

# Course Descriptions

# Code Cross Reference by Discipline

Discipline	Rubric	Discipline	Rubric
Accounting	ACCT ACNT	Electronics	CETT CPMT CSIR EECT ELMT HYDR INTC LOTT RBTC SMFT
Air Force Science	AFS	Emergency Medical Service Technician	EMSP
Allied Health Science	HPRS	Engineering Design Graphics	DFTG MCHN
Anthropology	ANT ANTH	Engineering	ENGR
Art	ART ARTS	English	ENGL
Astronomy	PHYS	English-as-a-Second Language Academic	DESL
Automotive Technology and Outdoor Powered Equipment	AUMT MTRC SMER	Environmental Science and Technology †	EPCT PSC
Biology	BIO BIOL	Financial Management	BNKG BUSA BUSG BUSI IBUS RELE
Biotechnology	BITC	Fire Protection Technology	FIRS FIRT
Building Construction Technology	CNBT CRPT OSHT WDWK	French	FREN
Child Care and Development	CDEC TECA	Geography	GEOG GOG
Chemistry	CHEM	Geology	GEO GEOL
Computer Information Technology	BCIS  ITNW ITSC ITSE ITSW	Geomatics/Land Surveying Technology	SRVY
Commercial Music Management	MUSB MUSC MUSP	German	GERM
Computer Science	COSC	Government	GOV GOVT
Criminal Justice	CJCR CJLE CJSA CRIJ	Heating, Air Conditioning, & Refrigeration Technology	HART
Creative Writing †	ENG ENGL	History	HIS HIST
Culinary Arts	CULA FDNS  HAMG IFWA PSTR RSTO	Hospitality Management	DITA EHKP HAMG IFWA TRVM
Dance	DANC DNC	Human Development	CREX HDP
Digital Publishing and Graphic Technology	GRPH	Humanities	HUDE HUMA
Drama	DRAM DRM		
Economics	ECO ECON		

# Code Cross Reference by Discipline

Discipline	Rubric	Discipline	Rubric
Human Services	CMSW	Philosophy	PHIL
	DAAC	Photography	PHTC
	PSYT	Physical Therapist Assistant	PTHA
	RECT	Pharmacy Technician	PHRA
	SCWK	Physics	PHY
	SLNG		PHYS
Japanese	JAPN		SCIT
Jewelry	HRGY	Psychology	PSY
Journalism	COMM		PSYC
Kinesiology	KINE	Quality Assurance	QCTC
Latin	LATI	Radio-Television-Film	COMM
Legal Assistant	LGLA		DRAM
Mathematics	MATH		RTF
	MTH	Radiology	RTVB
MathematicsóDevelopmental	MATD		CTMT
Management	BMGT		CVIR
	BUSG	ReadingóDevelopmental	MRIT
	BUSI	Real Estate	RADR
	HRPO	Religion	DEVR
	IBUS	Russian	RELE
Marketing	BMGT	Sociology	PHIL
	BUSI		RUSS
	COMM	Sonography	SOC
	FSHD		SOCI
	FSHN		SOCW
	HRPO		DCSO
	IBUS		DMSO
	LMGT	Spanish	DSAE
	MRKG	Speech	SPAN
	PRCD	Space Science	SPCH
Medical Coding	HITT	Study SkillsóDevelopmental	SPS
	MDCA	Surgical Technology	DSSK
Medical Laboratory Technology	MLAB	Technical Communications	SRGT
	MLT		BUSI
Military Science	MLS		ENGL
		Travel and Tourism	ETWR
Music	MUAP	Visual Communication Design	TRVM
	MUEN		ARTC
	MUS		ARTV
	MUSI		IMED
Nursing	NSG	Vocational Nursing	VNG
	RNSG		VNSG
Occupational Therapy Assistant	OTA	Welding Technology	NDTE
	OTHA		PFPB
Office Administration	ITSW		WLDG
	POFI	Womenís Studies	WMS
	POFL	WritingóDevelopmental	DEVW
	POFM		
	POFT		
Personal Fitness Trainer	FITT		

# Code Cross Reference by Code

Rubric	Discipline	Rubric	Discipline
ACCT	Accounting	DFTG	Engineering Design Graphics
ACNT	Accounting	DITA	Hospitality Management
AFS	Air Force Science	DMSO	Sonography
ANT	Anthropology	DNC	Dance
ANTH	Anthropology	DRAM	Drama Radio/TV/Film
ART	Art	DRM	Drama
ARTC	Visual Communications Design	DSAE	Sonography
ARTS	Art	DSSK	Study Skills
AUMT	Automotive Technology & Outdoor Powered Equipment	ECON	Economics
BCIS	Computer Information Systems	EECT	Electronic Technology
BIO	Biology	ELMT	Electronic Technology
BIOL	Biology	EMS	Emergency Medical Services
BITC	Biotechnology	EMSP	Emergency Medical Services
BMGT	Management	ENG	Creative Writing
BNKG	Financial Management	ENGL	Creative Writing Technical Communications
BUSG	Financial Management Management	ENGR	Engineering
BUSI	Financial Management Management	ETWR	Technical Communications
CDEC	Child Development	FDNS	Culinary Arts
CETT	Electronic Technology	FIRS	Fire Protection Technology
CHEM	Chemistry	FIRT	Fire Protection Technology
CJCR	Criminal Justice	FITT	Physical Fitness Technology
CJLE	Criminal Justice	FREN	French
CJSA	Criminal Justice	FRN	French
CNBT	Building Construction Technology	GEOG	Geography
COMM	Journalism Marketing Radio/TV/Film	GEOI	Geology
COSC	Computer Science	GER	German
CPMT	Electronic Technology	GERM	German
CREX	Human Development	GOG	Geography
CRIJ	Criminal Justice	GOVT	Government
CRPT	Building Construction Technology	GRPH	Printing and Desktop Publishing
CSIR	Electronic Technology	HAMG	Culinary Arts Hospitality Management
CULA	Culinary Arts	HART	Heating, Air Conditioning, & Refrigeration Technology
CVIR	Radiology	HDP	Human Development
DAAC	Human Services	HIS	History
DANC	Dance	HIST	History
DCSO	Sonography	HITT	Medical Coding
DESL	English As A Second Language	HPRS	Allied Health Sciences
DEVR	Reading Developmental	HRGY	Welding Technology
DEVW	Writing Developmental	HRPO	Management Marketing

# Code Cross Reference by Code

Rubric	Discipline	Rubric	Discipline
HUDE	Human Development	POFI	Office Administration
HUMA	Humanities	POFT	Office Administration
HYDR	Electronic Technology	PRCD	Marketing
IBUS	International Business	PSC	Physical Science
IFWA	Culinary Arts	PSTR	Culinary Arts
IMED	Visual Communications Design	PSY	Psychology
INTC	Electronic Technology	PSYC	Psychology
ITNW	Computer Information Systems	PSYT	Human Services
ITSC	Computer Information Systems	PTHA	Physical Therapist
ITSE	Computer Information Systems	QCTC	Quality Assurance
ITSW	Computer Information Systems Office Administration	RADR	Radiology
JAPN	Japanese	RBTC	Electronic Technology
JPN	Japanese	RECT	Human Services
KINE	Kinesiology	RELE	Financial Management Real Estate
LATI	Latin	RNSG	Nursing
LGLA	Legal Assistant	RSTO	Culinary Arts
LMGT	Marketing	RTF	Radio/TV/Film
LOTT	Electronic Technology	RUS	Russian
MATD	Mathematics ó Developmental	RUSS	Russian
MATH	Mathematics	SCWK	Human Services
MCHN	Electronic Technology Engineering Design Graphics	SLNG	Human Services
MDCA	Medical Coding	SMER	Automotive Technology & Outdoor Powered Equipment
MLAB	Medical Laboratory Technology	SMFT	Electronic Technology
MLS	Military Science	SOC	Sociology
MRIT	Diagnostic Medical Imaging ó Radiology	SOCI	Sociology
MRKG	Marketing	SOCW	Sociology
MUAP	Music	SPAN	Spanish
MUEN	Music	SRGT	Surgical Technology
MUS	Music	SRVY	Geomatics/Land Surveying
MUSB	Commercial Music Management	TECA	Child Development
MUSC	Commercial Music Management	TRVM	Hospitality Management Travel & Tourism
MUSI	Music	VNSG	Vocational Nursing
MUSP	Commercial Music Management	WDWK	Building Construction Technology
OSHT	Building Construction Technology	WLDG	Welding Technology
OTHA	Occupational Therapy Assistant	WMS	Women's Studies
PPFB	Welding Technology		
PHIL	Philosophy Religion		
PHRA	Pharmacy Technician		
PHTC	Photographic Technology		
PHYS	Astronomy Physics		

## Course Entry Requirements

Most college-credit courses have one or more skill requirements in reading, writing, or mathematics. (For example, English Composition I requires proficiency in reading and writing.) Proficiency is determined by the ACC assessment or ASSET test, or by the statewide TASP (Texas Academic Skills Program) test. Proficiency (or exemption) may also be proved with an official transcript from another college. Students must meet proficiency (or exemption) requirements of all courses. Other requirements, such as course prerequisites or departmental approval, must also be met. For more information about course requirements and prerequisites, see an academic counselor or faculty member. For more information about TASP, see current ACC Course Schedule.

## Course Numbering System

Austin Community College has adopted the Texas Common Course Number system, which facilitates the identification of courses that transfer among public institutions. As the system is phased in, some disciplines identify courses using the new system (which features a four-letter rubric, e.g. ENGL) and some continue to use the old system (which features a three-letter rubric, e.g. ENG). Courses in both systems are identified by a four-character number (e.g. ENGL 1301).

Under the new common course numbering system, the first digit indicates the level at which the course is taught (e.g. 1=freshman, 2=sophomore). The second number indicates credit-hour value and the third and fourth numbers indicate sequence of the course. For courses using the old

system the first digit indicates the level at which the course is taught and the fourth digit indicates the credit-hour value. Developmental courses, which are not transferable and therefore not part of the Texas Common Course Number system, have nevertheless adopted a four-character rubric, though they continue to use the old numbering system.

The three figures in parentheses after the title of each course in the course descriptions section indicate the number of semester credit hours for the course, the number of lecture hours each week and the number of laboratory or activity hours each week, respectively.

Course numbers in parentheses at the end of each course description represent a previous designation for this course.

## Skills Legend

BóReading & Math; CóReading & Special Approval; EóReading & Writing; GóReading, Writing & Math; IóReading, Writing & Special Approval; JóWriting & Math; KóWriting and Special Approval; NóMath, Writing & Special Approval; OóReading, Writing, Math & Special Approval; PóSpecial Approval; RóReading; XóMath; YóMath & Special Approval; ZóWriting

## Allied Health Sciences

In the health sciences areas, more complete or in-depth course descriptions are available from the individual programs.

## Honors

Honors courses are available in many discipline areas. For specific offerings, consult the Schedule of Classes. Call 223-3255 for additional information.

## ACCOUNTING

- ACCT 2301 PRINCIPLES OF FINANCIAL ACCOUNTING (3-3-1).** An introduction to financial accounting concepts and the communication of financial information to external users. Examines the accounting process, transaction analysis, asset and equity accounting, financial statement preparation and analysis, and related topics. Before enrolling in ACCT 2301, it is advisable to 1) have taken the equivalent of ACCT 1403 or BUSI 1301; or 2) have recently taken high school bookkeeping; or 3) have acquired relevant work experience. Although not required, the equivalent of MATH 1324 provides a good foundation for ACCT 2301. Basic computer skills utilizing word processing, spreadsheet, and presentation software are recommended for all accounting courses. If you have any questions, consult with an accounting advisor. Skills: R (ACC 1623)
- ACCT 2302 PRINCIPLES OF MANAGERIAL ACCOUNTING (3-3-1).** Introduction to communicating accounting information to internal users (enterprise managers). A study of the fundamentals of managerial accounting. Emphasis on accounting for a manufacturing concern, budgeting, planning, management decision making, and analysis of financial reports. Topics also include cost behavior and control, product cost accumulation and pricing, and responsibility accounting. Prerequisites: Successful completion of ACCT 2301 (or equivalent). (ACC 1633)
- ACNT 1303 INTRODUCTION TO ACCOUNTING I: NON-BUSINESS MAJORS (3-3-1).** A study of analyzing, classifying, and recording business transactions in a manual and computerized (Quickbooks) setting. Emphasis on understanding the complete accounting cycle, preparing basic financial statements, bank reconciliations, payroll and basic small business income tax issues. Skills: R
- ACNT 1311 COMPUTERIZED ACCOUNTING APPLICATIONS (3-2-2).** Develops further skills in maintaining accounting records using general ledger software (including Peachtree), provides in-depth exposure to accounts receivable/accounts payable modules; introduction to Quickbooks. Skills: R Prerequisites: ACNT 1403. (ACC 1913)
- ACNT 1329 PAYROLL AND BUSINESS TAX ACCOUNTING (3-2-2).** A study of payroll tax procedures, taxing entities, and reporting requirements of local, state and federal taxing authorities in a manual and computerized environment. Prerequisites: ACNT 1404. (ACC 1943)
- ACNT 1331 FEDERAL INCOME TAX: INDIVIDUAL (3-3-0).** Basic instruction in the tax laws as currently implemented by the Internal Revenue Service, providing a working knowledge of preparing taxes for individuals. Emphasis on federal income tax law; individual income, exclusions, deductions, credits, gains, etc.; and incorporating these concepts into individual tax filing requirements. Prerequisites: ACCT 2301 or equivalent. (ACC 2023)
- ACNT 1347 FEDERAL INCOME TAX: CORPORATIONS (3-3-0).** Introduction to the tax laws as currently implemented by the Internal Revenue Service providing a working knowledge of applying and interpreting federal tax law for, as well as preparing taxes for, partnerships, S Corporations, and corporations. Prerequisites: ACNT 1331 or equivalent. (ACC 2513)
- ACNT 1364 PRACTICUM - TAXATION (3-1-15).** Practical general training and experiences in the workplace. The college, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. (ACC 2553)
- ACNT 1366 PRACTICUM - ACCOUNTING (3-3-0).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external training and experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Prerequisites: ACNT 1475 or equivalent.
- ACNT 1391 SPECIAL TOPICS IN ACCOUNTING (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Course will cover topics of current or special interest in Financial Accounting, Income Tax, or Auditing not addressed by other courses. May be repeated when topics vary. Course topics will be announced prior to registration. Prerequisites: Varies with topics. (ACC 2533)
- ACNT 1392 SPECIAL TOPICS IN ACCOUNTING TECHNICIAN (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Includes an examination of current accounting trends and topics in business and industry. Course may be repeated for credit when topics vary. Examples include industry-specific subjects such as mortgage banking, real estate, insurance and fund accounting. Prerequisites: ACNT 1404 and ACNT 2371. (ACC 1953)

- ACNT 1393 SPECIAL TOPICS IN TAXATION: ESTATE AND GIFT TAXATION (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course may be repeated if topics and learning outcomes vary. Topic: Estate and Gift which includes life and death transfers, property owned, life insurance, expenses, debts, charitable bequests, marital deduction, and generation skipping. Offered in Summer. Prerequisites: ACNT 1331. (ACC 2523)
- ACNT 1393 SPECIAL TOPICS IN TAXATION: TAX RESEARCH (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course may be repeated if topics and learning outcomes vary. Topics: Tax research which includes extensive on-line research. Offered in Fall. Prerequisites: ACNT 1331.
- ACNT 1403 INTRODUCTION TO ACCOUNTING I (4-3-3).** A study of analyzing, classifying, and recording business transactions in a manual and computerized environment (Peachtree). Emphasizes an understanding of the complete accounting cycle, preparation of basic financial statements, bank reconciliations, and payroll. Skills: R (ACC 1524)
- ACNT 1404 INTRODUCTION TO ACCOUNTING II (4-3-3).** A continuation of the first course with emphasis on merchandising transactions, notes payable and receivable, valuation of receivables and equipment, and valuation of inventories in a manual and computerized environment; continued mastery of accounting software (Peachtree). Prerequisites: ACNT 1403. (ACC 1534)
- ACNT 1475 INDUSTRY ACCOUNTING (4-3-3).** A study of accounting procedures and operational issues facing accountants in industry. Topics include fixed asset and inventory accounting, an introduction to manufacturing, job costing and budgeting. Prerequisites: ACNT 1404 and ACNT 1311. (ACC 1544)
- ACNT 2304 INTERMEDIATE ACCOUNTING II (3-3-0).** Continued in-depth analysis of the accounting standards and principles for preparing financial statements; recording, analyzing, and disclosing accounting information related to liabilities, owners' equities, funds flow; comparative analysis; and related topics. Prerequisites: ACNT 2403 or equivalent. (ACC 2043)
- ACNT 2309 COST ACCOUNTING (3-3-0).** A study of budgeting and cost control systems including a detailed study of manufacturing cost accounts and reports, job order costing, and process costing. Includes introduction to alternative costing methods such as activity-based and just-in-time costing. Reviews planning of profit, cost, sales, cost and profit analysis, profit performance, and measurements. Prerequisites: ACCT 2302 or equivalent. (ACC 2063)
- ACNT 2330 GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING (3-3-0).** Introduction to fund accounting, emphasizing general, special revenue, capital improvement, debt service, trust agency, enterprise, intragovernmental, and other fund concepts used by state, municipal, and other governmental entities. Includes preparation and analysis of CAFR. Prerequisites: ACCT 2301 or equivalent. (ACNT 2372)
- ACNT 2331 INTERNAL CONTROL AND AUDITING (3-3-0).** A study of internal control and auditing standards and processes used by internal auditors, managers, and independent public accountants. Includes responsibilities of auditors, development of audit programs, accumulation of audit evidence and reporting. Prerequisites: ACNT 2304 or equivalent. (ACC 2073)
- ACNT 2333 ADVANCED ACCOUNTING (3-3-0).** Methods of measuring and communicating economic information, including consolidated statements, partnerships, real estate, foreign operations, and fund units. Prerequisites: ACNT 2304 or equivalent. (ACNT 2374)
- ACNT 2364 TAX PRACTICUM (3-1-15).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Prerequisites: ACNT 1364.
- ACNT 2371 SMALL BUSINESS ACCOUNTING (3-2-2).** A review of accounting procedures relevant to accounting for small businesses, with an emphasis on computerized applications and hands-on familiarity. Areas to be addressed include: journals ordinarily used for small businesses; payroll and related reporting; reporting for taxes other than income taxes; reconciliation and analysis of the cash account; tax accounting practices relevant to financial accounting. Prerequisites: ACNT 1404 and ACNT 1311. (ACC 1923)
- ACNT 2373 ACCOUNTING INFORMATION SYSTEMS (3-3-0).** Data collection, retrieval, manipulation, filtering, and storing of accounting information with EDP systems. Prerequisites: ACCT 2302 or equivalent. (ACC 2103)
- ACNT 2375 ADVANCED THEORY AND PROBLEMS IN ACCOUNTING (3-3-0).** As a capstone experience, students use case studies, database research and group projects to apply knowledge obtained in previous accounting courses. Case studies incorporate managerial, governmental, tax, audit, internal control, accounting information system and financial accounting issues. Prerequisites: Student must be in last semester of coursework required for associates degree and have completed a minimum of 20 hours of accounting. (ACC 2573)

**ACNT 2376 FINANCIAL STATEMENT ANALYSIS (3-3-0).** A course designed for business and non-business majors. A study of the process of evaluating financial statements, cash flow, and ratio analysis of individuals and businesses. Emphasis on the relationship of comparative analysis and industry standards. Topics include ratio analysis; interpretation of the balance sheet, income statement, and statement of cash flows; account classifications; income measurements; time value of money; and capital budgeting decisions. Heavy emphasis on analytical interpretation of ratios. Prerequisites: ACCT 2302 or instructor approval.

**ACNT 2377 ADVANCED AUDITING CONCEPTS AND APPLICATIONS (3-3-0).** Application of complex accounting principles in an audit environment. Using authoritative literature for research, case studies address application of changes in accounting principles, balancing client service with ethics/independence, and applying professional judgment to complex auditing and financial reporting issues. Control exposure in systems, operational and program audits and computer applications are integrated into this course. Offered in Spring. Prerequisites: ACNT 2331.

