of contemporary urban America.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **UST-1020 Urban Geography**

03 Semester Credits

Geographical study of cities and their demographics. Emphasizes area aspects of urban centers. Arrangements of cities and their internal patterns, including human behavior and impact of natural resources.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **UST-1120 History of Cleveland**

03 Semester Credits

Development of Cleveland from New England village to metropolitan area. Role of economic and technical change, immigration, reform, world war, demographics, labor unions, transportation and political leadership examined. Rise of suburban areas in post World War II, decline of central city and prospects for revival. Explains how each major era of the city shaped the present.

*Lecture 03 hours. Laboratory 00 hours. Prerequisite(s): None.*

### **UST-2020 Urban Cultures**

03 Semester Credits

Examination of cultural diversity within urban populations. Special emphasis on interaction of groups and value systems.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): ANTH-1010 Cultural Anthropology, or SOC-1010 Introductory Sociology, or UST-1010 Introduction to Urban Studies.*

### **UST-2070 Urban Politics**

03 Semester Credits

Study of variety of problems, politics, and public policies related to American cities. Analysis of central cities, suburbs, and metropolitan areas. Emphasis placed on efforts to make cities function more efficiently, and to improve quality of life of inhabitants.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): POL-1010 American National Government, or UST-1010 Introduction to Urban Studies.*

### **UST-2640 American Urban History**

03 Semester Credits

Growth of American city from early period to megalopolitan era. Emphasis on development of urban economy, historical functioning of political system and physical development. Includes urban/suburban and majority/minority issues.

*Lecture 03 hours. Laboratory 00 hours.*

*Prerequisite(s): UST-1010 Introduction to Urban Studies; or HIST-1520 United States History since 1877; or HIST-1720 African-American History 1877 to Present; or departmental approval.*

### **UST-2820 Independent Advanced Research in Urban Studies**

1-3 Semester Credits

Must be taken concurrently with any 1000-level course in UST. Specific content arranged between instructor and student. May be repeated for a maximum of three credits. *Lecture 01 hours. Laboratory 00 hours. Other Required Hours: 0. Prerequisite(s): Must be taken concurrently with a 1000-level course in UST.*



## Course Descriptions

## Fall 1999-Summer 2000 Catalog

### VETERINARY TECHNOLOGY - VT

#### VT-1300 Veterinary Terminology and Law

02 Semester Credits

Terminology and abbreviations commonly used by veterinary profession and animal owners. Emphasis on common colloquialisms, word construction, and word analysis. Overview of federal, state and local laws and agencies which currently impact veterinary medicine. Discussion of technician's role in malpractice litigation. Review of malpractice cases and ethical dilemmas common in veterinary medicine today.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): Departmental approval.*

#### VT-1320 Veterinary Office Applications

03 Semester Credits

Overview of veterinary practice management including veterinary medical record keeping, marketing, facility design, staff responsibilities, interoffice communications and public relation techniques. Automated veterinary office processing and record-keeping. Computer hardware and software commonly found in small to mid-sized veterinary practices described along with office procedures and work flow.

*Lecture 02 hours. Laboratory 02 hours.*

*Prerequisite(s): Departmental approval.*

#### VT-1400 Veterinary Science I

03 Semester Credits

Recognition of physical and behavioral characteristics of commonly encountered dog and cat breeds. Introduction to basic companion animal and laboratory animal behavior, husbandry and nutrition. Laboratory focuses on non-invasive clinical management techniques including physical examination, grooming and other in-office procedures.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): Departmental approval: admission to program.*

#### VT-1450 Veterinary Radiography

02 Semester Credits

Introduction to X-Radiation production, utilization and maintenance of radiographic equipment, techniques of exposure and development of diagnostic radiographs, radiographic positioning and special contrast procedures. Field trips included for large animal studies.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): VT-1300 Veterinary Terminology and Law; VT-1400 Veterinary Science I; and BIO-1410 Anatomy and Physiology of Domestic Animals I.*

#### VT-1500 Veterinary Science II

04 Semester Credits

Recognition of physical and behavioral characteristics of commonly encountered breeds of horses, cattle, sheep and pigs. Basic food animal and equine behavior, husbandry and nutrition. Laboratory focuses on restraint, handling and performance of common veterinary procedures used as part of large animal management and/or treatment of common clinical conditions. Field trips included in laboratory portion of course.

*Lecture 03 hours. Laboratory 02 hours.*

*Prerequisite(s): VT-1400 Veterinary Science I; VT-1300 Veterinary Terminology and Law; and BIO-1420 Anatomy and Physiology of Domestic Animals II, or concurrent enrollment.*

#### VT-1520 Veterinary Parasitology

02 Semester Credits

Study of identification techniques, nomenclature, life cycles, epidemiology and control of internal and external parasites of small animals, horses and cattle.

*Lecture 01 hour. Laboratory 03 hours.*

*Prerequisite(s): VT-1300 Veterinary Terminology and Law; BIO-1420 Anatomy and Physiology of Domestic Animals II, or concurrent enrollment; and departmental approval: admission to program.*

#### VT-1600 Veterinary Surgical Nursing and Assisting

03 Semester Credits

Basic fundamentals of routine veterinary surgery including instrumentation, aseptic technique, fluid therapy, wound healing, specialized procedures and general nursing care. Fundamentals of electrocardiography including operation of electrocardiograph, origin of ECG tracing and recognition of common cardiac arrhythmias.