**ACNT 2378 GOVERNMENTAL AUDITING AND NONPROFIT ACCOUNTING (3-3-0).** Governmental auditing concepts and procedures, including the Yellow Book and Single Audit Act. Accounting for non profit entities, federal government, public schools, colleges and universities, hospitals, water districts, rural electrification coops, and others. Case studies are integrated into the course. Offered in Fall. Prerequisites: ACNT 2330. (ACC 2133)

**ACNT 2379 ADVANCED COST ACCOUNTING (3-3-0).** Accounting related to the use of cost data for making managerial decisions. Includes budgeting, responsibility accounting, cost-volume-profit analysis, transfer pricing, statistical methods, and planning capital expenditures. Case studies and computer applications are integrated into the course. Offered in Fall. Prerequisites: ACNT 2309.

**ACNT 2381 COOPERATIVE EDUCATION - ACCOUNTING (3-1-15).** Career related activities encountered in the student's area of specialization are offered through a cooperative agreement with the college, employer, and student. Under supervision of the college and employer, the student combines classroom learning and work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. Prerequisites: ACNT 1475 or equivalent.

**ACNT 2386 INTERNSHIP - ACCOUNTING TECHNICIAN (3-1-12).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee,

the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. A student will work a minimum of 12 hours per week at an accounting job approved by the Accounting Internship Advisor. Additionally, students will meet with an Accounting Instructor for one hour per week to review the student's progress and discuss related issues. Prerequisites: Student must be in last semester of course work required for the associates degree or certificate. Instructor approval required. (ACC 2543)

**ACNT 2388 INTERNSHIP - ACCOUNTING (3-1-12).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. A student will work a minimum of 12 hours per week at an accounting job approved by the Accounting Internship Advisor. Additionally, students will meet with an Accounting Instructor for one hour per week to review the student's progress and discuss related issues. Prerequisites: Student must be in last semester of course work required for the associates degree and have completed a minimum of 15 hours of accounting course work. Instructor approval required. (ACC 2543)

**ACNT 2403 INTERMEDIATE ACCOUNTING I (4-4-0).** Critical analysis of generally accepted accounting principles, concepts, and theory underlying the preparation of financial statements. Emphasis on current theory and practice. An intense study of accounting standards and principles used by accounting professionals for disclosing accounting information related to enterprise assets. Examines professional accounting pronouncements for measuring, recording, and reporting of asset values. Prerequisites: ACCT 2302 or equivalent. (ACC 2033)

## AIR FORCE SCIENCE

**AFS 1102 THE FOUNDATIONS OF THE UNITED STATES AIR FORCE I (1-1-0).** Introductory course exploring the overall roles and missions of the United States Air Force and career fields available in the Air Force. Emphasis on military customs and courtesies, appearance standards, Air Force core values, and written communication. Leadership Laboratory includes various leadership techniques, including drill and ceremonies, customs and courtesies, and uniform standards.

- AFS 1103 THE FOUNDATIONS OF THE UNITED STATES AIR FORCE II (1-1-0).** Continuation of Air Force Science 1102, with an introduction to American military history and emphasis on personal communication. Leadership laboratory includes various leadership techniques, including drill and ceremonies, customs and courtesies, and uniform standards.
- AFS 1111 THE EVOLUTION OF USAF AIR AND SPACE POWER I (1-1-0).** Key historical events and milestones in the development of air power as a primary instrument of United States national security. Leadership Laboratory includes various leadership techniques, including drill and ceremonies, customs and courtesies, and uniform standards.
- AFS 1112 THE EVOLUTION OF USAF AIR AND SPACE POWER II (1-1-0).** Basic tenets of leadership and ethical behavior. Interweaves study of Air Force core values and competencies with history of events and leaders in United States air power. Leadership Laboratory includes various leadership techniques, including drill and ceremonies, customs and courtesies, and uniform standards.

## ALLIED HEALTH SCIENCE

- HPRS 1106 MEDICAL TERMINOLOGY PCM (1-1-0).** A short course of study of prefixes, suffixes, and word roots. A body systems approach is used to focus on select abbreviations and symbols, surgical, pathological, and diagnostic procedures. This web course allows the flexibility of participating in individual study and group study. Internet access is required.
- HPRS 1201 INTRODUCTION TO HEALTH PROFESSIONS (2-2-0).** An overview of the roles of the various members of the health care system, educational requirements, and issues affecting the delivery of health care.
- HPRS 1205 MEDICAL LAW/ETHICS FOR HEALTH PROFESSIONALS (2-2-0).** Introduction to the relationship between legal aspects and ethics associated with the health care field. Emphasis on ethical and legal responsibilities of health care professionals. (AHS 2303)
- HPRS 1206 MEDICAL TERMINOLOGY (2-2-0).** A study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. (AHS 1303)
- HPRS 1303 DEATH AND DYING (3-3-0).** Topics address grief, loss, death, and dying. Preparation for caregivers in health and related sciences to function in clinical settings where communication skills are used to give psychosocial support to dying persons and their families. (AHS 2303)

- HPRS 2200 PHARMACOLOGY FOR HEALTH PROFESSIONS (2-2-0).** A study of drug classifications, actions, therapeutic uses, adverse effects, methods of administration, client education, and calculation of dosages. This course is designed for Medical Coding Students, Medical Assisting Students, and Massage Therapy Students. HPRS 2200 is not an acceptable course for clinical nursing students.
- HPRS 2233 CONSUMER ORIENTATED HEALTH DELIVERY SYSTEMS (2-2-0).** An experiential learning course involving the multidisciplinary approach to care of persons with common diagnoses and diverse human conditions. (AHS 2403)
- HPRS 2300 PHARMACOLOGY FOR HEALTH PROFESSIONS (3-3-0).** A study of drug classifications, mechanism of actions, therapeutic uses, adverse effects, methods of administration, client education and calculation of dosages. Prerequisites: Anatomy & Physiology (4 hours) with a grade of C or better and a math course above MATD 0330, TASP (230 or higher), or ACC Math Assessment (Compass Math 39 or higher). Bring proof of prerequisites to orientation or first class meeting (grade report, transcript, math scores). Exempt students need proof of a Math course or Assessment. (AHS 1403)
- HPRS 2301 PATHOPHYSIOLOGY (3-3-0).** Study of the pathology and general health management of disease and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries. Prerequisites: Completion of Anatomy and Physiology (4 hours).

## ANTHROPOLOGY

- ANT 2404 PHYSICAL ANTHROPOLOGY WITH LAB (4-3-3).** An introduction to the study of biocultural diversity of humans. The interaction between culture and biology produces a variety of human biological adaptations that are traced through the following avenues: the fossil record of primates, primate behavior, and the genetic make up of modern populations. Lab involves the practical applications of current procedures and practices related to physical anthropology. Prerequisites: One 4-hour biology course.
- ANT 2433 TOPICS IN ANTHROPOLOGY (3-3-0).** An elective course designed to deal with special topics of current interest in Anthropology. Skills: E
- ANT 2433 TOPIC: HUMAN OSTEOLOGY/FORENSICS (3-3-0).** This course involves the study of human bones and aspects of forensic anthropology. Course objectives include use of prevailing criteria in the analyses of skeletal material to derive gender, age at death, ancestry, stature, anomalous and pathological conditions and cause of death where possible to arrive at osteobiographical

profiles. Additionally, field techniques regarding the recovery of human remains and management of recovery sites are examined. Skills: E

- ANT 2433 TOPIC: ARCHAEOLOGICAL FIELD METHODS (3-3-0).** This course introduces students to field and laboratory methods in archaeology. Course objectives include research design, surface survey and excavation, analysis of artifacts and other remains, and preparation of final reports. Emphasis on specific aspect of archaeological fieldwork will depend on where (US or international) taught. Skills: E
- ANTH 2301 PHYSICAL ANTHROPOLOGY (3-3-0).** An introduction to the study of the bio/cultural diversity of humans. The interaction between culture and biology produces a variety of human biological adaptations that are traced through the following avenues: the fossil record of primates, primate behavior, and the genetic makeup of modern populations. Skills: E (ANT 2403)
- ANTH 2302 INTRODUCTION TO ARCHAEOLOGY (3-3-0).** This course covers archaeological techniques for reconstructing ancient societies. Emphasis is placed on archaeological questions, scientific methods, and culture change. Skills: E (ANT 2423)
- ANTH 2351 CULTURAL ANTHROPOLOGY (3-3-0).** This course introduces the student to a holistic study of culture. The major elements of human social behavior, material culture, and cultural diversity are studied as adaptations to social and environmental change past and present. Skills: E (ANT 2413)
- ART**
- ART 1701 SPECIAL TOPICS IN ART (1-1-0).** Recent advances or special topics in art. May be repeated for a maximum of six credit hours when topics vary.
- ART 1702 SPECIAL TOPICS IN ART (2-2-0).** Recent advances or special topics in art. May be repeated for a maximum of six credit hours when topics vary.
- ART 1703 SPECIAL TOPICS IN ART (3-2-3).** Recent advances or special topics in art. May be repeated for a maximum of six credit hours when topics vary. Laboratory fee for classes with lab hours. Fee: \$8
- ART 2323 METAL SMITHING (3-2-4).** Designed to explore techniques for working ferrous and non-ferrous metals. Explorations in brazing, forging, and welding in all processes. Students will be urged to produce individualized items or objects for function. Combining metals and processes will be encouraged in order to give a strong understanding of the versatility of these techniques and materials and the vast number of objects that can be created. Fee: \$24 Insurance: \$3 Prerequisites: ARTS 1311 and ARTS 1316.
- ART 2333 METAL SCULPTURE (3-2-4).** A study utilizing techniques and methods of Art Metals and Metal Smithing. Required projects will promote

creativity in both designer and spontaneous modes. Students will be urged to develop individualized work ethics and artistic styles. All welding, brazing, and finishing techniques will be open to student discretion. Professionalism will be discussed and encouraged. Fee: \$24 Insurance: \$3 Prerequisites: ARTS 1311 and ARTS 1316.

- ART 2343 STUDIO PROBLEMS (3-2-4).** (May be applied only to metal and jewelry courses, ARTS 2341, ART 2323, ART 2333, and ARTS 2342.) A course structured to give advanced students an opportunity to apply previously acquired skills in an open-studio atmosphere. Students will be encouraged to combine materials and techniques and to experiment freely. Instruction will be offered in an individualized format according to project demands. Portfolio presentation will be the final project. Repeatable. Fee: \$24 Insurance: \$3 Prerequisites: Department approval.
- ARTS 1301 INTRODUCTION TO THE VISUAL ARTS (3-3-0).** (Art Appreciation) The visual elements and principles of art; their nature, function and relationship in painting, sculpture, architecture and graphics. Emphasis on basic approaches to understanding works of art and the development of personal interpretations. Lecture and discussion with visits to museums. Skills: E
- ARTS 1303 ART HISTORY I (3-3-0).** A critical and analytic study of the great historical works of art in architecture, painting, and minor arts from prehistoric times to the Renaissance. Skills: E
- ARTS 1304 ART HISTORY II (3-3-0).** A critical and analytic study of the great historical works of art in architecture, sculpture, painting, and minor arts from the Renaissance to the present. Skills: E
- ARTS 1311 DESIGN I (3-2-4).** Introduction to fundamentals of design: line, color, form, texture, shape, and arrangement. Emphasis on two-dimensional principles. Fee: \$20
- ARTS 1312 DESIGN II (3-2-4).** A continuation on the fundamentals of design: line, color, form, texture, shape, and arrangement. Emphasis on three-dimensional principles. Fee: \$20 Prerequisites: ARTS 1311.
- ARTS 1316 DRAWING I (3-2-4).** Fundamentals of drawing; consideration of line, space, form, and perspective in rendering from still life, landscape, or the human figure. Emphasis on composition and development of hand-eye coordination. Fee: \$20
- ARTS 1317 DRAWING II (3-2-4).** Emphasis on drawing from still life, landscape, human figure, and architectural subjects. Rendering line, light and shade, and form in pencil, charcoal and pen and ink. Fee: \$20 Prerequisites: ARTS 1316 or department approval.
- ARTS 2316 PAINTING I (3-2-4).** Development of painting skills, techniques, and aesthetic sensibilities related to artistic expression in oil and/or acrylic

- mediums. Emphasis on color and composition. Fee: \$20 Prerequisites: ARTS 1316 or department approval.
- ARTS 2317 PAINTING II (3-2-4).** A continuation of Painting I with emphasis on development of independent problem solving and style in composition: figure, landscape, portrait painting, and still life. Fee: \$20 Prerequisites: ARTS 2316 or department approval.
- ARTS 2323 LIFE DRAWING I (3-2-4).** Detailed study of the human form. Emphasis on rendering, mood, expression, and skeletal and muscular structure. Fee: \$20 Prerequisites: ARTS 1316 or department approval.
- ARTS 2324 LIFE DRAWING II (3-2-4).** A continuation of ARTS 2323 with emphasis on special problems in drawing the human form in selected media. Fee: \$20 Prerequisites: ARTS 2323.
- ARTS 2326 SCULPTURE I (3-2-4).** Introduction to basic principles and techniques of sculpture. Emphasis on three-dimensional expression in a variety of materials. Fee: \$20 Insurance: \$3
- ARTS 2327 SCULPTURE II (3-2-4).** A continuation of ARTS 2326 with emphasis on advanced principles and techniques of sculpture. Emphasis on three-dimensional expression in a variety of materials. Fee: \$20 Insurance: \$3 Prerequisites: ARTS 2326.
- ARTS 2333 PRINTMAKING I (3-2-4).** Introduction to monotype, relief, lithography and intaglio printing methods; line and tonal etching, drypoint, aquatint, soft ground, and other techniques explored. Limited editions will be required. Prior credit in ARTS 1311 or ARTS 1316 recommended. Fee: \$20 Insurance: \$3
- ARTS 2334 PRINTMAKING II (3-2-4).** In depth experimentation with intaglio, lithograph and relief printmaking; line etching, aquatint, soft grounds, and multi-plate color techniques will be explored. Emphasis will be placed on using the printmaking media expressively. Fee: \$20 Insurance: \$3 Prerequisites: ARTS 2333.
- ARTS 2341 ART METALS (3-2-3).** Instruction in conceptualizing and producing utilitarian items in non-ferrous metals. Various handworking principles will be explored through the techniques of raising, chasing, repousse, piercing and planishing in order to create objects from flat sheet. Additional techniques in casting, brazing, soldering, tinning, patinizing, and polishing. Skills developed can be applied to decorative objects as well as functional and wearable art. Fee: \$24 Insurance: \$3 Prerequisites: ARTS 1311 and ARTS 1316.
- ARTS 2342 JEWELRY FABRICATION (3-2-4).** Explores the processes used to fabricate jewelry, wearable art, and small sculptural and functional objects, primarily of nonferrous and noble metals. The student will learn cold forging and joining, soldering, fabrication of settings, and the use of hand tools. Stone setting, lost wax casting, and surface finishing and decoration will also be explored. Standard industry techniques will be taught through assignments typical of those encountered by the jewelry professional. Includes a segment on business practices, pricing, and ethics. Fee: \$24 Insurance: \$3 Prerequisites: ARTS 1311 and ARTS 1316.
- ARTS 2346 CERAMICS I (3-2-4).** Introduction to basic ceramic processes and techniques: design, hand-building, wheel-throwing, and glazing. Fee: \$20 Insurance: \$3
- ARTS 2347 CERAMICS II (3-2-4).** A continuation of ARTS 2346 with emphasis on clay bodies, glazes, firing, and using the wheel. Fee: \$20 Insurance: \$3 Prerequisites: ARTS 2346.
- ARTS 2356 PHOTOGRAPHY I (3-2-4).** Introduction to fundamentals of black and white photography. Shooting techniques, film development, printing and portfolio presentation will be covered. An emphasis will be placed on the development of personal expression through photographs. Prior credit in ARTS 1311 recommended. Fee: \$24
- ARTS 2366 WATERCOLOR PAINTING (3-2-4).** Development of painting skills, techniques, and aesthetic sensibilities to artistic expression in watercolor medium. Emphasis on interpretation of still life, landscape, architectural, and figure subjects. Fee: \$20 Prerequisites: ARTS 1316 or department approval.

## ASTRONOMY

- PHYS 1111 LABORATORY IN INTRODUCTORY ASTRONOMY (1-0-3).** An introduction to elements of observational astronomy. Topics include the celestial sphere and coordinates, star maps, the electromagnetic spectrum, telescopes, phases of the moon. Emphasis on naked-eye observation. Students will be required to attend a night-time field trip and a day-time field trip. Fee: \$20 Insurance: \$2 Skills: G Prerequisites: Credit for or concurrent enrollment in PHYS 1311 or PHYS 1312 or their equivalent or approval of instructor.
- PHYS 1311 STELLAR ASTRONOMY (3-3-0).** A study of stars, galaxies, and the universe. Discussion of atomic spectra, nuclear energy, and astronomical tools (such as optical, radio, and other telescopes and image enhancers) as they provide knowledge about distant objects. Emphasis on recent discoveries about quasars, black holes, and cosmology. Skills: B Prerequisites: MATD 0370 or one year of high school algebra or equivalent. One year of high school science recommended, but not required.
- PHYS 1312 SOLAR SYSTEM ASTRONOMY (3-3-0).** A study of the Sun and its solar system: planets, satellites, meteors, comets, asteroids. Theories about the structure and origin of the solar system, with

emphasis on recent discoveries. Includes a scientific investigation of other solar systems and the possibilities for extraterrestrial life. Skills: B  
Prerequisites: MATD 0370 or one year of high school algebra or equivalent. One year of high school science recommended, but not required.

## AUTOMOTIVE TECHNOLOGY & OUTDOOR POWERED EQUIPMENT

**AUMT 1405 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY (4-3-3).** An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. Emphasis is on automobile construction, major components, basic systems and their repair and maintenance. Fee: \$24 Insurance: \$3 Skills: P (AUT 1014)

**AUMT 1407 AUTOMOTIVE ELECTRICAL SYSTEMS (4-3-3).** An overview of automotive electrical systems including topics in operational theory, testing, magnetism, diagnosis, and repair of batteries, charging and starting systems, and electrical accessories. Emphasis on electrical schematic diagrams, chassis wiring and switches, and service manuals. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P (AUT 1024)

**AUMT 1410 AUTOMOTIVE BRAKE SYSTEMS (4-3-3).** Operation and repair of drum/disc type brake systems. Emphasis on safe use of modern equipment. Topics include brake theory, concepts related to design, diagnosis and repair of power assist systems, manual, anti-lock brake systems, scan tool diagnostics, and parking brakes. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P (AUT 2044)

**AUMT 1416 SUSPENSION AND STEERING (4-3-3).** Theory and operation of automotive suspension and steering systems including tire and wheel problem diagnosis, component repair, and alignment procedures. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P (AUT 2124)

**AUMT 1419 AUTOMOTIVE ENGINE REPAIR (4-3-3).** Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, and disassembly, repair, and reassembly of the engine. Prepares students for ASE certification tests. This class is recommended to be taken concurrently with AUMT 2428. Fee: \$24 Insurance: \$3 Skills: P (AUT 1034)

**AUMT 1445 AUTOMOTIVE HEATING AND AIR CONDITIONING (4-3-3).** Theory of and maintenance of manual and automatic automotive air conditioning and heating systems. Emphasis on the

basic refrigeration cycle and diagnosis and repair of system malfunctions. Covers EPA guidelines for refrigerant handling and new refrigerant replacements. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P (AUT 2014)

**AUMT 2413 MANUAL DRIVE TRAIN AND AXLES (4-3-3).** A study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials with emphasis on the diagnosis and repair of transmissions and drive lines. Prepares students for ASE certification tests. This class is recommended to be taken concurrently with AUMT 2428. Fee: \$24 Insurance: \$3 Skills: P (AUT 2054)

**AUMT 2417 ENGINE PERFORMANCE ANALYSIS I (4-3-3).** Theory, operation, diagnosis, and repair of basic engine dynamics, both early and electronic ignition systems, fuel delivery systems, including carburetion and throttle body injection repair, and emission control systems. Use, care, and maintenance of basic engine performance diagnostic equipment. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P (AUT 1044)

**AUMT 2425 AUTOMATIC TRANSMISSIONS AND TRANSAXLES (4-3-3).** A study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and proper repair techniques. Prepares students for ASE certification tests. This class is recommended to be taken concurrently with AUMT 2428. Fee: \$24 Insurance: \$3 Skills: P (AUT 1054)

**AUMT 2428 AUTOMOTIVE SERVICE (4-3-3).** Mastery of automotive vehicle service and component systems repair. Emphasis on mastering current automotive competencies covered in related theory courses in specialized areas previously obtained by the student. The course will enhance the student's competency of NATEF task listings and give additional preparation for ASE testing and employment. Fee: \$24 Insurance: \$3 Skills: P (AUT 2073)

**AUMT 2434 ENGINE PERFORMANCE ANALYSIS II (4-3-3).** Diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems; proper use of advanced engine performance diagnostic equipment. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P Prerequisites: Department approval. (AUT 2034)

**AUMT 2437 AUTOMOTIVE ELECTRONICS (4-3-3).** Topics address electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, computerized engine controls, and electrical test equipment as applied to automotive technology. Prepares students for ASE certification tests. Fee: \$24 Insurance: \$3 Skills: P (AUT 2024)

- AUMT 2489 INTERNSHIP AUTOMOTIVE TECHNICIAN (4-1-15).** An experience external to the college for the advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workforce employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Insurance: \$3 Skills: P (AUT 2134)
- MTRC 1402 MOTORCYCLE TUNE UP (4-3-3).** Introduction to tune up procedures for both two and four stroke motorcycles including analysis, valve train, ignition, fuel system, and chassis service. Emphasis on the appropriate procedures and equipment. Also included in the course are coolants, lubricants and various types of fuel octanes and proper carburetor jetting for climate and altitude. Fee: \$16 Insurance: \$3 (AUT 1314)
- MTRC 1405 MOTORCYCLE SERVICE PRINCIPLES (4-3-3).** Principles of operation of two and four stroke motorcycle engines and their associated systems. Emphasis on troubleshooting and analysis of faulty systems and their individual components using proper repair manuals and special tools. Also included are fuels, lubricants, oil and filter changes, and various types of engine cooling. Fee: \$16 Insurance: \$3 (AUT 1324)
- MTRC 1408 MOTORCYCLE CHASSIS AND DRIVE SYSTEMS (4-3-3).** Theory of operation, servicing procedures, and problem diagnosis of motorcycle chassis, final drive systems, wheels, brakes, frames, and suspensions with emphasis on troubleshooting for handling and riding problems with extensive training in the proper use of repair manuals for technical data and all special tools to perform needed repairs. Fee: \$16 Insurance: \$3 (AUT 2334)
- MTRC 1466 PRACTICUM - MOTORCYCLE MECHANICS & REPAIR (4-0-28).** Practical general training and experience in the work place. The college with the employer develops and documents an individualized plan for the student. The plan relates the work place training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Insurance: \$3
- SMER 1401 OUTBOARD TUNE UP (4-3-3).** An introductory course in tune up procedures for both two and four stroke outboard motors including analysis, valve train, ignition, fuel, cooling, and drive systems service. Emphasis on appropriate equipment and procedures using proper repair manuals. Also included are extensive test procedures for performance tuning. Fee: \$16 Insurance: \$3 (AUT 1214)
- SMER 1404 OUTBOARD SERVICE PRINCIPLES (4-3-3).** Principles of operation of two and four stroke outboard motors and their associated systems. Emphasis on troubleshooting and analysis of fault cooling, lubrication, and recirculation systems and their individual components. Fee: \$16 Insurance: \$3 (AUT 1224)
- SMER 1407 OUTBOARD POWERHEAD OVERHAUL (4-3-3).** An introductory course in overhaul procedures for two stroke outboard power head overhaul including emphasis on proper shop procedures; use of proper repair manuals for clearance and tolerances using precision measuring equipment for disassembly, inspection, servicing, and assembly of two stroke outboard power heads. Emphasis on troubleshooting for reasons the power head failed. Fee: \$16 Insurance: \$3 (AUT 2214)
- SMER 1410 OUTBOARD LOWER UNITS (4-3-3).** Operation, service, troubleshooting, and overhaul of all systems of an outboard motor located below the power head. Emphasis on the use of proper tools and procedures when servicing the mid-section, lower unit, trim, and tilt systems. Fee: \$16 Insurance: \$3 (AUT 2224)
- SMER 1413 OUTBOARD ELECTRICAL SYSTEMS (4-3-3).** Theory of operation and test procedures and equipment used in the diagnosis and repair of the various circuits which make up an outboard motor's electrical system. The systems are charging, ignition, starting, primer and auxiliary wiring. All color codes of various makes and models as well as test and wire routing schematics. Fee: \$16 Insurance: \$3 (AUT 1234)
- SMER 1419 MOTORCYCLE FOUR STROKE ENGINE/TRANSMISSION (4-3-3).** Overhaul procedures for four stroke motorcycle engines and transmissions. Emphasis on approved shop procedures for disassembly, assembly, component inspection, measurement, servicing, and transmission troubleshooting in transmission inspection with the use of precision measuring equipment and proper repair manual needed for matching color coded bearings to races used on Japanese applications. Fee: \$16 Insurance: \$3 (AUT 2314)
- SMER 1422 MOTORCYCLE ELECTRICAL SYSTEMS (4-3-3).** Theory of operation and test procedures and equipment used in the diagnosis and repair of the various circuits which make up motorcycle electrical systems such as starting, charging, ignition, safety switches, lighting, and warning systems. Emphasis on color codes and repair and routing schematics. Fee: \$16 Insurance: \$3 (AUT 1334)
- SMER 1425 SMALL ENGINE ELECTRICAL SYSTEMS (4-3-3).** Theory of operation and test procedures and equipment used in the diagnosis and repair of the various circuits which make up a small engine electrical system. Ignition, charging, starting

and all safety switches as well as color codes and wiring schematics are covered in this section. Fee: \$16 Insurance: \$3 (AUT 1134)

**SMER 1428 SMALL ENGINE SERVICE PRINCIPLES (4-3-3).** Principles of operation of two and four stroke small engines and their associated systems. Emphasis on troubleshooting and the analysis of faulty systems and their components. Also covered are cutter decks, bar and chains, belt and clutch belt drive applications. This class covers oil and fuel applications and service and maintenance on commonly used lawn equipment. Fee: \$16 Insurance: \$3 (AUT 2154)

**SMER 1431 SMALL ENGINE TUNE UP (4-3-3).** Tune up procedures for two and four stroke small engines including analysis, valve train, ignition fuel, starter, cutter, and safety compliance systems. Emphasis on the use of appropriate equipment and procedures. Fee: \$16 Insurance: \$3 (AUT 1124)

**SMER 1434 SMALL ENGINE TWO STROKE OVERHAUL (4-3-3).** Overhaul procedures for two stroke small engines as used in lawn and garden applications. Emphasis on proper shop procedures for disassembly, inspection, servicing, and assembly of two stroke small engines and their applicable drive systems. Fee: \$16 Insurance: \$3 (AUT 1114)

**SMER 1437 SMALL ENGINE FOUR STROKE OVERHAUL (4-3-3).** Overhaul procedures for four stroke small engines, transmissions, and transaxles. Emphasis on shop procedures for disassembly, assembly, component inspection, component measurement, component servicing, transmission troubleshooting, transmission inspection, and transaxle inspection. Fee: \$16 Insurance: \$3

**SMER 1466 PRACTICUM—SMALL ENGINE REPAIR (4-0-28).** Practical general training experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Insurance: \$3

## BIOLOGY

**BIO 1614 FIELD BIOLOGY (4-3-3).** An introduction to the observation and identification of plants and animals and of the ecological associations in which they are found. Includes a consideration of the relationships of these organisms with their environment. Involves field excursions and techniques of field work. May be repeated once for credit when topics vary. (CB 042001). Fee: \$24 Insurance: \$2 Skills: E

**BIO 1673 ECOLOGY AND EVOLUTIONARY BIOLOGY (3-3-0).** Designed for science majors and students with a strong science background who

desire a more in-depth approach to biological topics. An introduction to the structures and functioning of ecological systems, including populations, communities and ecosystems. The impact of humans on the environment will also be discussed. Also includes a discussion of the principles of population genetics, evolution and speciation. BIOL 2206 and BIOL 1673 may not both be counted towards graduation. Skills: E

**BIO 1714 ANATOMY AND PHYSIOLOGY I (4-3-3).** An introduction to the structure and function of the human body with an emphasis on anatomy. Designed for students in the ACC health science programs. Fee: \$24 Insurance: \$2 Skills: E

**BIO 1724 ANATOMY AND PHYSIOLOGY II (4-3-3).** A sequel to BIO 1714 with an emphasis on physiology. Designed for students in the ACC health science programs. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: BIO 1714 (or equivalent) with a minimum grade of C.

**BIO 2614 AQUATIC BIOLOGY (4-3-3).** An overview of aquatic ecosystems and their organisms. The course will focus on learning to sample and identify aquatic plants and animals from both freshwater and marine habitats. Exercises will involve collecting and analyzing samples from both freshwater and marine ecosystems. Field trips will be required. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: BIO 1673.

**BIO 2991 SPECIAL PROBLEMS IN BIOLOGY (1-1-0).** Recent advances or special problems in the biological sciences. May be repeated for a maximum of six credit hours when topics vary. Skills: E Prerequisites: Three hours of biological science.

**BIO 2992 SPECIAL PROBLEMS IN BIOLOGY (2-2-1).** Recent advances or special problems in the biological sciences. May be repeated for a maximum of six credit hours when topics vary. Skills: E

**BIO 2993 SPECIAL PROBLEMS IN BIOLOGY (3-3-0).** Recent advances or special problems in the biological sciences. May be repeated for a maximum of six credit hours when topics vary. Insurance: \$2 Skills: E

**BIOL 1308 LIFE ON EARTH (3-3-0).** A survey of major plant and animal groups with emphasis on evolutionary relationships, adaptive strategies, natural history, reproductive behavior, and co-evolution. (CB 040102). Skills: E (BIO 1603)

**BIOL 1322 CONTEMPORARY ISSUES IN NUTRITION (3-3-0).** An introduction to basic nutrition. Special emphasis on understanding and evaluating fads and fallacies in nutrition. Topics include body systems, health cooking techniques, dietary restrictions and guidelines, diet and disease, recipe modifications and menu planning, nutritional concerns of the athlete or the vegetarian, and the relationship between addictions and nutrition. Skills: E (BIO 1633)

- BIOL 1323 HUMAN NUTRITION (3-3-0).** This course explores the various nutrients, their sources, digestion, absorption, metabolism, interaction, storage, and excretion. Current research is presented against a background of basic nutritional concepts. Special emphasis is given to the role nutrition plays in the current health care delivery system and how nutrition can be emphasized to promote health maintenance. This course is required for most BSN students and fulfills the requirements for a science elective in the College of Natural Sciences at U.T. Skills: E Prerequisites: High School Chemistry or CHEM 1411; BIOL 1406 or BIOL 1408 are recommended but not required. (BIO 1643)
- BIOL 1406 CELLULAR AND MOLECULAR BIOLOGY (4-3-3).** General Biology course designed for science majors and students with a strong science background who desire an in-depth approach to biological topics. An introduction to the physical and chemical organization of living organisms; cell structure, function, and metabolism; classical and molecular genetics; gene regulation; genetic engineering; molecular aspects of development; and reproduction. BIOL 1406 and 1408 may not both be counted towards graduation. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: One year of high school chemistry or one semester of college chemistry; two years of high school algebra or MATD 0390. (BIO 1654)
- BIOL 1407 STRUCTURE AND FUNCTION OF ORGANISMS (4-3-3).** General Biology course designed for science majors and students with a strong science background who desire an in-depth approach to biological topics. An introduction to the diversity, anatomy, physiology, reproduction, development, behavior, and evolution of living organisms. Includes viruses, prokaryotes, protists, fungi, plants, and animals. BIOL 1407 and 1409 may not both be counted toward graduation. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: BIOL 1406 with a minimum grade of C. (BIO 1664)
- BIOL 1408 INTRODUCTORY BIOLOGY: UNITY OF LIFE (4-3-3).** Introductory biology course designed for non-science majors who desire a conceptual approach to biological topics. An introduction to the nature of science, the characteristics of life, the molecular and cellular basis of life, genetics, reproduction, and development. An emphasis will be placed on how these topics are related to current issues, such as genetic engineering, biotechnology, and problems facing modern society. BIOL 1406 and 1408 may not both be counted toward graduation. Fee: \$24 Insurance: \$2 Skills: E (BIO 1684)
- BIOL 1409 INTRODUCTORY BIOLOGY: DIVERSITY OF LIFE (4-3-3).** Introductory biology course designed for non-science majors who desire a conceptual approach to biological topics. An introduction to the diversity of life: viruses, prokaryotes, protists, fungi, plants, and animals. Topics will include structures and functions, evolution, environmental and human interactions, and origin of life. BIOL 1407 and 1409 may not both be counted for graduation. Fee: \$24 Insurance: \$2 Skills: E (BIO 1694)
- BIOL 1411 GENERAL BOTANY (4-3-3).** A survey of plant science; includes structure and function of leaves, stems, and roots; plant reproduction; life histories of archegoniate plants including mosses, ferns, and seed plants; plant-environment interactions; and local flora. Fee: \$24 Insurance: \$2 Skills: E (BIOL 1424)
- BIOL 1413 GENERAL ZOOLOGY (4-3-3).** A survey of the animal kingdom and animal-like protists from an evolutionary perspective. Major lines of evolution will be traced as characteristics of each animal group are compared and contrasted. The taxonomy, diversity, behavior and ecology of all major animal phyla will be studied with an emphasis on the functional anatomy of each group. Fee: \$24 Insurance: \$2 Skills: E (BIO 1824)
- BIOL 1424 NATIVE PLANTS (4-3-3).** Introduction to the flora of Central Texas, particularly identification of Hill Country plants. The course involves plant identification, distribution, comparisons, and discussions on the usefulness of native Texas plants. This includes medicinal, edible, and horticultural uses. Involves field trips. Fee: \$24 Insurance: \$2 Skills: E (BIO 1623)
- BIOL 2106 ENVIRONMENTAL BIOLOGY LAB (1-0-3).** A companion lab/activity course to BIOL 2206. Investigates topics in environmental biology with demonstrations, lab activities and field trips. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: Recommended corequisite: BIOL 2206. (BIO 1671)
- BIOL 2206 ENVIRONMENTAL BIOLOGY LECTURE (2-2-0).** An investigation into the biological, social, political, and economic effects of overpopulation, resource depletion and pollution. Course encourages the expression of diverse opinions and critical thinking on key environmental issues. Skills: E (BIO 1672)
- BIOL 2306 THE LIVING PLANET (3-3-0).** A survey of the major biomes of the world, environmental interactions of species, populations and community dynamics, and impact of humans on the world around them. Skills: E (BIO 1613)
- BIOL 2316 GENETICS (3-3-0).** An introduction to the basic concepts of human heredity and cytogenetics including mendelian, molecular, and population genetics. Skills: E Prerequisites: BIOL 1406. (BIO 2653)
- BIOL 2401 HUMAN ANATOMY (4-3-3).** A detailed review of the structure of the human body. Topics include cellular, integumentary, skeletal, muscular, neural, endocrine, circulatory, respiratory, digestive, urinary, and reproductive anatomy. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: BIOL 1406 or equivalent. (BIO 2714)

**BIOL 2402 HUMAN PHYSIOLOGY (4-3-3).** An in-depth inquiry into the physiology of the human body with an emphasis on the characteristics of physiological processes and the influence of environmental and other factors on these processes. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: CHEM 1405 and BIOL 2401 or equivalents with lab. (BIO 2724)

**BIOL 2420 INTRODUCTION TO MICROBIOLOGY (4-3-3).** An introduction to the microbial world including the basic characteristics of fungi, algae, bacteria, and viruses. Special emphasis is placed on applications to humans. This course will not count as credit toward the Associate of Science degree in Biology. Fee: \$24 Insurance: \$2 Skills: E (BIO 1704)

**BIOL 2421 MICROBIOLOGY (4-3-4).** Characteristics and life activities of micro-organisms and their interactions with their surroundings. Emphasis is placed on relationships that influence man: infection, immunity, parasitism, and control. Includes laboratory techniques. Fee: \$24 Insurance: \$2 Skills: E Prerequisites: BIOL 1406 and CHEM 1405.

## BIOTECHNOLOGY

**BITC 1311 INTRODUCTION TO BIOTECHNOLOGY (3-2-3).** An introduction to biotechnology including career exploration, history and applications of DNA/RNA technology, molecular biology, bioethics, and laboratory safe practices. The course is supplemented with laboratory exercises, demonstrations and field trips that illustrate the basic techniques of biotechnology including laboratory topics, and finally the course concludes with a consideration of bioethical issues relating to this powerful new technology. Fee: \$24 Insurance: \$2 Prerequisites: CHEM 1405 or equivalent and ENGL 1301 or equivalent. (BIT 1613)

**BITC 1401 BIOTECHNOLOGY LABORATORY INSTRUMENTATION (4-3-4).** Lecture will discuss theory, applications, and operation of various analytical instruments with an emphasis on protein purification. Laboratory exercises will focus on quantitative and qualitative analyses by chromatography, centrifugation, spectrophotometry, and electrophoresis. An introduction to protein bioinformatic tools is included. Fee: \$24 Insurance: \$2 Prerequisites: BITC 2401 or permission of instructor. (BIT 1624)

**BITC 1402 BIOTECHNOLOGY LABORATORY METHODS AND TECHNIQUES (4-3-4).** Emphasis is on researching information on the computer, laboratory operations, management, equipment, instrumentation, quality control techniques, and safety procedures. Lecture emphasis will be on biochemistry and bioorganic

topics. Laboratory practice will be in lab safety, mixing buffers, preparing solutions, and performing organic chemistry including separation techniques that are used in industry. Fee: \$24 Insurance: \$2 Prerequisites: BITC 1311, MATH 1314, BIOL 1406, CHEM 1411. (BIT 1614)

**BITC 2401 MOLECULAR BIOLOGY TECHNIQUES (4-3-4).** An introduction to the theory and laboratory techniques in molecular biology with an emphasis on DNA replication, transcription, gene expression and regulation, recombinant DNA and RNA techniques such as transformation, RT-PCR, Northern Blots and DNA bioinformatic tools. Fee: \$24 Insurance: \$2 Prerequisites: BIOL 1406, BITC 1402 or permission of instructor. (BIT 2624)

**BITC 2431 CELL CULTURE TECHNIQUES (4-3-4).** A study of cell culture techniques, the laboratory emphasizes the principles and practices of initiation, cultivation, maintenance, and the preservation of cell lines including applications such as biomanufacturing and project management. Basic immunology including ELISAs and Western Blots are also taught. Fee: \$24 Insurance: \$2 Prerequisites: BITC 1402 or permission of instructor. (BIT 2614)

**BITC 2486 INTERNSHIP-BIOLOGICAL TECHNOLOGY/TECHNICIAN I (4-1-20).** The experience can be internal to the college where the student prepares kits for the Biotechnology Center for distribution under the supervision of a trained ACC instructor. Activities include designing and refining laboratory protocols for the classroom use. Or the experience can be external to the college, where the student is mentored and supervised by a workplace employee. This may be paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. (Capstone for certificate or elective for A.A.S.). Insurance: \$2 Prerequisites: Assigned by the College. (BIT 2634)

**BITC 2487 INTERNSHIP-BIOLOGICAL TECHNOLOGY/TECHNICIAN II (4-1-20).** This is an experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry partner. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college that directly relate to specific occupational outcomes. This may be paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. (Capstone course for A.A.S.). Insurance: \$2 (BIT 2644)

**QCTC 1242 QUALITY ASSURANCE FOR THE BIOSCIENCES (2-2-0).** Information on quality assurance principles and applications; designed to introduce the student to the quality assurance profession in the biotechnology, biopharmaceutical, and biomedical device industries.