*Lecture 01 hour. Laboratory 04 hours.*

*Prerequisite(s): VT-1400 Veterinary Science I; and BIO-1420 Anatomy and Physiology of Domestic Animals II, or concurrent enrollment.*

#### VT-2300 Pharmacology for Veterinary Technicians

02 Semester Credits

Introduction to veterinary pharmacology including common drug terminology, classifications and usages of drugs, dosage calculations, methods of drug administration, side effects and contraindications.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): VT-1400 Veterinary Science I; and BIO-1420 Anatomy and Physiology of Domestic Animals II.*

#### VT-2400 Veterinary Pathology I

02 Semester Credits

Veterinary medical laboratory procedures including complete blood counts, coagulation tests, clinical chemistries, urinalysis and serologic diagnostics performed commonly in veterinary practices.

*Lecture 00 hours. Laboratory 04 hours.*

*Prerequisite(s): BIO-1420 Anatomy and Physiology of Domestic Animals II; and BIO-2500 Microbiology, or concurrent enrollment.*

#### VT-2410 Veterinary Pathology II

02 Semester Credits

Veterinary medical laboratory procedures including veterinary microbiologic techniques, cytology, necropsy, and specimen collection and preservation procedures performed commonly in veterinary practices. Field trips included.

*Lecture 00 hours. Laboratory 04 hours.*

*Prerequisite(s): VT-2400 Veterinary Pathology I.*

#### VT-2500 Small Animal Health and Disease

02 Semester Credits

Physiological systems approach to most frequently encountered diseases and metabolic problems of dogs and cats including disease names, definition and history, animals at risk, causes and signs, diagnosis, treatment and prevention.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): VT-2300 Pharmacology for Veterinary Technicians.*

## **VT-2510 Large Animal Health and Disease**

02 Semester Credits

Study of most frequently encountered diseases and clinical problems of horses, cows, sheep and swine including disease names, definition and history, animals at risk, causes and signs, treatment and prevention.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): VT-2300 Pharmacology for Veterinary Technicians.*

## **VT-2600 Anesthesiology, Emergency Techniques and Dentistry**

03 Semester Credits

Fundamentals of veterinary anesthesiology, emergency medicine and veterinary dentistry. Students learn how to administer and monitor anesthesia, assist with cardiopulmonary resuscitation and perform routine veterinary dental prophylactic techniques.

*Lecture 02 hours. Laboratory 03 hours.*

*Prerequisite(s): VT-1600 Veterinary Surgical Nursing and Assisting; VT-2300 Pharmacology for Veterinary Technicians; and VT-1500 Veterinary Science II.*

## **VT-2700 Avian and Exotic Animal Medicine**

02 Semester Credits

Introduction to avian and exotic animal husbandry, physical examination, clinical procedures and common clinical conditions. Field trips included.

*Lecture 02 hours. Laboratory 00 hours.*

*Prerequisite(s): VT-1520 Veterinary Parasitology, and BIO-2500 Microbiology.*

## **VT-2800 Special Advanced Topics in Veterinary Technology**

1-3 Semester Credits

Study of selected advanced topics or current issues in Veterinary Technology. Provides student an opportunity to explore various topics in greater detail (see Credit Schedule of classes for current offerings.). Repeatable for different topics. (No more than six credits of special topics courses may be applied toward elective and/or program graduation degree requirements.)

*Lecture 1-3 hours. Laboratory 00 hours.*

*Prerequisite(s): Faculty counterparts determine appropriate prerequisite/corequisite for each topic.*

## **VT-2850 Veterinary Practicum**

01 Semester Credit

Students observe and assist with common procedures in clinical settings. Clinical settings include small animal practice, animal population control facility, laboratory animal facility, equine practice, food animal practice/facility and exotic animal practice/facility. (Course may be repeated up to two credit hours.)

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Practicum: 7 hours per week.*

*Prerequisite(s): VT-1500 Veterinary Science II; and concurrent enrollment in VT-2970 Practicum Seminar I or VT-2980 Practicum Seminar II.*

## **VT-2940 Veterinary Field Experience**

02 Semester Credits

Clinical experience involving practice of techniques commonly used in veterinary medicine. Students assigned to two different types of veterinary facilities. Site options may include small animal practices, animal emergency clinics, referral practices, equine practices, mixed practices, food animal practices, laboratory animal facilities and Cleveland Metroparks Zoo.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Field experience: 24 hours per week.*

*Prerequisite(s): VT-2850 Veterinary Practicum; and VT-2600 Anesthesiology, Emergency Techniques and Dentistry.*

## **VT-2970 Practicum Seminar I**

01 Semester Credit

Study of individual clinical situations occurring during veterinary practicum experience. Expanded study of technician's role in pediatrics, first aid, and in euthanasia of animal including methodology, mental preparation and understanding of grieving owner.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): Concurrent enrollment in VT-2850 Veterinary Practicum.*

## **VT-2980 Practicum Seminar II**

01 Semester Credit

Study of individual clinical situations occurring during veterinary practicum experience. Preparation for search for employment including resume preparation and simulated job interviews.

*Lecture 00 hours. Laboratory 00 hours.*

*Other Required Hours: Seminar: 1 hour per week.*

*Prerequisite(s): Concurrent enrollment in VT-2850 Veterinary Practicum.*