## BUILDING CONSTRUCTION TECHNOLOGY

- CNBT 1191 SPECIAL TOPICS IN CONSTRUCTION/BUILDING TECHNOLOGY/TECHNICIAN (1-0-2).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$12 Insurance: \$3 Prerequisites: Department approval.
- CNBT 1204 RESIDENTIAL AND LIGHT COMMERCIAL BLUEPRINT READING (2-2-0).** Blueprint reading covering the theory of projection, architectural and engineering symbols, relationship of views, and measuring with emphasis on residential and light commercial construction. Prerequisites: CNBT 1411 or department approval.
- CNBT 1205 RESIDENTIAL AND LIGHT COMMERCIAL BLUEPRINT READING (2-2-0).** Blueprint reading covering the theory of projection, architectural and engineering symbols, relationship of views, and measuring with emphasis on residential and light commercial construction. Prerequisites: CNBT 1411 or department approval.
- CNBT 1210 CONSTRUCTION METHODS AND MATERIALS: BEGINNING WOODWORKING (2-1-2).** An introduction to construction materials and methods and their applications. A beginning course in wood working which allows students to progress through a logical sequence of courses to reach a goal of being a cabinet maker or a furniture maker or both. Fee: \$16 Insurance: \$3
- CNBT 1211 CONSTRUCTION METHODS & MATERIALS: INTERMEDIATE WOODWORKING & FURNITURE (2-1-2).** An introduction to construction materials and methods and their applications. An intermediate woodworking course in which students learn the skills and techniques of building furniture. The milling processing of jointing, planing, and table sawing are stressed as quality wood working skills. Hardwood joinery techniques are introduced as students learn the tolerances required to build fine furniture. Fee: \$16 Insurance: \$3 Prerequisites: CNBT 1210 or department approval.
- CNBT 1280 COOPERATIVE EDUCATION & CONSTRUCTION/BUILDING TECHNOLOGY (2-1-7).** Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. Insurance: \$3 Prerequisites: Department approval.

- CNBT 1291 SPECIAL TOPICS IN CONSTRUCTION/BUILDING TECHNOLOGY/TECHNICIAN (2-1-2).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. May be repeated for credit. Fee: \$16 Insurance: \$3
- CNBT 1305 RESIDENTIAL & LIGHT COMMERCIAL BLUEPRINT READING (3-3-0).** Blueprint reading covering the theory of projection, architectural and engineering symbols, relationship of views, and measuring with emphasis on residential and light commercial construction. Fee: \$16 Prerequisites: CNBT 1411 or department approval.
- CNBT 1311 CONSTRUCTION METHODS AND MATERIALS: ADVANCED FURNITURE CONSTRUCTION (3-2-4).** An introduction to construction materials and methods and their applications. An advanced course in which students further develop the refined skills and techniques of building fine furniture. Students will construct and finish a fine hardwood secretary table using hand and power tools to perform complex joinery techniques. Design and function will be emphasized. Instruction will include characteristics and behavior of wood that dictate quality construction techniques. Fee: \$24 Insurance: \$3 Prerequisites: WDWK 1413 or CNBT 1211 or department approval. (BCT 2054)
- CNBT 1342 BUILDING CODES AND INSPECTIONS (3-3-0).** An examination of the building codes and standards applicable to building construction and inspection processes. Prerequisites: CNBT 1411 or department approval.
- CNBT 1346 CONSTRUCTION ESTIMATING I (3-3-0).** Fundamentals of estimating materials and labor costs in construction. Students will read blueprints and interpret building specifications to verify dimensions of building components and determine total count of those components. Verification of construction procedures described in building specifications; and calculate costs for materials, labor, and contractor services. Prerequisites: CNBT 1411, CNBT 1305 or department approval.
- CNBT 1391 SPECIAL TOPICS IN CONSTRUCTION/BUILDING TECHNOLOGY/TECHNICIAN (3-2-2).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Repeatable for credit. Fee: \$20 Insurance: \$3 Prerequisites: Department approval.
- CNBT 1402 MECHANICAL, PLUMBING AND ELECTRICAL SYSTEMS IN CONSTRUCTION (4-3-3).** A presentation of the basic mechanical, plumbing and electrical components in construction and their relationship to the overall building. Fee: \$20 Insurance: \$3

- CNBT 1411 CONSTRUCTION METHODS AND MATERIALS (4-3-3).** An introduction to construction materials and methods and their applications. This is a hands-on survey course which has four components: construction management, concrete/masonry, carpentry, and woodworking. Students learn to use math, blueprints, building specifications, optical leveling equipment, hand tools, portable power tools, and stationary power tools in a sequence of learning activities designed for students to acquire entry level skills and knowledge of the construction industry. Fee: \$24 Insurance: \$3 (BCT 1014)
- CNBT 1413 CONCRETE-RESIDENTIAL (4-3-3).** A study of the various techniques for concrete utilization in residential and light construction from the theoretical concepts of hydration to the practical experience of verifying site conditions, interpreting data used to establish conditions of level, square, plumb, parallel, and perpendicular, tying steel, and placing and finishing a concrete slab. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 1024)
- CNBT 1446 CONSTRUCTION ESTIMATING I (4-3-3).** Fundamentals of estimating materials and labor costs in construction. The student will identify estimating procedures; estimate materials from blueprints; and calculate labor units and costs. (BCT 2064)
- CNBT 1449 CONCRETE-COMMERCIAL AND INDUSTRIAL (4-3-3).** In-depth coverage of the various techniques used in concrete utilization in commercial and industrial construction. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 and CNBT 1413. (BCT 2114)
- CNBT 1471 BUILDING FOR RESOURCE CONSERVATION (4-3-3).** For the advanced student: skills and knowledge in theory and use of tools, materials, and techniques used by construction industry to conserve energy, materials, water, and human resources. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411. (BCT 2074)
- CNBT 1491 SPECIAL TOPICS IN CONSTRUCTION/BUILDING TECHNOLOGY/TECHNICIAN (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Repeatable for credit. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval.
- CNBT 2280 COOPERATIVE EDUCATION-CONSTRUCTION/BUILDING TECHNOLOGY/TECHNICIAN (2-1-7).** Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. Insurance: \$3 Prerequisites: CNBT 1411 or department approval.
- CNBT 2332 PROJECT SCHEDULING (3-3-0).** A study of conventional scheduling using critical-path-method, precedence and arrow networks, gantt charts, monthly reports, and crashing time schedule. Prerequisites: CNBT 1411 or department approval.
- CNBT 2335 COMPUTER-AIDED CONSTRUCTION SCHEDULING (3-3-0).** Advanced construction scheduling utilizing computer scheduling software to perform various scheduling procedures. Prerequisites: CNBT 2332.
- CNBT 2337 CONSTRUCTION ESTIMATING II (3-3-0).** Advanced estimating concepts using computer software programs for the construction and crafts. Prerequisites: CNBT 1346.
- CNBT 2344 CONSTRUCTION MANAGEMENT II (3-3-0).** A management course in contract documents, safety, planning, scheduling, production control, and law and labor. Topics include contracts, planning, cost and production peripheral documents, and cost and work analysis. Focus will be on the responsibilities and duties of a sub-contractor. Prerequisites: CNBT 1411, CNBT 1305, or department approval.
- CNBT 2346 CONSTRUCTION MANAGEMENT III (3-3-0).** An advanced course in construction safety, project management, scheduling, material handling, layout, payment scheduling, and inspection. Focus will be on the responsibilities and duties of the general contractor and the business of general contracting. Prerequisites: CNBT 2344.
- CNBT 2442 CONSTRUCTION MANAGEMENT I (4-3-3).** Human relations management skills in motivation on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making. (BCT 2024)
- CNBT 2444 CONSTRUCTION MANAGEMENT II (4-3-3).** A management course in contract documents, safety, planning, scheduling, production control, and law and labor. Topics include contracts, planning, cost and production peripheral documents, and cost and work analysis. Fee: \$24 Prerequisites: CNBT 1411. (BCT 2024)
- CRPT 1191 SPECIAL TOPICS IN CARPENTER I (1-0-2).** Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$10 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 2081)
- CRPT 1291 SPECIAL TOPICS IN CARPENTER I (2-1-2).** Topics address recently identified current events, skills, knowledges, and/or attitudes and

behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$16 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 2082)

- CRPT 1411 CONVENTIONAL ROOF SYSTEMS (4-3-3).** Study of the principles of design and construction of a conventional roof system incorporating gable, hip, and intersections. Emphasis on safe work practices and the selection, use and maintenance of tools and equipment. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411. (CNBT 1044)
- CRPT 1415 CONVENTIONAL WALL SYSTEMS (4-3-3).** Instruction on conventional wall and floor systems, and installation of trusses of wood frame construction. Topics include math to solve construction problems, identification of components, slab and building layout, build up of floor and wall members, construction of a floor and wall system and layout and installation of wood trusses. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval.
- CRPT 1441 CONVENTIONAL EXTERIOR FINISH SYSTEMS (4-3-3).** Skill development in the installation of exterior finish systems and components including the placement and installation of cornice, windows, doors, siding, and flashing. Emphasis on safe work practices and the selection, use, and maintenance of tools and equipment. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 2134)
- CRPT 1445 CONVENTIONAL INTERIOR FINISH SYSTEMS (4-3-3).** Instruction in the installation of interior finish systems and components including the placement and installation of doors and trim and floor, wall, and ceiling finishes. Emphasis on safe work practices and the selection, use, and maintenance of tools and equipment. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval.
- CRPT 1491 SPECIAL TOPICS IN CARPENTER (4-3-3).** Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 2084)
- CRPT 2335 METAL WALL SYSTEMS (3-2-2).** Instruction in metal wall system construction. Topics include walls, partitions, framing materials, and fastening systems with emphasis on safe work practices and the selection, use, and maintenance of tools and equipment. Fee: \$20 Insurance: \$3 Prerequisites: Departmental approval.

- CRPT 2435 METAL WALL SYSTEMS (4-3-3).** Instruction in metal wall system construction. Topics include walls, partitions, framing materials, and fastening systems with emphasis on safe work practices and the selection, use and maintenance of tools and equipment. Fee: \$24 Insurance: \$3 Prerequisites: CNBT 1411 or department approval.
- OSHT 1405 OSHA REGULATIONS<sup>6</sup> CONSTRUCTION INDUSTRY (4-3-3).** A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry. Fee: \$24 Insurance: \$3
- WDWK 1191 SPECIAL TOPICS IN CABINET MAKER AND MILLWORKER I (1-0-2).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$10 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 2081)
- WDWK 1291 SPECIAL TOPICS IN CABINET MAKER AND MILLWORKER (2-1-2).** Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$16 Insurance: \$3 Prerequisites: CNBT 1411 or department approval. (BCT 2082)
- WDWK 1413 CABINET MAKING (4-3-3).** Introduction to cabinet construction, including base and upper units and shelving using typical carcass joinery, and hardwood face frame joinery. Students learn correct and safe methods of millwork, and install plastic laminate and hardware. Fee: \$20 Insurance: \$3 Skills: P Prerequisites: CNBT 1411 or instructor approval. (BCT 1054)
- WDWK 1491 SPECIAL TOPICS IN CABINET MAKER AND MILLWORKER (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. May be repeated for credit. Fee: \$20 Insurance: \$3 Skills: P (BCT 2054)
- WDWK 2451 CABINET MAKING II (4-3-3).** Advanced skills in machine woodworking and hand craftsmanship. Emphasizes advanced design and door and drawer construction, laminate laying, and customer and co-worker relations. Fee: \$20 Insurance: \$3 (BCT 2014)

## CHEMISTRY

**CHEM 1405 INTRODUCTION TO CHEMISTRY (4-3-3).** An introduction to the basic concepts of chemistry. Includes the metric system, atomic structure, the periodic table, ionic and covalent bonding, nomenclature of chemical elements and compounds, balancing chemical reactions, oxidation/reduction, states of matter, and solution concentrations. Some fundamental mathematical concepts crucial to chemistry are also covered. Does not count as science credit for degrees in sciences and engineering. Fee: \$16 Insurance: \$2 Prerequisites: Two years high school Algebra or MATD 0390. (CHM 1614)

**CHEM 1411 GENERAL CHEMISTRY I (4-3-3).** Covers the fundamental facts, laws, principles, theories, and concepts of chemistry necessary for further work in science or science-related subjects. Stresses atomic structure, periodic properties of matter, chemical bonding, and molecular geometry of organic and inorganic molecules, states of matter, stoichiometry, and properties of solutions. Fee: \$16 Insurance: \$2 Skills: B Prerequisites: One year of high school chemistry or CHEM 1405; two years of high school algebra or MATD 0390. (CHM 1634)

**CHEM 1412 GENERAL CHEMISTRY II (4-3-3).** A continuation of CHEM 1411. Stresses the quantitative aspects of kinetics, chemical equilibria, acid-base theories, coordination complexes, thermodynamics, and electrochemistry. Includes introductions to organic chemistry and nuclear chemistry. Fee: \$16 Insurance: \$2 Prerequisites: CHEM 1411 and MATH 1314. (CHM 1644)

**CHEM 2423 ORGANIC CHEMISTRY I (4-3-3).** An introduction to the chemistry of carbon compounds. An integration of aromatic and aliphatic compounds treating the principal classes of each. Emphasis on molecular structure theory, stereochemistry, structure and reactivity, and reaction mechanisms. Fee: \$16 Insurance: \$2 Skills: Z Prerequisites: CHEM 1412. (CHM 2614)

**CHEM 2425 ORGANIC CHEMISTRY II (4-3-3).** A continuation of CHEM 2423. Emphasis on the classes of aliphatic and aromatic compounds not previously discussed; spectroscopy; the use of instrumentation in organic chemistry; and introduction to the chemistry of carbohydrates, amino acids, proteins, and natural products. Qualitative analysis included in the laboratory work. Fee: \$16 Insurance: \$2 Prerequisites: CHEM 2423. (CHM 2624)

## CHILD CARE & DEVELOPMENT

**CDEC 1166 PRACTICUM I6CHILD DEVELOPMENT AND EARLY CHILDHOOD (1-0-10).** A specialized workplace experience designed to strengthen students' job skills by

providing an opportunity to use acquired skills and techniques with young children. This course and CDEC 1392 replace CDP 1634. NOTE: Ten hours per week of regularly scheduled lab experience is required; five hours of this must be completed at the ACC Lab School. Students who have taken 15-25 hours of CDEC must enroll in this course before completing additional CDEC hours. Offered in spring semester. Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test and completion of 15-25 hours of CDEC courses and departmental approval; Co-Requisite: CDEC 1392 and DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test.

**CDEC 1321 THE INFANT AND TODDLER (3-3-1).** A study of appropriate infant and toddler (birth to 3 years) child care programs. Topics covered include an overview of development; quality caregiving routines; appropriate environments; and age-appropriate teaching techniques. Regularly scheduled observations of young children are required. Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDEC 2321)

**CDEC 1359 CHILDREN WITH SPECIAL NEEDS (3-3-1).** A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, educational intervention, available resources, referral processes, and the advocacy role and legislative issues. Regularly scheduled observations of children are required. Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1323)

**CDEC 1392 SPECIAL TOPICS IN CHILD DEVELOPMENT (3-3-0).** A study of the attitudes and behaviors pertinent to child development and to the student's professional development. Emphasis is placed on observing and recording children's behaviors and utilizing this information in an applied setting, professional ethics and the workplace. This course and CDEC 1166 replace CDP 1634. Offered in spring semester. Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test and completion of 15-25 hours of CDEC courses and departmental approval. Co-requisite: CDEC 1166 and DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test.

**CDEC 1393 SPECIAL TOPICS IN FAMILY LIVING AND PARENTHOOD (3-3-1).** Emphasizes methods of parenting that encourage positive attitudes in children. Explores the adult/child relationship, including realistic principles that provide adults with the skill and understanding needed to confidently rear and teach children.

Topics include choosing parenthood, the early years, discipline, illness and death, and societal support. Integration of these principles will be applied to a variety of settings through field projects. Offered in Spring. Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1613)

- CDEC 1394 SPECIAL TOPICS IN EARLY CHILDHOOD (3-3-0).** An in-depth study of the attitudes and behaviors pertinent to early childhood and to the student's professional development. Emphasis is placed on using developmentally appropriate practices in the workplace, professional ethics and workplace behaviors. This course and CDEC 2166 replace CDP 2664. Offered in Spring. Skills: E Prerequisites: Instructor Approval and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-requisite: CDEC 2166 and DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test.
- CDEC 1413 CURRICULUM RESOURCES FOR EARLY CHILDHOOD PROGRAMS (4-3-3).** This course emphasizes the fundamentals of curriculum design and implementation in developmentally appropriate programs for young children. Topics covered include developmentally appropriate practices; curricula models; and anti-bias curricula. Requires 3 hours per week of supervised fieldwork with young children. Prerequisites: TECA 1311(CDP 1214) and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1314)
- CDEC 1417 CHILD DEVELOPMENT ASSOCIATE TRAINING I (4-3-4).** Based on the requirements for the Child Development Associate National Credential (CDA). Three of the 13 functional areas of study include family, program management, and professionalism. Additional topics include an overview of the CDA process, general observation skills, and child growth and development overview. Students must be working with a group of children in 0-5 years range. Instructor visits will be scheduled. (CDP 1114)
- CDEC 1419 CHILD GUIDANCE (4-3-3).** A summary of general theories related to child guidance and how guidance teaches young children autonomy and self-discipline, while promoting development of positive self-concept and pro-social behaviors. Three hours per week of supervised fieldwork with young children is required. Offered in Spring. Prerequisites: TECA 1311 (CDP 1214) and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1624)

- CDEC 1456 EMERGENT LITERACY FOR EARLY CHILDHOOD (4-3-3).** An exploration of principles, methods, and materials for teaching young children language and literacy through a play-based, integrated curriculum. Three hours per week of supervised fieldwork with young children is required. Offered in Fall. Prerequisites: TECA 1311 (CDP 1214) and CDEC 1413 (CDP 1314) (or concurrent enrollment in CDEC 1413 (CDP 1314)) and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1564)
- CDEC 1457 MATH & SCIENCE FOR EARLY CHILDHOOD (4-3-3).** An exploration of principles, methods, and materials for teaching young children math and science concepts through discovery and play. Three hours per week of supervised fieldwork with young children is required. Offered in Spring. Prerequisites: TECA 1311 (CDP 1214) and CDEC 1413 (CDP 1314) (or concurrent enrollment in CDEC 1413 (CDP 1314)) and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1424)
- CDEC 1458 CREATIVE ARTS FOR EARLY CHILDHOOD (4-3-3).** An exploration of principles, methods, and materials for teaching young children music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking. Three hours per week of supervised fieldwork with young children is required. Offered in Fall. Prerequisites: TECA 1311 (CDP 1214) and CDEC 1413 (CDP 1314) (or concurrent enrollment in CDEC 1413 (CDP 1314)) and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1584)
- CDEC 2166 PRACTICUM II - CHILD DEVELOPMENT AND EARLY CHILDHOOD (1-0-10).** A specialized, intensive workplace experience designed to strengthen a student's job skills by providing an opportunity to use acquired skills and techniques with young children. This course and CDEC 1394 replace CDP 2664. NOTE: Ten hours per week of regularly scheduled lab experience is required; five hours of this must be completed at the ACC Lab School. Offered in Spring. Skills: E Prerequisites: Departmental approval and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: CDEC 1394 and DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test.
- CDEC 2326 ADMINISTRATION OF PROGRAMS FOR CHILDREN (3-3-1).** A practical application of management procedures for early care and education programs, including a study of operating, supervising, and evaluating programs. Topics

covered include program philosophies, types of programs, policies, fiscal management, regulations, staffing, evaluation and communication. Regularly scheduled field assignments are required. Offered in Fall. Prerequisites: TECA 1311 or CDP 1214 or departmental approval and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 1643)

**CDEC 2328 ADMINISTRATION OF PROGRAMS FOR CHILDREN II (3-3-1).** An in-depth study of the skills and techniques required in managing early care and education programs. Topics covered include legal and ethical issues, personnel management, conflict resolution and fiscal analysis. Regularly scheduled field assignments are required. Offered in Spring. Prerequisites: CDEC 2326 (CDP 1643) or departmental approval and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 2223)

**CDEC 2341 THE SCHOOL AGE CHILD (3-3-1).** A study of age appropriate child care programs for children 5 to 13 years old. Topics covered include an overview of school age development, developmentally appropriate environments, activities, planning and teaching techniques appropriate for school age children. Weekly observations of school age children are required. Offered in Spring. Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 2413)

**CDEC 2386 INTERNSHIP6EARLY CHILDHOOD PROGRAMS (3-1-8).** A course designed to develop workplace competencies related to the child care center manager's role in working with staff and families. Eight hours per week of regularly scheduled fieldwork with a child care center director is required. Offered in Spring. Prerequisites: CDEC 2326 (CDP 1643) and concurrent enrollment in CDEC 2328 (CDP 2223) and DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDP 2233)

**CDEC 2422 CHILD DEVELOPMENT ASSOCIATE TRAINING II (4-3-4).** A continuation of the study of the requirements for the Child Development Associate National Credential (CDA). The six functional areas of study include safe, healthy, learning environment, self, social, and guidance. Students must be working with a group of children in 0-5 years range. Instructor visits will be scheduled. Prerequisites: C or above in CDP 1114 or CDEC 1417 and instructor approval. (CDP 1124)

**CDEC 2424 CHILD DEVELOPMENT ASSOCIATE TRAINING III (4-3-4).** A continuation of the study of the requirements for the Child Development Associate National Credential (CDA). The four functional areas of study are creative, cognitive, physical, and communication. Students must be working with a group of children in 0-5 years range. Instructor visits will be scheduled. Prerequisites: C or above in CDP 1114 or CDEC 1417 and instructor approval. (CDP 1134)

**TECA 1303 FAMILY AND COMMUNITY (3-3-1).** A study of the relationship between the child, the family, the community, and early childhood educators. Also includes parent education, family and community lifestyles, child abuse, and current issues. Students will develop activities to enhance understanding of diverse lifestyles and multi-cultural influences. Field projects in the community are required. Offered in Fall. (CDP 1333) Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDEC 1303)

**TECA 1311 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3-3-1).** An introduction to the profession of early childhood education. Topics covered include developmentally appropriate programs for young children; the history of early care and education; future trends and issues of the early childhood profession. One hour per week of supervised fieldwork with young children is required. (CDP 1214) Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDEC 1411)

**TECA 1318 NUTRITION, HEALTH, AND SAFETY (3-3-1).** A study of nutrition, health, safety, and related activities, including skill development in management of issues, guidelines, and practices in nutrition, as well as community health, hygiene, safety, and legal implications. Integration of these principles will be applied to a variety of settings through field projects. (CDP 1423) Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDEC 1318)

**TECA 1354 CHILD GROWTH AND DEVELOPMENT (3-3-1).** A study of the principles of normal child growth and development from conception to adolescence. Topics covered include physical, social-emotional and cognitive development; influences on development; and methods of child observation. Regularly scheduled observations of children are required. (CDP 1023) Prerequisites: DEVR 0303 and DEVW 0403 or satisfactory score on appropriate placement test. Co-Requisite: DEVR 1303 and DEVW 1403 or satisfactory score on appropriate placement test. (CDEC 1354)

## COMMERCIAL MUSIC

- MUSB 1301 LEGAL ASPECTS OF THE ENTERTAINMENT INDUSTRY (3-3-0).** A course in the basics of copyright law and the various agreements used in the entertainment industry with emphasis on contracts used by music publishers, record companies, artist management, record producers, film and television producers, and booking agencies. Materials will include actual and sample contracts used in the music business, such as recording agreements, publishing agreements and management agreements. We will also refer to current articles in newspapers and trade publications in order to examine legal developments in the music industry. (CMM 2613)
- MUSB 1305 SURVEY OF THE MUSIC BUSINESS (3-3-0).** An overview of the music industry including songwriting, live performance, the record industry, music merchandising, contracts and licenses, and career opportunities. Discussion regarding Music Business on the Internet will be included. (CMM 1613)
- MUSB 1341 CONCERT PROMOTION AND VENUE MANAGEMENT (3-3-0).** A course in the basics of concert promotion and venue management including considerations in purchasing a club; concert promotion and advertising; talent buying; city codes; insurance; Texas Alcoholic Beverage Commission Regulation; American Society of Composers, Arrangers, and Producers (ASCAP/BMI) licenses; personnel management; and concert production and administration. (CMM 1653)
- MUSB 1491 SPECIAL TOPICS IN MUSIC BUSINESS MANAGEMENT AND MERCHANDISING: STUDENT INITIATED PROJECT (4-3-4).** Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Advanced work in areas of special interest with the approval of the instructor. May be repeated for credit with different emphasis. The primary objective of this course is to apply the skills learned in other Commercial Music Management courses. This is a hands on, project oriented course aimed at helping students create a portfolio of their work. Artists and their music will be our focus. Each student must design and complete their own project with instructor approval. The student will submit a written proposal outlining the project they have chosen within the first two weeks of the semester. After approval is given, the student will meet with the instructor on a weekly basis to discuss the project. The student will be evaluated for timeliness and professionalism as well as content. Each student must complete their project in order to receive credit for the class. May be repeated for credit with different emphasis. Prerequisites: Departmental approval. (CMM 2823)
- MUSB 2301 MUSIC MARKETING AND MERCHANDISING (3-2-2).** A study of the methods of distribution, retailing, and wholesaling. Topics include the basics of purchasing, inventory control, shipping and receiving, returns, pricing and cost analysis, merchandising, retail display, sales promotion, advertising, security and shrinkage, personnel management, and relationships between retailers and distributors. (CMM 2643)
- MUSB 2305 MUSIC PUBLISHING (3-3-0).** A study of the administrative and marketing aspects of music publishing including the application of current copyright law, developing songwriters, rights exploration, and royalty collection. (CMM 2623)
- MUSB 2309 THE RECORD INDUSTRY (3-3-0).** A study of the history of the record industry and the organization of large and small record companies. Topics include record company functions such as A & R, promotion, marketing, business affairs, and administration and distribution. (CMM 1633)
- MUSB 2345 LIVE MUSIC AND TALENT MANAGEMENT (3-3-0).** An examination of the role, scope, and activities of the talent manager including establishing the artist/manager relationship; planning the artist's career; and developing goals, strategies, and tactics with an overall view of the live music business. (CMM 1623)
- MUSB 2386 INTERNSHIP/MUSIC BUSINESS MANAGEMENT AND MERCHANDISING (3-0-15).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Prerequisites: Department approval. (CMM 2813)
- MUSC 1213 COMMERCIAL MUSIC THEORY I (2-1-2).** Introduction to chord progressions, song forms, and harmonic techniques used in commercial music. Topics include modern chord notation and chord voicings. Additional topics include use of scales and modes, rhythmic notation and interpretation. To be taken concurrently with MUSC 1311. Prerequisites: MUSI 1301 or instructor approval. (CMM 1413)
- MUSC 1303 HISTORY OF POPULAR MUSIC (3-3-0).** A study of commercial music industry trends and developments through historical analysis. Topics include the evolution of the music industry with emphasis on the development of popular musical styles and the impact of culture and technology on industry growth. (CMM 1663)

- MUSC 1311 COMMERCIAL MUSIC SIGHT SINGING AND EAR TRAINING I (3-3-0).** Introduction to basic aural, visual, and vocal experiences in dictation and singing at sight with emphasis on identification of chord progression, motion, and melody/harmony relationship of popular music. To be taken concurrently with MUSC 1213. Prerequisites: Instructor approval. (CMM 1312)
- MUSC 1321 SONGWRITING (3-3-0).** Introduction to the techniques of writing marketable songs including the writing of lyrics and melodies, setting lyrics to music, developing lyrical and musical hooks, analyzing the marketplace, and developing a production plan for a song demo. (CMM 2213)
- MUSC 1325 ACOUSTICS (3-2-2).** Presentation of general principles of sound in air, characteristics of sound in recording, and applications of sound reinforcement. Topics include acoustical properties of studios, live performance facilities, resonances, and electronic and acoustic control.
- MUSC 1327 AUDIO ENGINEERING I (3-2-2).** An overview of the modern recording studio and related personnel. Topics include basic studio electronics and acoustic principles, wave form analysis, microphone concepts and miking techniques, studio set up and signal flow, recording console theory, signal processing concepts, tape machine principles and operation, and an overview of mixing and editing. (CMM 1703)
- MUSC 1331 MUSICAL INSTRUMENT DIGITAL INTERFACE (MIDI) I (3-2-2).** An overview of Musical Instrument Digital Interface (MIDI) systems and applications. Topics include the history and evolution of MIDI, hardware requirements, computer numbering systems, channels and modes, the MIDI language, and typical implementation of MIDI applications in the studio environment using software-based sequencing programs. (CMM 1713)
- MUSC 1333 SYNTHESIS I (3-2-2).** A study of sound synthesis including sound considerations, electronic sound sources, basic signal processing, and voltage control and modulation. Topics include additive, subtractive, and AM and FM synthesis types. The student will also receive an introductory overview of digital audio sampling and sample processing. (CMM 1733)
- MUSC 1491 SPECIAL TOPICS IN MUSIC: REMIXING (4-2-4).** Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The student will acquire proficiency in skills that are used in much of today's popular music. Using audio and MIDI sequencing tools in conjunction with synthesizers, students will learn the basic techniques necessary to produce finished remixes of previously recorded musical compositions. Prerequisites: MUSC 1327, MUSC 1331, and MUSC 1333 or departmental approval.
- MUSC 2213 COMMERCIAL MUSIC THEORY II (2-1-2).** Continuation of Commercial Music Theory I with emphasis on composing and harmonizing melodies. Study will stress using appropriate principles of chord substitution, extended chord voicings and use of altered scales. To be taken concurrently with MUSC 2311. Prerequisites: MUSC 1311, MUSC 1213 and instructor approval. (CMM 2423)
- MUSC 2311 COMMERCIAL MUSIC SIGHT SINGING AND EAR TRAINING II (3-3-0).** Continuation of Commercial Music Sight Singing and Ear Training I with emphasis on chromatic tonalities and melodies. Use of the blues scales and altered modes will be included. To be taken concurrently with MUSC 2213. Prerequisites: MUSC 1311, MUSC 1213 and instructor approval. (CMM 2322)
- MUSC 2319 ORCHESTRATION (3-3-0).** Exploration of writing for voices and instruments to include ranges, transposition, and idiosyncrasies of each instrument with emphasis on commercial music chord voicings. Also to include work with computer/MIDI based systems. Prerequisites: MUSI 1311, MUSI 1116 or instructor approval. (CMM 2713)
- MUSC 2345 SYNTHESIS II (3-2-2).** A continuation of Synthesis I including hybrid synthesis and digital sampling. Prerequisites: MUSC 1333 or instructor approval. (CMM 1743)
- MUSC 2355 MUSICAL INSTRUMENT DIGITAL INTERFACE (MIDI) II (3-2-2).** Advanced study of and skill development in music notation software at a professional level, including large score notation. The class will also study sequencing technology, hybrid sequencing and audio/MIDI techniques. Prerequisites: MUSC 1311 or instructor approval. (CMM 1763)
- MUSC 2427 AUDIO ENGINEERING II (4-3-2).** A continuation of Audio Engineering I with emphasis on implementation of the techniques and theories of the recording process. Topics include applications of microphones, the audio console, the multitrack tape recorder, and signal processing devices in recording session environments. Prerequisites: MUSC 1327 or instructor approval. (CMM 1723)
- MUSC 2447 AUDIO ENGINEERING III (4-3-2).** Presentation of advanced procedures and techniques utilized in recording and manipulating audio information. Topics include advanced computer-based console automation, hard disk based digital audio editing, nonlinear digital multitrack recording, and advanced engineering project completions. Prerequisites: MUSC 1327, MUSC 2427 or instructor approval. (CMM 1773)
- MUSC 2448 AUDIO ENGINEERING IV (4-3-2).** Examination of the role of the producer including recording, mixing, arranging, analyzing projects,

session planning, communication, budgeting, business aspects, technical considerations, and music markets. Prerequisites: MUSC 1327, MUSC 2427, MUSC 2447 or instructor approval. (CMM 1783)

- MUSP 1142 SMALL COMMERCIAL MUSIC ENSEMBLE (1-0-4).** Participation in a small commercial music ensemble concentrating on commercial music performance styles. The class will focus on rock and blues performance styles. May be repeated for credit. Prerequisites: Instructor approval. (CMM 2161)
- MUSP 1146 SMALL COMMERCIAL MUSIC ENSEMBLE: COUNTRY (1-0-4).** Participation in a country ensemble concentrating on commercial music performance styles. May be repeated for credit. Prerequisites: Instructor approval. (CMM 2171)
- MUSP 1148 SMALL COMMERCIAL MUSIC ENSEMBLE: IMPROVISATION (1-0-4).** Participation in a small ensemble concentrating on improvisation of commercial music performance styles. Jazz, blues and Latin music will be emphasized. May be repeated for credit. Prerequisites: MUSI 1311, MUSI 1116 or instructor approval. (CMM 2723)
- MUSP 1150 SMALL COMMERCIAL MUSIC ENSEMBLE: JAZZ (1-0-4).** Participation in a jazz ensemble concentrating on commercial music performance styles. May be repeated for credit. Prerequisites: Instructor approval. (CMM 2181)
- MUSP 1151 SMALL COMMERCIAL MUSIC ENSEMBLE: RECORDING (1-0-4).** Participation in a small recording ensemble concentrating on commercial music performance styles. May be repeated for credit. Prerequisites: Instructor approval. (CMM 2191)
- MUSP 1329 LIVE PERFORMANCE PRESENTATION (3-2-2).** A study of the presentation of music to the public including development of image and stagecraft, production elements, and effective presentation programming. (CMM 2633)

## COMPUTER INFORMATION SYSTEMS

- BCIS 1305 BUSINESS COMPUTER APPLICATIONS (3-3-1).** Computer terminology, hardware, software, operating systems, and information systems relating to the business environment will be covered. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. Fee: \$12 Skills: E

- INEW 2338 ADVANCED JAVA PROGRAMMING: VISUAL (3-2-2).** Continued study of the use of the Java programming language for writing complex and sophisticated stand-alone applications and internet Applets having visual objectives. Fee: \$12 Prerequisites: ITSE 2317 or departmental approval. (ITSE 2371)
- ITMC 1319 INSTALLING AND ADMINISTERING WINDOWS 2000 (3-2-2).** An introduction to Microsoft Windows 2000 operating system in a single domain environment. Topics include basic installation, configuration tasks, and day-to-day administration tasks in a Windows 2000-based network. Fee: \$12 Prerequisites: ITMC 1342 or departmental approval. (ITNW 2356)
- ITMC 1342 IMPLEMENTING MICROSOFT WINDOWS 2000 NETWORK INFRASTRUCTURE (3-2-2).** Installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows 2000 server family of products. Fee: \$12 Prerequisites: ITNW 1325 or departmental approval. (ITNW 2351)
- ITNW 1325 FUNDAMENTALS OF NETWORKING (3-3-1).** Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software. Fee: \$12 Prerequisites: or Corequisite: COSC 1300 or department approval. (CIS 1303)
- ITNW 1337 INTRODUCTION TO THE INTERNET (3-2-2).** Introduction to the Internet with emphasis on using the World Wide Web to locate, transfer, and publish information. Survey of emerging technologies on the Internet. Fee: \$12 Prerequisites: or corequisite COSC 1300 or COSC 1301 or department approval. (CIS 1063)
- ITNW 2405 NETWORK ADMINISTRATION FOR NOVELL NETWARE (4-3-3).** Preparation to effectively manage a Novell NetWare network. Topics include network components, user accounts and groups, network file systems, file system security, and network printing. Fee: \$12 Prerequisites: ITMC 1342 or department approval. (CIS 2304)
- ITSC 1307 UNIX OPERATING SYSTEM I (3-2-2).** A study of the UNIX operating system including multi-user concepts, terminal emulation, use of system editor, basic UNIX commands, and writing script files. Topics include introductory systems management concepts. Fee: \$12 Prerequisites: One semester of programming. (ITSW 1306)
- ITSC 1309 INTEGRATED SOFTWARE APPLICATIONS I (3-2-2).** Integration of applications from popular business productivity software suites. Instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Fee: \$12 Prerequisites: COSC 1301 or COSC 1300 (for CIT majors only) or department approval. (CSC 1013)

- ITSC 1313 INTERNET/WEB PAGE DEVELOPMENT (3-2-2).** Instruction in the use of Internet services and the fundamentals of web page design and web site development. Fee: \$12 Prerequisites: or Corequisite: COSC 1300 or department approval.
- ITSC 1325 PERSONAL COMPUTER HARDWARE (3-2-2).** A study of current personal computer hardware including personal computer assembly and upgrading, setup and configuration, and troubleshooting. Fee: \$12 Prerequisites: COSC 1300 and one semester of programming or department approval. (CIS 1093)
- ITSC 1327 MULTI-USER OPERATING SYSTEMS (3-3-1).** Summary of multi-user operating systems including a contrast of single user and multi-user systems. Investigation of a variety of multi-user operating systems, similarities, and differences. Fee: \$12 Prerequisites: COSC 1300 and one semester of programming. (ITSW 1327)
- ITSC 2337 UNIX OPERATING SYSTEMS II (3-2-2).** Advanced study of the UNIX operating system. Includes advanced concepts of system management and communication, the installation and maintenance of software, network security, and data integrity issues. Fee: \$12 Prerequisites: ITSC 1307 or departmental approval.
- ITSC 2346 COMPUTER CENTER MANAGEMENT (3-3-0).** Assessment of needs of a computing center and general principles of hardware and software acquisition, maintenance, licensing, and improving usage scheduling. Emphasis on interpersonal communication and management skills. Prerequisites: CIT major with sophomore standing or comparable work experience. (CIS 2083)
- ITSC 2364 PRACTICUM6CIS, GENERAL (3-0-21).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Prerequisites: Sophomore standing, B average, and department approval. (CIS 2053)
- ITSE 1331 INTRODUCTION TO VISUAL BASIC PROGRAMMING (3-2-2).** Introduction to computer programming using Visual BASIC. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. Fee: \$12 (CIS 1023)
- ITSE 1344 MASTERING MS VISUAL BASIC 6.0 DEVELOPMENT (3-2-2).** Skill development in the creation of database applications using component object model (COM). Sequential and random file access are also covered. A review of BASIC syntax is included. Fee: \$12 Prerequisites: ITSE 1331, COSC 1315 or department approval. (CIS 2043)
- ITSE 1345 INTRODUCTION TO ORACLE SQL AND PL/SQL (3-2-2).** An introduction to the design and creation of relational databases. Topics include storing, retrieving, updating, and displaying data using Structured Query Language (SQL) and Procedure Language (PL). Fee: \$12 Prerequisites: ITSE 2309. (CIS 2153)
- ITSE 1411 WEB PAGE PROGRAMMING (4-3-3).** Instruction in Internet Web Page programming and related graphic design issues including mark-up languages, Web sites, Internet access software, and interactive topics. May include use of HTML, CGI, JAVA, ASP or JavaScript. Fee: \$12 (ITSE 1491)
- ITSE 1450 SYSTEM ANALYSIS AND DESIGN (4-3-3).** Comprehensive introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools. Fee: \$12 Prerequisites: Two semesters of programming or department approval. (CIS 2024)
- ITSE 2309 INTRODUCTION TO DATABASE PROGRAMMING: ORACLE (3-2-2).** Application development using database programming techniques emphasizing database structures, modeling, and database access. This course instructs the student in the essential concepts and design methodology for the Relational Database Model as implemented by Oracle. Other topics include: the Data definition Language, the Data Manipulation Language, database normalization, transaction processing, security, multi-user problems and solutions. Fee: \$12 Prerequisites: COSC 1315 (or corequisite) or departmental approval. (ITSW 1372)
- ITSE 2313 WEB AUTHORING (JAVA SCRIPT) (3-2-2).** Instruction in designing and developing web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools. Fee: \$12 Prerequisites: ITSE 1331 or COSC 1315 and ITNW 1337 (CIS 2103)
- ITSE 2317 JAVA PROGRAMMING (INTERMEDIATE) (3-2-2).** Introduction to JAVA programming with object-orientation. Emphasis on the fundamental syntax and semantics of JAVA for applications and web applets. Fee: \$12 Prerequisites: ITSE 2321 or department approval. (CIS 2513)
- ITSE 2321 INTRO. TO OBJECT-ORIENTED PROGRAMMING (JAVA) (3-2-2).** Introduction to object-oriented programming. Emphasis on the fundamentals of structured design with classes, including development, testing, implementation, and documentation. Includes object-oriented programming techniques, classes, and objects. Fee: \$12 Prerequisites: COSC 1315 or ITSE 1411 OR department approval. (CIS 2503)

- ITSE 2339 ADVANCED WINDOWS PROGRAMMING USING C++ (3-3-1).** Further applications of windows programming techniques using C++, including file program testing, and documentation. This course covers the application of windows programming techniques using C++, including use of the MFC application framework. Fee: \$12 Prerequisites: ITSE 2431 or department approval. (CIS 2243)
- ITSE 2349 ADVANCED VISUAL BASIC PROGRAMMING (3-2-2).** Further applications of programming techniques using Visual BASIC. Topics include file access methods, data structures and modular programming, program testing and documentation. Database controls, SQL, classes, report writers, and Internet topics are also covered. Fee: \$12 Prerequisites: ITSE 1344 or department approval. (CIS 2103)
- ITSE 2356 ORACLE DATABASE ADMINISTRATION I (3-2-2).** Fundamentals of the tasks and functions required of a database administrator. While Oracle is the primary DBMS utilized, the concepts and procedures presented in this course are typical for any Database Management System server. Fee: \$12 Prerequisites: ITSE 1345 or department approval.
- ITSE 2357 ADVANCED OBJECT-ORIENTED PROGRAM (JAVA) (3-2-2).** Application of advanced object-oriented programming techniques such as abstract data structures, class inheritance, virtual functions, and exception handling. Fee: \$12 Prerequisites: ITSE 2317 or department approval. (CIS 2523)
- ITSE 2359 ADVANCED PROGRAMMING (OOA/OOD/OOP) (3-3-1).** Further applications of programming techniques. Topics include file access methods, data structures and modular programming, program testing and documentation. This course covers the basic theory and application of the methodology of Object-Oriented Analysis and Design, emphasizing static and dynamic system decomposition into objects and classes. Students may use either C++ or Java for their project's programming language. Programming examples are provided during lectures using either C++ or Java or both. Fee: \$12 Prerequisites: ITSE 2431 or ITSE 2321 or department approval. (CIS 2233)
- ITSE 2431 ADVANCED C++ PROGRAMMING (4-3-3).** Further application of C++ programming techniques including subjects such as file access, abstract data structures, class inheritance, and other advanced techniques. The following C++ programming topics are covered: classes, objects, function and operator overloading, inheritance and dynamic polymorphism, templates, exception handling, reference counting, complex data structures, complex input/output standard and file handling techniques, program documentation and other advanced C++ techniques. Fee: \$12 Prerequisites: COSC 1320 or department approval. (CIS 2204)
- ITSE 2437 ASSEMBLY LANGUAGE PROGRAMMING (4-3-3).** Comprehensive coverage of low-level computer operations and architecture. Includes design, development, testing, implementation, and documentation of programs; language syntax; data manipulation; input/output devices and operations; and file access. Fee: \$12 Prerequisites: Two semesters of programming. (CIS 1064)
- ITSW 1304 INTRODUCTION TO SPREADSHEETS (3-2-2).** Instruction in the concepts, procedures, and importance of electronic spreadsheets. Fee: \$12 Prerequisites: One semester of programming, or COSC 1301, or COSC 1300, or department approval. (CIS 1043)
- ITSW 1307 INTRODUCTION TO DATABASE (3-2-2).** Introduction to database theory and the practical applications of a database. Fee: \$12 Prerequisites: COSC 1300 or departmental approval. (ITSW 1407)
- ## COMPUTER SCIENCE
- COSC 1300 INTRODUCTION TO COMPUTING (3-3-1).** A survey course discussing computing terminology, components, programming concepts, and the computer's integration into business activities. Laboratory experience includes word processing, spreadsheets, presentation software and databases. Fee: \$8 Skills: R (CIS 1003)
- COSC 1301 PERSONAL COMPUTING (3-2-2).** A hands-on course for the development of skills needed to use personal computer systems for business, individual, and educational applications. Learn word processing, database management, spreadsheet development, and how to use the operating system. Keyboarding skills are not required, but are helpful. May not be applied toward a CSC degree. Fee: \$12 Skills: R (CSC 1003)
- COSC 1315 FUNDAMENTALS OF PROGRAMMING (3-3-1).** An introduction to computer concepts, logic, and computer programming. Includes designing, coding, debugging, testing, and documenting programs using a high-level programming language. Fee: \$12 Skills: B (CIS 1033)
- COSC 1320 C++ PROGRAMMING (3-2-2).** This is an introduction to the C++ programming language and its subset, the C programming language. Program structure, blocks, storage types, console and file I/O, functions, arrays, strings, pointers, call-by-reference, call-by-value, and dynamic memory allocation will be discussed. The concept of classes will be introduced. The differences between C++ and C will also be discussed. Fee: \$12 Prerequisites: COSC 1315 or department approval. (CIS 2003)
- COSC 2415 DATA STRUCTURES (4-3-3).** Investigation of techniques for program design, testing, and debugging. Data structures are studied including stacks, queues, linked lists and binary

trees. Searching, sorting, recursion, strings, and arrays are also covered. Taught in appropriate high-level language. Fee: \$12 Prerequisites: COSC 1320 or department approval. (CSC 1044)

**COSC 2425 COMPUTER ORGANIZATION AND MACHINE LANGUAGE: PC ASSEMBLY (4-3-3).** Computer organization and programming for the microcomputer. Emphasis on macros, assemblers, loaders, linkers, channels, subroutines, coroutines, internal and I/O operations, low level I/O, recursion, data manipulation including arrays and records. Fee: \$12 Prerequisites: Two semesters of programming or department approval. (CIS 2064)

## CREATIVE WRITING

**ENG 0021 WRITTEN PERFORMANCE LAB (1-0-1).** Rehearsal and performance of student's literary work under the direction of faculty or guest writer. An end of semester performance is required. Corequisite with ENGL 2308 Poetry. Prerequisites: ENGL 2307 (or the equivalents) and Instructor approval.

**ENG 2673 WRITING PRACTICE/INTERNSHIP (3-3-0).** Academic cooperation in Fine Arts to include individualized practice in editing, publication, journalism and writing craft through work on the College literary journal or newspaper or other approved program opportunities; internships available in the community. There is also opportunity for individual instruction of manuscript preparation for publication. Prerequisites: ENGL 1302 or the equivalent and approval by Instructor and Dean.

**ENGL 2307 CREATIVE WRITING (3-3-0).** Instruction in literary writing: prose, poetry, screenwriting and drama. Topics may vary. Possible markets for creative writing to be discussed. Prerequisites: ENGL 1301. (ENG 1653)

**ENGL 2307 CREATIVE WRITING & SCREENWRITING (3-3-0).** Students study and analyze the process of writing for film by examining story concept, theme, characterization, structure, and script formatting, and by creating synopses and treatments. Students write a screen play. Prerequisites: ENGL 1301 (or the equivalent) or instructor approval. (ENG 1653)

**ENGL 2307 CREATIVE WRITING & PLAY WRITING (3-3-0).** Students study and analyze the structure of different styles and movements of theater and how it differs from film and other genres of the written word. Students edit and critique plays, and write a one act play or 2 fifteen minute scenes. Prerequisites: ENGL 1301 (or the equivalent) or instructor approval. (ENG 1653)

**ENGL 2307 CREATIVE WRITING & POETRY WITH SPANISH IV TRANSLATION (3-3-0).** Students write poetry, study translation techniques and translate their own work and the work of others. Performance opportunity available. Corequisite with

SPAN 2389. Prerequisites: ENGL 1301 (or the equivalent) or instructor approval and SPAN 2311 or instructor approval. (ENG 1653)

**ENGL 2307 CREATIVE WRITING & POETRY (3-3-0).** Instruction in literary writing: poetry. Genre may vary. Possible markets for creative writing to be discussed. Prerequisites: ENGL 1302. (ENG 1653)

**ENGL 2307 CREATIVE WRITING & PROSE (3-3-0).** Instruction in literary writing: prose. Genre may vary. Possible markets for creative writing to be discussed. Prerequisites: ENGL 1301. (ENG 1653)

**ENGL 2308 ADVANCED WRITING WORKSHOP (3-3-0).** Continuation of ENGL 1301 with emphasis on persuasion and argumentation (prerequisite: ENGL 1301 or equivalent) or continuation of ENGL 2307 with emphasis on literary writing. Prerequisites: ENGL 2307 or equivalent or instructor approval. (ENG 1663)

**ENGL 2308 ADVANCED WRITING WORKSHOP & POETRY WITH WRITTEN PERFORMANCE LAB (3-3-0).** Continuation of 2307 with emphasis on poetry writing in a seminar setting. Corequisite with Written Performance Lab with emphasis on the rehearsal and performance of literary work under the direction of faculty or guest writers. Performance opportunity available. Prerequisites: ENGL 1301 and ENGL 2307 or instructor approval. (ENG 1663)

**ENGL 2308 ADVANCED WRITING WORKSHOP & PROSE WITH WRITTEN PERFORMANCE LAB (3-3-0).** Continuation of 2307 with emphasis on prose writing in a seminar setting. Corequisite with Written Performance Lab with emphasis on the rehearsal and performance of literary work under the direction of faculty or guest writers. Performance opportunity available. Prerequisites: ENGL 1301 and ENGL 2307 or instructor approval. (ENG 1663)

**ENGL 2308 ADVANCED WRITING WORKSHOP - SCREEN WRITING (3-3-0).** Continuation of ENGL 2307 & Screen Writing with an emphasis on editing and analysis in a seminar setting. Skills: E Prerequisites: ENGL 2307 & Screen Writing.

## CRIMINAL JUSTICE

**CJCR 1304 LE & PROBATION AND PAROLE (3-3-0).** A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines. Skills: R (CRJ 2053)

**CJCR 1400 LE & BASIC JAIL COURSE (4-3-2).** Provides instruction in human relations, observation, evaluation of prisoners, booking procedures, classification, mug shots, fingerprinting, strip searches, meals, medical services, visitation, inmates rights and privileges, detention areas, key, knife and tool control, disturbances, riots, fire procedures, and release procedures. Taught in accordance with the current TCLEOSE instructor guides provided by the Commission for course #1005. Skills: E

- CJLE 2420 TEXAS PEACE OFFICER PROCEDURES (4-3-4).** Study of the techniques and procedures used by police officers on patrol. Includes controlled substance identification, handling abnormal persons, traffic collision investigation, note-taking and report writing, vehicle operation, traffic direction, crowd control and jail operations. This is a TCLEOSE-approved sequencing course to satisfy requirements to sit for the Basic Peace Officer licensure exam in addition to obtaining an Associate's or Bachelor's Degree and approval of the college department administrator. Skills: R Prerequisites: Program Coordinator approval. (CRJ 2114)
- CJLE 2421 TEXAS PEACE OFFICER LAW (4-3-4).** Study of laws directly related to police field work. Topics include Texas Transportation Code, intoxicated driver, Texas Penal Code, elements of crimes, Texas Family Code, Texas Alcoholic Beverage Code, and civil liability. This is a TCLEOSE-approved sequencing course to satisfy requirements to sit for the Basic Peace Officer Licensure exam in addition to obtaining an Associate's or Bachelor's Degree and approval of the college department administrator. Skills: R Prerequisites: Program Coordinator approval. (CRJ 2104)
- CJLE 2522 TEXAS PEACE OFFICER SKILLS (5-3-5).** Requires the demonstration and practice of the skills of a police officer including patrol, driving, traffic stop skills, use of force, mechanics of arrest, firearm safety, and emergency medical care. This is a TCLEOSE-approved sequencing course to satisfy requirements to sit for the Basic Peace Officer licensure exam in addition to obtaining an Associate's or Bachelor's Degree and approval of the college department administrator. Fee: \$24 Insurance: \$3 Skills: R Prerequisites: Program Coordinator approval. (CRJ 2125)
- CJSA 1348 ETHICS IN CRIMINAL JUSTICE (3-3-0).** A study of ethical thought and issues facing the criminal justice professional. Topics include constitutional ethics, codes of conduct, and standards of conduct. Skills: R (CRJ 2143)
- CRIJ 1301 INTRODUCTION TO CRIMINAL JUSTICE (3-3-0).** History and philosophy of criminal justice and ethical considerations; crime defined: its nature and impact; overview of criminal justice system; law enforcement; court system; prosecution and defense; trial process; corrections. Skills: R (CRJ 1013)
- CRIJ 1306 COURT SYSTEMS AND PRACTICES (3-3-0).** The judiciary in the criminal justice system; structure of American court system; prosecution; right to counsel; pre-trial release; grand juries; adjudication process; types and rules of evidence and sentencing. Skills: R (CRJ 1133)
- CRIJ 1307 CRIME IN AMERICA (3-3-0).** American crime problems in historical perspective; social and public policy factors affecting crime; impact and crime trends; social characteristics of specific crimes; prevention of crime. Skills: R (CRJ 1113)
- CRIJ 1310 FUNDAMENTALS OF CRIMINAL LAW (3-3-0).** A study of the nature of criminal law; philosophical and historical development; major definitions and concepts; classification of crime; elements of crimes and penalties using Texas statutes as illustrations; criminal responsibility. Skills: R (CRJ 1123)
- CRIJ 1313 JUVENILE JUSTICE SYSTEM (3-3-0).** A study of the juvenile justice process to include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency. Skills: R (CRJ 2043)
- CRIJ 2301 COMMUNITY RESOURCES IN CORRECTIONS (3-3-0).** An introductory study of the role of the community in corrections; community programs for adults and juveniles; administration of community programs; legal issues; future trends in community treatment. Skills: R (CRJ 2083)
- CRIJ 2313 CORRECTIONAL SYSTEMS AND PRACTICES (3-3-0).** Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues. Skills: R (CRJ 2063)
- CRIJ 2314 CRIMINAL INVESTIGATION (3-3-0).** Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation. Skills: R (CRJ 1023)
- CRIJ 2323 LEGAL ASPECTS OF LAW ENFORCEMENT (3-3-0).** Police authority; responsibilities; constitutional constraints; laws of arrest, search, and seizure; police liability. Skills: R (CRJ 1033)
- CRIJ 2328 POLICE SYSTEMS AND PRACTICES (3-3-0).** The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues. Skills: R (CRJ 2093)
- ## CULINARY ARTS
- CULA 1191 SPECIAL TOPICS IN CULINARY ARTS CHEF TRAINING6VITICULTURE EXCURSION (1-0-3).** Optional trip to reinforce all materials covered in RSTO 1319. Students will be able to interact with various wineries, perform various samples of vintages from wineries toured and learn about wine making operations. Prerequisites: RSTO 1319 and Department approval.
- CULA 1191 SPECIAL TOPICS IN CULINARY ARTS CHEF TRAINING6CULINARIAN EXCURSION (1-0-3).** Culinary excursion trip to reinforce materials covered in CULA classes. Trip will consist of tours, demonstrations, interaction with regional chefs and food tastings. Prerequisites: Department approval.

- CULA 1301 BASIC FOOD PREPARATION (3-1-4).** A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism. Fee: \$24 Insurance: \$2 Prerequisites: FDNS 1301 and IFWA 1213. (CUL 1062)
- CULA 1341 AMERICAN REGIONAL CUISINE (3-1-6).** A study of the development of regional cuisines in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and build a portfolio of recipe strategies and production systems. Fee: \$24 Skills: P Prerequisites: IFWA 1213 and FDNS 1301. Department approval required.
- CULA 1345 INTERNATIONAL CUISINE (3-1-6).** The study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and other regions of the world. Fee: \$24 Insurance: \$2 Prerequisites: FDNS 1301, IFWA 1213, and CULA 1341 and Department approval.
- CULA 1391 SPECIAL TOPICS IN CULINARY ARTS/CHEFS TRAINING 6 CAJUN CUISINE (3-1-4).** Through lecture and hands-on cooking, students will explore Cajun and Creole cuisines and local food specialties of Southern Louisiana. Authentic recipes from working chefs from the region will be utilized. Correct cooking techniques and authentic traditional seasoning are emphasized. Fee: \$24 Insurance: \$2 Prerequisites: IFWA 1213, CULA 1301 or Department approval.
- CULA 1391 SPECIAL TOPICS IN CULINARY ARTS/CHEF TRAINING 6 MEAT PREPARATION AND COOKING (3-1-4).** A study of the preparation, storage and cooking techniques for beef, pork, lamb, poultry, seafood, and game. Class will cover moist heat and dry heat preparation methods as related to both classical and modern methods of preparation of dishes. Fee: \$24 Insurance: \$2 Skills: P Prerequisites: IFWA 1319 and Department approval.
- CULA 1391 SPECIAL TOPICS IN CULINARY ARTS/CHEF TRAINING 6 SENSORY EVALUATIONS (3-1-4).** An overview of the art of understanding and demonstrating the proper technique for using sensory evaluation to analyze food and beverages. Fee: \$24 Insurance: \$2 Skills: P Prerequisites: IFWA 1319 and Department approval.
- CULA 1391 SPECIAL TOPICS IN CULINARY ARTS/CHEF TRAINING 6 UNDERSTANDING BEERS (3-3-0).** An overview of understanding and evaluating the components and sensory evaluation of beers from around the world. Class will include an in-depth evaluation of the components of beers, production differences among styles and possible pairings with foods. Prerequisites: Prior approval from department. Must be 21 years old prior to start of class.

- CULA 2301 INTERMEDIATE FOOD PREPARATION (3-2-4).** Continuation of previous food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation; covers full range of food preparation techniques. Fee: \$24 Insurance: \$2 Prerequisites: Suggested: CULA 1301 and department approval.
- CULA 2302 SAUCIER (3-1-4).** Instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods. Fee: \$24 Insurance: \$2 Prerequisites: FDNS 1301 and IFWA 1213 and department approval. (CUL 1073)
- CULA 2336 CHARCUTERIE (3-1-4).** Advanced concepts in the construction of sausages, pates, and related forced meat preparations. Fee: \$24 Insurance: \$2 Prerequisites: FDNS 1301, IFWA 1213, and IFWA 1319 or Department approval.
- FDNS 1301 INTRODUCTION TO FOODS (3-2-2).** A study of the composition of food and the chemical and biological changes that occur in storage and processing. Includes preparation techniques and selection principles. Fee: \$24 Skills: G (CUL 1023)
- IFWA 1213 SANITATION AND SAFETY (2-2-0).** Introduction to sanitation and public health as related to the food service industry, including potential hazards that may occur in the operation and production of food.
- IFWA 1217 FOOD PRODUCTION AND PLANNING (MATH) (2-2-0).** Skill development in basic mathematical operations and study of their applications in the food service industry. Topics include percentages, weights and measures, ratio and proportion, weights and measures conversions, determination of portion costs for menu items and complete menus, portion control, and the increase and decrease of standard recipes.
- IFWA 1319 HOTEL, RESTAURANT, AND INSTITUTIONAL MEAT (3-2-3).** A study of the identification and characteristics of wholesale and retail cuts of meat; hotel, restaurant, and institutional cuts of meat; U.S.D.A. quality grades; quality control; and the Federal Meat Inspection Regulation. Fee: \$24 Insurance: \$2 Prerequisites: FDNS 1301 and IFWA 1213.
- IFWA 2343 PROFESSIONAL TECHNIQUES FOR COOKS/CATERERS (3-2-4).** A study and practice of professional techniques for cooks and caterers, including planning menus, serving, garnishing, preparing hors d'oeuvres, and displaying food showmanship. Fee: \$24 Insurance: \$2 Prerequisites: Department approval required.
- PSTR 1301 FUNDAMENTALS OF BAKING (3-2-4).** Fundamentals of baking including dough, quick breads, pies, cakes, cookies, tarts, and doughnuts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the use of proper flours. Fee: \$24 Insurance: \$2 Prerequisites: Department approval required.

**PSTR 2331 ADVANCED PASTRY SHOP (3-2-4).** A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques. Fee: \$24 Insurance: \$2 Prerequisites: PSTR 1301 and department approval.

**RSTO 1304 DINING ROOM SERVICE (3-3-1).** Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. Insurance: \$2

**RSTO 1317 NUTRITION FOR THE FOOD SERVICE PROFESSIONAL (3-3-0).** An introduction to nutrition including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques. (IFWA 1229)

**RSTO 1319 VITICULTURE AND ENOLOGY (3-2-3).** A study of the growing regions, production, processing, and distribution of domestic and international wines. Topics include types of wine grapes, varieties of wine, proper storage procedures, and the techniques of proper wine service. Fee: \$24 Insurance: \$2 Prerequisites: Must be 21 years old and receive department approval to take class.

**RSTO 2264 CULINARY PRACTICUM (2-0-15).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. Insurance: \$2 Prerequisite: department approval.

## DANCE

**DANC 1101 DANCE COMPOSITION I (1-1-2).** An introduction to the basic principles of composition and choreography with emphasis on the study, design, and evaluation of compositional forms. Performance opportunity available. May be repeated once for credit. Insurance: \$3 (DNC 1711)

**DANC 1102 DANCE COMPOSITION II (1-1-2).** A continuation of DANC 1101. May be repeated once for credit. Performance opportunity available. Insurance: \$3 Prerequisites: DANC 1101. (DNC 1721)

**DANC 1131 DANCE PERFORMANCE WORKSHOP (1-0-4).** Rehearsals and performances of dance works under the direction of faculty or guest choreographers. May be repeated for up to four credit hours. Performance opportunity available. Insurance: \$3 (DNC 1731)

**DANC 2303 HISTORY AND APPRECIATION OF DANCE (3-3-0).** An introductory survey course in the history and development of primitive, classical,

and contemporary dance forms. Involves a study of stylistically authentic dances from several of the major periods based on research and films. Skills: R (DNC 1623)

**DNC 1631 BALLET I (1-1-2).** An introduction to the fundamentals of classical ballet designed for the student with little or no training. Primary emphasis on placement and alignment of the body, turnout, stretches, barre work, simple adagio and allegro movements, brief history and French terminology, as well as other preparatory work necessary for the establishment of a basic technical foundation. May be repeated for one additional credit with instructor's approval. Insurance: \$3

**DNC 1641 MODERN DANCE I (1-1-2).** Introductory course in the fundamentals of modern dance technique. Students learn and practice warm-up exercises and dance sequences emphasizing articulation and coordination of body parts, rhythm, musicality and expressive qualities of movement. May be repeated for one additional credit with instructor's approval. Insurance: \$3

**DNC 1651 JAZZ DANCE I (1-1-2).** Introductory course designed for the student with little or no previous training. Primary emphasis on jazz dance technique; placement and alignment of the body, footwork, stretches, musicality and other preparatory work necessary for establishment of a basic technical foundation. Different styles of jazz dance such as musical theatre, show style, Broadway, funky jazz, television and movie styles are explored. May be repeated for one additional credit with instructor's approval. Insurance: \$3

**DNC 1671 DANCE IMPROVISATION I (1-1-2).** Introductory course designed for the beginning dance student. Improvisational dance techniques provide opportunities for students to explore and expand their personal range of creativity, movement and awareness. Activities include exercises and information on body alignment, muscular development and effective relaxation/breathing techniques. May be repeated for one additional credit with instructor's approval. Insurance: \$3

**DNC 2631 BALLET II (1-1-2).** A continued study of the technical fundamentals of classical ballet. Designed for the student with at least one semester of previous ballet training. Primary emphasis on sequence combinations of beginning ballet movements, positions of the body, vertical posture, centering coordination of *port de bras* with adagio and allegro movements and continuation of French terminology. Insurance: \$3 Prerequisites: DNC 1631 or consent of instructor.

**DNC 2641 MODERN DANCE II (1-1-2).** A continuation of DNC 1641 with emphasis on refining technique and performance skills. Insurance: \$3 Prerequisites: DNC 1641 or consent of instructor.

**DNC 2651 JAZZ DANCE II (1-1-2).** A continuation of DNC 1651. Designed for the student with at least

one semester of previous jazz dance training. Primary emphasis on jazz dance techniques; placement and alignment of the body, footwork, stretches, turns, musicality and other work necessary for continued growth in jazz technique. Work on developing each dancer's unique style will be emphasized. Insurance: \$3 Prerequisites: DNC 1651 or consent of instructor.

**DNC 2671 DANCE IMPROVISATION II (1-1-2).** Extended study of the basic elements of DNC 1671 with emphasis on refining student's spatial/body awareness and creative choices. Insurance: \$3 Prerequisites: DNC 1671 or consent of instructor.

**DNC 2683 ANATOMY FOR DANCERS (3-3-0).** An introduction to the interdependent elements of human anatomy, with emphasis on the musculoskeletal system and principles of movement. Designed to provide knowledge of the function of the human body as a means to facilitate the technical details of physical movements used in the art of dancing. Skills: R

## DIAGNOSTIC MEDICAL IMAGING - RADIOLOGY (See Radiology)

## DIGITAL PUBLISHING AND GRAPHICS TECHNOLOGY

**GRPH 1191 SPECIAL TOPICS IN GRAPHIC AND PRINTING EQUIPMENT OPERATOR (1-1-1).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Prerequisites: Instructor approval. (PRT 2061)

**GRPH 1196 SPECIAL TOPICS IN DESKTOP PUBLISHING EQUIPMENT OPERATOR (1-1-1).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Prerequisites: Instructor approval. (PRT 2061)

**GRPH 1296 SPECIAL TOPICS IN DESKTOP PUBLISHING EQUIPMENT OPERATOR (2-1-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Fee: \$12 Prerequisites: Instructor approval. (PRT 2062)

**GRPH 1307 PRINTING PRODUCTION MANAGEMENT (3-3-0).** For students who plan to own or manage a print shop operation; including techniques for supply sources, jobbers, estimating, pricing, and selling printing services. Topics include

location, safety, stocking, and maintenance, determination of profit and the process of bidding and developing plans for a printing plant and public relations and salesmanship skills. Prerequisites: Students are expected to have a job-entry-level understanding of printing from work experience or courses GRPH 2235, GRPH 1409, and GRPH 1422. (PRT 2073)

**GRPH 1367 PRACTICUM GRAPHIC & PRINTING EQUIPMENT OPERATOR (3-1-20).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. This course may be repeated if topics and learning outcomes vary. Insurance: \$3 Prerequisites: Instructor approval. (PRT 2083)

**GRPH 1396 SPECIAL TOPICS IN DESKTOP PUBLISHING EQUIPMENT OPERATOR (3-2-4).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Fee: \$12 Prerequisites: Instructor approval. (PRT 2063)

**GRPH 1409 PRESS OPERATIONS I (4-2-6).** An introduction to offset printing including knowledge and skills to operate a small offset press to print single color jobs. Emphasis on parts of the press and operation procedures, printing terminology, paper types and ink types and their uses, make ready and cleanup. Fee: \$24 Insurance: \$3 Prerequisites: May be used as a starting course with or without GRPH 2235 or GRPH 1422. (PRT 1034)

**GRPH 1422 ELECTRONIC PUBLISHING I (4-3-3).** An introduction to computer layout and design using major components of electronic publishing including text, graphics, and page layout and design using a computer. Introduction to the basic concepts and terminology associated with typography and page layout and production, commonly known as desktop publishing. These skills are evolving to include publishing on the internet. May be used as a starting course with or without GRPH 2235 or GRPH 1409. Fee: \$24 Prerequisites: Ability to touch type or POFT 1127. (PRT 1044)

**GRPH 1425 DIGITAL IMAGING I (4-3-3).** An introduction to digital imaging on the computer using image editing and/or image creation software. Topics include scanning, resolution, file formats, output devices, color systems, and image-acquisitions. Emphasis is placed upon making clean selections for realistic composites; making image tonal adjustment to optimize light and dark areas; using masks and channels for fine tune adjustments; and incorporating text with images. Fee: \$24 (PRT 1144)

- GRPH 1432 ELECTRONIC IMAGING SYSTEM (4-3-3).** An introduction to electronic publishing systems, including advantages, disadvantages, and characteristics of these systems. An overview of hardware and software platforms, as well as disk and file formats. Emphasis on procedures for transferring information between different hardware and software platforms. Exploration of characteristics of printers and scanners used in electronic publishing and communication with service bureaus. Use of utility software for troubleshooting and repair of system files. Establishing network communications between local computers and printers. Fee: \$24 Prerequisites: GRPH 1422 or Instructor approval. (PRT 2244)
- GRPH 1454 ELECTRONIC PUBLISHING II (4-2-6).** Emphasis on design principles for the creation of advertising and publishing materials such as letterheads, business cards, ads, fliers, brochures, and manuals. Mastery of design principles regarding typography, effective use of color, special graphic effects, informational graphics and output considerations. Emphasis on techniques for planning and documenting projects and on efficient project design techniques. Fee: \$24 Prerequisites: GRPH 1422 or Instructor approval. (PRT 2044)
- GRPH 1457 DIGITAL IMAGING II (4-3-3).** An in-depth investigation of digital imaging on the computer using image editing and/or image creation software. Optimizing images for print and/or the web will be covered. Manipulation, creation, and editing of digital images using advanced masking techniques and channels for spot color will be covered. Topics include image capture, low and high-resolution color images, image bit-depth, interaction with service bureaus and printing industries. Fee: \$24 Prerequisites: GRPH 1425 or Instructor approval. (PRT 2144)
- GRPH 1459 OBJECT ORIENTED COMPUTER GRAPHICS (4-0-0).** Mastery of the tools and transformation options of an industry standard draw program to create complex illustrations and follow them through to the color output stage. Mastery in the use of basic elements of good layout and design principles and use of the capabilities specific to vector (object oriented) drawing software to manipulate both text and graphics with emphasis on the use of bezier curves. Acquisition of images via scanning and the creative use of clip art is included. Fee: \$24
- GRPH 1491 SPECIAL TOPICS IN GRAPHIC AND PRINTING EQUIPMENT OPERATOR (4-2-7).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Fee: \$12 Prerequisites: Instructor approval. (PRT 2064)
- GRPH 1493 SPECIAL TOPICS IN LITHOGRAPHER AND PLATEMEKER (4-2-7).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Fee: \$12 Prerequisites: Instructor approval.
- GRPH 1494 SPECIAL TOPICS IN PRINTING PRESS OPERATOR (4-2-7).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Fee: \$12 Insurance: \$3 Prerequisites: Instructor approval.
- GRPH 1496 SPECIAL TOPICS IN DESKTOP PUBLISHING EQUIPMENT OPERATOR (4-2-7).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Or specific objectives developed for an individual student for self-study with instructor guidance. Fee: \$12 Prerequisites: Instructor approval.
- GRPH 2235 PREPRESS TECHNIQUES I (2-1-3).** Hands-on experience in both electronic file imaging and traditional graphic camera use. Electronic file output and troubleshooting, graphics camera knowledge, traditional film assembly, and proofing process. High-end color scanning is described. In this first course of two, emphasis will be on traditional prepress skills and introduction to electronic prepress. Output single page black and white and scanning color for black and white output. Knowledge of QuarkXPress and Photoshop are helpful. May be used as starting course with or without GRPH 1409 or GRPH 1422. Fee: \$24 (PRT 1012)
- GRPH 2236 PREPRESS TECHNIQUES II (2-1-3).** Hands-on experience in both electronic file imaging and traditional graphic camera use. Electronic file output and troubleshooting, graphics camera knowledge, traditional film assembly, and proofing process. High-end color scanning is described. In this second course of two, emphasis will be on electronic prepress, file output and troubleshooting, color management and reproduction guidelines. Fee: \$24 Skills: E Prerequisites: GRPH 2235, GRPH 1422, GRPH 1425, GRPH 1459 or Instructor approval. (PRT 1052)
- GRPH 2441 ELECTRONIC PUBLISHING III (4-2-7).** Advanced typographical concepts in electronic publishing using an industry standard page layout software package. In-depth color separations, trapping and advanced techniques for controlling

type and graphics. Overview of color schemes, software additions (plug-ins, filters, utilities), and preparation of files for printing. Fee: \$24  
Prerequisites: GRPH 1422 or Instructor approval. (PRT 2234)

## DRAMA

- DRAM 1120 THEATRE WORKSHOP (1-1-3).** Laboratory course in phases of theater. Students assigned areas compatible with experience and/or interest. May be repeated for a maximum of four credit hours. Insurance: \$3 (DRM 1711)
- DRAM 1310 INTRODUCTION TO THEATRE (3-3-0).** A general survey of theater including exploration of dramatic literature, theory, and criticism; production arts, skills, and crafts; and theater history from 500 BC to the present. Course requires good reading and writing skills. Attendance at plays and Technical Lab hours required. Insurance: \$3 Skills: E (DRM 1613)
- DRAM 1330 STAGECRAFT (3-3-2).** Basic skills and techniques of theatrical mounting. Materials and principles of scene construction and painting, properties, and stage lighting. Participation on technical crews required. Insurance: \$3 Skills: R (DRM 1673)
- DRAM 1341 STAGE MAKE-UP (3-3-2).** The design and execution of make-up for the purpose of developing believable characters. Focus on basic makeup principles and experience with makeup application. Laboratory and Technical Lab hours required. Insurance: \$3 (DRM 1663)
- DRAM 1351 ACTING I (3-3-2).** Basic skills and techniques of acting, including increased sensory awareness, ensemble and solo performing, character analysis, and script analysis. Development of stage presence and characterizations through improvisations and scenes. Technical Lab hours required. Insurance: \$3 Skills: R (DRM 1633)
- DRAM 1352 ACTING II (3-3-2).** A study of the process of creating the dramatic character from text to performance with emphasis on scene study and audition techniques. Technical lab hours required. Insurance: \$3 Prerequisites: DRAM 1351. (DRM 1643)
- DRAM 2336 VOICE AND DICTION (3-3-0).** Principles of diction, voice development, and improvement, vocal variety and expressiveness. Focus on various aspects of using the voice effectively, including volume and projection, rate and phrasing, inflection, and resonance. Study of the International Phonetic Alphabet to correct and eliminate individual articulation problems. (DRM 1653)
- DRAM 2366 FILM APPRECIATION (3-3-2).** Analysis of the visual, aural, dramatic, thematic, and structural aspects of motion pictures that best depict the cinematic art. Skills: E (RTF 1614)
- DRM 1683 INTRODUCTION TO COSTUME (3-3-2).** A study of the principles and techniques of costume design and construction for the stage. Review of the costume designer's duties and responsibilities, and a brief overview of costume history. Laboratory and Technical Lab hours required. Insurance: \$3
- DRM 1723 CHILDREN (3-3-2).** A study of the production of theater by adults for the benefit and enjoyment of children and youth, with emphasis on the needs and interests of different age groups. Study of scripts written specially for the young audience. Required lab involves production opportunity.
- DRM 1723 CREATIVE DRAMATICS (3-3-2).** A course for those interested in helping children learn to enhance their creative abilities through playmaking. Of special interest to drama majors, elementary education majors, child development majors, therapeutic recreation majors, and those interested in working with children in a social services, or parks and recreation, environment. Required lab involves observation of children in formal and informal settings.
- DRM 1723 MUSICAL THEATRE (3-3-2).** A study of the most popular American theatrical form. Review of the dramatic elements, including music, lyrics, choreography, and story. Exercises in characterization, singing, dancing, and scene work are included. Required lab involves production opportunity.
- DRM 1723 PRACTICUM: PLAY READING AND ANALYSIS (3-3-2).** A study of plays written for the stage in terms of genre, style, and period. Basic dramatic theory and criticism and some historical production techniques are included, along with modern possibilities for production and scene work. Technical Lab hours required. Insurance: \$3
- DRM 1723 PRACTICUM: STAGE CHOREOGRAPHY AND DANCE (3-3-2).** A study of dance found in plays. Folk dances, waltzes, ethnic, tap, jazz, ballet, and modern will be explored. The design form and style of dances for particular plays are created within the class.
- DRM 1723 PRACTICUM: STAGE MOVEMENT (3-3-2).** A study of the use of the body on stage to communicate character and action. Activities include exercises in body control, body language, dance, and stage combat. Insurance: \$3
- DRM 2733 ACTING FOR TV AND FILM (3-2-4).** A study of the differences between acting techniques and methods needed for the stage and for the screen. Ability to use already-acquired stage acting techniques and transfer them to the requirements of the film and video camera will be emphasized. Prerequisites: DRAM 1351.

## ECONOMICS

- ECO 1603 ISSUES IN ECONOMICS (3-3-0).** A course for students who have active interests in fields other than business administration or economics, but also of interest to students majoring in these areas. This is an issues-oriented course; a number of social, political and business issues of current interest will be studied from an economic perspective. This issues approach will help develop an understanding of people in relation to their economic environment. Students will gain a knowledge of the purpose, functioning, and results of a capitalistic system and an understanding of current economic problems.
- ECO 1653 EMERGENCE OF OUR MODERN ECONOMY (3-3-0).** A course for students who have active interest in fields other than business administration and economics, but of interest also to students majoring in these areas. Students will study the forces responsible for shaping the evolution of modern industrial economy in the United States, as well as the institutional adaptations and the changes in social relations due to these forces.
- ECON 2301 PRINCIPLES OF MACROECONOMICS (3-3-0).** Deals with consumers as a whole, producers as a whole, the effects of government spending and taxation, and the monetary policy of the Federal Reserve. Macroeconomics is concerned with unemployment, inflation and the business cycle. Skills: G (ECO 1633)
- ECON 2302 PRINCIPLES OF MICROECONOMICS (3-3-0).** Deals with the interactions between individual households and business firms. The concepts of supply and demand will be studied; students will learn what these concepts mean, how they operate, and how prices are determined. Market structure, market failure and income distribution will also be considered. Skills: G (ECO 1623)

## ELECTRONICS

- CETT 1403 DC CIRCUITS (FIRST 8-WEEK SESSION) (4-3-3).** A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements. Includes steady state analysis of magnetism, electromagnetism, inductance, and capacitance. Fee: \$20 Insurance: \$3 Skills: B Prerequisites: MATD 0370 or higher or Department approval. (ELN 1034)
- CETT 1405 AC CIRCUITS (SECOND 8-WEEK SESSION) (4-3-3).** A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1403 or Department approval. Prerequisite or corequisite: MATH 1314 or higher or Department approval. (ELN 1044)
- CETT 1421 ELECTRONIC FABRICATION (4-3-3).** A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1429 and MATH 1314 or higher or Department approval. (ELN 2074)
- CETT 1425 DIGITAL FUNDAMENTALS (4-3-3).** An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combination logic. Emphasis on circuit logic analysis and troubleshooting digital circuits. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1403 or Department approval. Prerequisite or corequisite: MATH 1314 or higher or Department approval. (ELN 2094)
- CETT 1429 SOLID STATE DEVICES (4-3-3).** A study of diodes, bipolar, mos semiconductor devices, including analysis of static and dynamic characteristics and thermal considerations of solid state devices. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1405 or Department approval. Prerequisite or corequisite: MATH 1314 or higher or Department approval. (ELN 1154)
- CETT 1445 MICROPROCESSOR (4-3-3).** An introductory course in microprocessor software and hardware architecture, timing sequence, operation, and programming and discussion of appropriate software diagnostic language and tools. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1425 or Department approval. (ELN 2114)
- CETT 1457 LINEAR INTEGRATED CIRCUITS (4-3-3).** A study of the characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. Application in computation, measurements, instrumentation, and active filtering. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1429 or Department approval. (ELN 2104)
- CETT 2433 DIGITAL COMPUTER CIRCUITS (4-3-3).** A study of the three major component systems of a digital computer including arithmetic logic operations, RAM and ROM memory systems, and control systems. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1445 (or co-requisite) or department approval.
- CETT 2435 ADVANCED MICROPROCESSORS (4-3-3).** An advanced course utilizing the microprocessor in control systems and interfacing. Emphasis on microprocessor hardware and implementation of peripheral interfacing. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1445 or Department approval. (ELN 2214)
- CETT 2471 PULSE CIRCUITS AND WAVESHAPING (4-3-3).** An entry level course in pulse circuits which includes solid state switching circuits. Course includes the study of wave shaping and passive filtering. Fee: \$20 Insurance: \$3

Prerequisites: CETT 1403 or Department approval.  
Prerequisite or corequisite: MATH 1314 or higher,  
or Department approval. (ELN 2084)

**CPMT 1445 COMPUTER SYSTEMS**

**MAINTENANCE (4-3-3).** Examination of the functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids. Fee: \$16 Insurance: \$3 (ELN 2204)

**CPMT 1449 COMPUTER NETWORKING**

**TECHNOLOGY (4-3-3).** A beginning course in computer networks with focus on networking fundamentals, terminology, hardware, software, and network architecture. A study of local/wide area networking concepts and networking installations and operation. Fee: \$16 Insurance: \$3 Skills: B (ELN 2294)

**CPMT 2437 MICROCOMPUTER INTERFACING (4-**

**3-3).** An interfacing course exploring the concepts and terminology involved in interfacing the internal architecture of the microcomputer with commonly used external devices. A study of data acquisition circuits primarily used in microcomputer systems, including computer controls, interfacing between mechanical, electrical, electronic, and/or computer equipment. Fee: \$16 Insurance: \$3 Prerequisites: CETT 1445 and CETT 1425 or department approval. (ELN 2264)

**CPMT 2445 COMPUTER SYSTEM**

**TROUBLESHOOTING (4-3-3).** Principles and practices involved in computer system troubleshooting techniques and repair procedures including advanced diagnostic test programs and the use of specialized test equipment. The study of maintenance and repair of mini-computers and small digital systems. Includes service techniques on solid-state memory machines and I/O peripherals. Fee: \$16 Insurance: \$3 Prerequisites: CETT 2435 or instructor approval. (ELN 2204)

**CPMT 2449 ADVANCED COMPUTER**

**NETWORKING TECHNOLOGY (4-3-3).** An in-depth study of network technology with emphasis on network operating systems, network connectivity, hardware, and software. Mastery of implementation, troubleshooting, and maintenance of LAN and/or WAN network environments. Fee: \$16 Insurance: \$3 Skills: B Prerequisites: CPMT 1449 or Department approval. (ELN 2324)

**EECT 2433 TELEPHONE SYSTEMS (4-3-3).**

A study of installation and maintenance systems including telephone set, public switched networks, local exchanges, networks, two and four wire systems, tip and ringing requirements, and digital transmission techniques. Fee: \$16 Insurance: \$3 (ELN 2274)

**EECT 2435 TELECOMMUNICATIONS (4-3-3).**

A study of modern telecommunications systems incorporating microwave, satellite, optical, and wire/cable-based communications systems. Instruction in installation, testing, and maintenance of

communications systems components. Fee: \$16 Insurance: \$3 (ELN 2284)

**EECT 2439 COMMUNICATIONS CIRCUITS (4-3-**

**3).** A study of communications systems with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. Discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers. Fee: \$16 Insurance: \$3 Prerequisites: CETT 2435 or instructor approval. (ELN 2244)

**EECT 2488 INTERNSHIP ELECTRICAL, ELECTRONIC, AND COMMUNICATIONS ENGINEERING TEC (4-0-15).**

An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Insurance: \$3

**ELMT 2335 CERTIFIED ELECTRONICS**

**TECHNICIAN TRAINING (3-3-0).** Review of electronics concepts and principles in preparation for sitting for a certification examination administered by an outside organization or agency. Insurance: \$3

**ELMT 2433 INDUSTRIAL ELECTRONICS (4-3-3).**

A study of devices, circuits, and systems primarily used in automated manufacturing and/or process control, including computer controls and interfacing between mechanical and electrical, electronic, and computer equipment. Presentation of programming schemes. Fee: \$20 Insurance: \$3 Prerequisites: CETT 1425 and CETT 1457 or Department approval. (ELN 2364)

**ELMT 2437 ELECTRONIC TROUBLESHOOTING, SERVICE, AND REPAIR (4-3-3).**

In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, and preventative maintenance. Emphasis on safety and proper use of test equipment. May be offered as a capstone course. Fee: \$16 Insurance: \$3 Prerequisites: CETT 1425 and CETT 1457, or department approval. (ELN 2254)

**ELMT 2441 ELECTROMECHANICAL SYSTEMS**

**(4-3-3).** A study of devices and components that translate electrical energy into mechanical motion. Emphasis on the semiconductor industry. Topics include DC and AC motors and controllers, servo motors, stepping motors, solenoids, linear motors, and actuators. Introduction to pneumatics principles, components, control systems, and mass flow controllers. Principles of robotics, types of robots, and common applications. Programmable logic controllers and ladder logic. Open and closed control principles. PID controllers. Fee: \$16 Prerequisites: CETT 1457 and CETT 1425.

- HYDR 1445 HYDRAULICS AND PNEUMATICS (4-3-3).** A study of the applications and servicing of hydraulic, pneumatic, electromechanical and air logic devices, as related to automated and robotics systems. Prerequisites: CETT 1457 and CETT 1425. (ELN 2044)
- INTC 1448 ANALYTICAL INSTRUMENTATION (4-3-3).** A study of transducers and measurement techniques. Includes testing and calibration as well as repair of industrial instrumentation. Fee: \$16 Prerequisites: CETT 1457. (ELN 2304)
- INTC 2471 DATA ACQUISITION AND MEASUREMENT (4-3-3).** A study of transducers and measurement techniques. Introduction to data conversion and computer data acquisition methods. Includes testing and calibration as well as repair of industrial instrumentation. Fee: \$16 Prerequisites: CETT 1457 and CETT 1425. (ELN 2304)
- LOTT 1401 INTRODUCTION TO FIBER OPTICS (4-3-3).** An introductory course in fiber optics and its application including advantages of fiber, light transmission in fiber, types of fiber, sources, detectors, and connectors. Fee: \$16 Insurance: \$3 Prerequisites: CETT 1425 and CETT 1457 or department approval. (ELN 2174)
- RBTC 2305 INDUSTRIAL WIRING (4-3-3).** The study of national electrical code and approved electrical installations as applied to industrial automation systems. Includes all aspects from the standpoint of safety for personnel and equipment. Prerequisites: CETT 1457 and CETT 1445. (ELN 2314)
- SMFT 1101 SEMICONDUCTOR INDUSTRY OVERVIEW (1-1-0).** A study of the history of the semiconductor industry, including its culture, history, products, organization, and employment opportunities. (ELN 1051)
- SMFT 1341 SEMICONDUCTOR MANUFACTURING METHODS (3-3-0).** In this certificate capstone course, students will study various aspects of manufacturing while applying knowledge and experience learned from previous courses. Topics to be studied include the elements of manufacturing, Total Productive Manufacturing (TPM), manufacturing teamwork dynamics, quality control, continuous improvement, Statistical Process Control (SPC) capability studies, inspection and measurement procedures, and productivity issues. Classes include computer usage in a manufacturing environment, workplace simulation, and case studies. Insurance: \$3 Prerequisites: SMFT 1101. (ELN 2423)
- SMFT 1473 SEMICONDUCTOR MANUFACTURING TECHNOLOGY I (4-3-2).** A study of the processes, materials, and equipment used in the manufacturing of semiconductors, including an overview of the semiconductor industry, related terminology, and standard safety practices. Insurance: \$3
- SMFT 2341 VACUUM PRINCIPLES & RF PLASMA SYSTEMS (3-2-4).** A study of vacuum principles and RF plasma systems in the semiconductor manufacturing industry. Vacuum topics include principles, components, systems, leak detection, and safety practices. RF plasma topics include plasma physics, RF power amplification and oscillators, transmission line, impedance matching, and safety. Fee: \$16 Prerequisites: CETT 1457 and PHY 1634. (ELN 2403)
- SMFT 2472 SEMICONDUCTOR EQUIPMENT OPERATION AND MAINTENANCE (4-3-3).** This is the capstone course for the AAS degree program in which students integrate their knowledge from previous courses and apply it to learning the operation, maintenance and repair of the semiconductor manufacturing tools and equipment used in the fab. Students will actually use and service many typical fab tools during lab sessions. Fee: \$16 Insurance: \$3 Prerequisites: ELMT 2433 and corequisite SMFT 2341 or faculty consent. (ELN 2424)
- SMFT 2473 SEMICONDUCTOR MANUFACTURING TECHNOLOGY II (4-3-2).** The continuation of Semiconductor Manufacturing Technology I covering the processes, materials, and equipment used in the manufacturing of semiconductors. Topics address process-yield analysis and process troubleshooting. Prerequisites: SMFT 1473.
- ## EMERGENCY MEDICAL SERVICE TECHNICIAN
- EMSP 1145 BASIC TRAUMA LIFE SUPPORT (1-1-0).** Intense skill development in emergency field management, systemic rapid assessment, resuscitation, packaging, and transportation of patients. Includes experience necessary to meet initial certification requirements. Offered in Fall and Spring Semesters. Fee: \$16 Insurance: \$2
- EMSP 1147 PEDIATRIC ADVANCED LIFE SUPPORT (1-1-0).** A course in a system of protocols for management of the pediatric patient experiencing difficulties in medical and/or trauma related emergencies. Offered in Spring Semester. Fee: \$24 Insurance: \$2
- EMSP 1149 PREHOSPITAL TRAUMA LIFE SUPPORT (1-1-0).** Intense skill development in emergency field management, systematic rapid assessment, resuscitation, packaging, and transportation of patients. Includes experience necessary to meet initial certification requirements. Offered in Fall and Spring Semesters. Fee: \$16 Insurance: \$2
- EMSP 1160 EMT6BASIC CLINICAL (1-0-4).** A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each

course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Rideout Fee: \$36 Insurance: \$64

- EMSP 1161 PARAMEDIC CLINICAL I (1-0-6).** A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Fall and Summer Semesters. Rideout Fee: \$75 Insurance: \$33 Prerequisites: EMSP 1501, EMSP 1160, BIO 1714.
- EMSP 1162 PARAMEDIC CLINICAL II (1-0-6).** A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Fall and Spring Semesters. Rideout Fee: \$75 Insurance: \$33 Prerequisites: EMSP 1338, EMSP 1356, EMSP 1161.
- EMSP 1338 INTRODUCTION TO ADVANCED PRACTICE (3-2-4).** An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital. Offered in Fall and Summer Semesters. Fee: \$24 Insurance: \$2 Prerequisites: EMSP 1501, EMSP 1160, BIO 1714.
- EMSP 1355 TRAUMA MANAGEMENT (3-3-2).** A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with traumatic injuries. Offered in Fall and Spring Semesters. Fee: \$24 Insurance: \$2 Prerequisites: EMSP 1338, EMSP 1356, EMSP 1161.
- EMSP 1356 PATIENT ASSESSMENT AND AIRWAY MANAGEMENT (3-2-3).** A detailed study of the knowledge and skills required to reach competence in performing patient assessment and airway management. Offered in Fall and Summer Semesters. Fee: \$24 Insurance: \$2 Prerequisites: EMSP 1501, EMSP 1160, BIO 1714.
- EMSP 1501 EMT6BASIC (5-3-6).** Introduction to the level of Emergency Medical Technician (EMT)6 Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services. Fee: \$24 Insurance: \$2
- EMSP 2135 ADVANCED CARDIAC LIFE SUPPORT (1-1-0).** Skill development for professional personnel practicing in critical care units, emergency departments, and paramedic ambulances. Establishes a system of protocols for management of the patient experiencing cardiac difficulties. Offered in Spring Semester. Fee: \$8 Insurance: \$2
- EMSP 2237 EMERGENCY PROCEDURES (2-0-4).** Instruction in a laboratory environment concentrating on development of practical medical skills and critical thinking abilities. Students will master a variety of skills appropriate to their training level by a combination of practice: use mannequins, actors or other students, and stage scenarios. Required verifications of specific skills may be included. Offered in Spring Semester. Fee: \$24 Insurance: \$2 Prerequisites: EMSP 2534, EMSP 2330.
- EMSP 2243 ASSESSMENT BASED MANAGEMENT (2-2-0).** The capstone course of the EMSP program. Designed to provide for teaching and evaluating comprehensive, assessment-based patient care management. Offered in Spring Semester. Fee: \$24 Prerequisites: EMSP 2534, EMSP 2330, EMSP 2260.
- EMSP 2252 EMS RESEARCH (2-2-0).** Primary and/or secondary research in current and emerging issues in EMS. Basic research principles, scientific inquiry, and interpretation of professional literature are emphasized. Offered in Spring Semester. Prerequisites: EMSP 2534, EMSP 2330, EMSP 2260.
- EMSP 2260 PARAMEDIC CLINICAL III (2-0-10).** A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Fall Semester. Rideout fee: \$212 Insurance: \$33 Prerequisites: EMSP 1160, EMSP 1161, EMSP 1162.
- EMSP 2266 PRACTICUM (2-0-14).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Offered in Spring Semester. Rideout Fee: \$212 Insurance: \$33 Prerequisites: EMSP 1501, EMSP 1160, EMSP 1161, EMSP 2260.
- EMSP 2330 SPECIAL POPULATIONS (3-2-3).** A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of ill or injured patients in nontraditional populations. Offered in Fall Semester. Fee: \$24 Insurance: \$2 Prerequisites: EMSP 1355, EMSP 2238, EMSP 1162, EMSP 2344.

**EMSP 2338 EMS OPERATIONS (3-3-0).** A detailed study of the knowledge and skills necessary to reach competence to safely manage the scene of an emergency. Offered in Fall and Spring Semesters. Fee: \$24 Prerequisites: EMSP 1338, EMSP 1356, EMSP 1161.

**EMSP 2444 CARDIOLOGY (4-3-3).** A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with cardiac emergencies. Offered in Spring/Summer Semester. Fee: \$24 Insurance: \$2 Prerequisites: BIO 1714 and HPRS 2300.

**EMSP 2534 MEDICAL EMERGENCIES (5-4-3).** A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with medical emergencies. Offered in Fall Semester. Fee: \$24 Prerequisites: EMSP 1355, EMSP 2238, EMSP 1162, EMSP 2344.

## ENGINEERING

**ENGR 0145 STATICS TUTORIAL (1-0-2).** Optional problem session designed for students currently registered in Statics, ENGR 2301. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. Skills: P (ENR 0271)

**ENGR 0147 DYNAMICS TUTORIAL (1-0-2).** Optional problem session designed for students currently registered in Dynamics, ENGR 2302. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. Skills: P (ENR 0271)

**ENGR 1201 INTRODUCTION TO ENGINEERING (2-2-0).** Introduction to engineering as a discipline and profession. Includes instruction in the application of mathematical and scientific principles to the solution of practical problems. A broad range of problems will be considered in order to introduce the student to various engineering majors and careers. Prerequisites: One full year of high school physics or equivalent and mathematics through trigonometry. (ENR 1212)

**ENGR 2301 VECTOR MECHANICS: STATICS (3-3-0).** Calculus-based study of the composition and resolution of forces. Vector algebra, force systems, freebody diagrams; equilibrium of rigid bodies and structures; centroids, distributed loads, friction; moment of inertia. Prerequisites: PHYS 2425 or equivalent and credit in or registration for MATH 2415.

**ENGR 2302 VECTOR MECHANICS: DYNAMICS (3-3-0).** Calculus-based study of the dynamics of rigid bodies. Includes force-mass-acceleration methods, work and energy, and impulse-momentum computations. Emphasis on two- and three-

dimensional kinematics and dynamics, applied to a broad class of engineering problems. Offered only in the Spring semester. Prerequisites: ENGR 2301 or equivalent and MATH 2415 or equivalent. (ENR 2424)

**ENGR 2332 MECHANICS OF MATERIALS (3-3-0).** Stresses and deformations in solids; stress-strain relationships and torsions; beams, shafts and columns; elastic deflections in beams; combined loading and combined stresses. Emphasis on application to engineering problems. Offered once per year in the Fall semester. Prerequisites: ENGR 2301 or equivalent and MATH 2415 or equivalent. (ENGR 2432)

## ENGINEERING DESIGN GRAPHICS

**DFTG 1405 TECHNICAL DRAFTING (4-3-3).** A study of electrical drawing preparation as applied to commercial and industrial standards. Instructs students in modern graphics and modeling fundamentals for engineering design. Students will be introduced to freehand sketching, multi-view orthographic projection, shape modeling and its applications in computer-aided drafting and design (CADD). Studies will include graphic geometry and projection techniques, visualization methods, pictorial drawings, geometric modeling techniques for CADD, drafting practices, and manufacturing processes and materials documentation. Fee: \$16 Skills: R

**DFTG 1409 BASIC COMPUTER AIDED DRAFTING (4-3-3).** An introduction to basic computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems; as well as input and output devices. This course in computer-aided-drafting and design (CADD) employs AutoCAD software. Additional topics to be covered include drawing set-up, drawing and editing techniques, pictorial drawing, dimensioning, printing, plotting, and basic 3D modeling. Fee: \$16 Prerequisites: DFTG 1405, High School drafting or Instructor approval. (EDG 1064)

**DFTG 1417 ARCHITECTURAL DRAFTING<sup>6</sup> RESIDENTIAL (4-3-3).** Topics will cover the principles and practices used in residential construction. This course is an introduction to the preparation of architectural construction documents for a single family residence. Fee: \$16 Prerequisites: DFTG 1409 or Instructor approval. Laboratory fees. (EDG 2044)

**DFTG 1421 ARCHITECTURAL ILLUSTRATION (4-3-3).** Architectural drawing and sketching, including freehand drawing, perspectives, delineation in various media and development of students' graphical expression, including an

introduction to various reproduction methods. Visual communication is a drawing studio intended to help the student visualize his/her creative thought process and the environment around him/her. The class is structured to advance the students visualization skills of architectural subjects by developing hand-drawn perspectives and presentation techniques. Basics of three dimensional CAD modeling will also be covered. Fee: \$16 Prerequisites: DFTG 1417. (EDG 2144)

- DFTG 1425 BLUEPRINT READING AND SKETCHING (4-3-3).** An introduction to reading and interpreting the working drawings for manufactured products and associated tooling. Use of sketching techniques to create pictorial and multiple-view drawings of manufactured parts. A survey course for students enrolled in vocational-technical majors. Methods of representation used in construction trades with emphasis on rough layouts and blueprint reading, with a section on materials take-off and cost estimating. CNBT 1446 may be substituted for DFTG 1425. Fee: \$16 Skills: R (EDG 1034)
- DFTG 1433 MECHANICAL DRAFTING (4-3-3).** An intermediate course covering detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, and 3D isometric and oblique drawings, including bill of materials. This is an advanced course in modern graphic drawing and design. Topics covered include dimensioning techniques, drafting standards, pictorial drawings, auxiliary views, sections, fasteners, assembly and detail drawings. The engineering design process is also covered. Fee: \$16 Skills: R Prerequisites: DFTG 1405 and DFTG 1409 or Instructor approval. May be taken concurrently with DFTG 1409. (EDG 1044)
- DFTG 1458 ELECTRICAL/ELECTRONIC DRAFTING (4-3-3).** A study of the principles of layout of electrical and electronic drawings, stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams. An introduction to schematics, logic diagrams and electro/mechanical design. Study of electronic symbols and the use of industrial standards. Fee: \$16 Prerequisites: DFTG 1405. May be taken concurrently with DFTG 1409. (EDG 2034)
- DFTG 1491 SPECIAL TOPICS IN DRAFTING (4-2-4).** EDG is capstone course. Particular attention is given to the development of a portfolio suitable for job hunting in the Engineering Design Graphics field. May be repeated to meet the requirements of an EDG internship. Fee: \$16 Prerequisites: Instructor approval. (EDG 2184)
- DFTG 1494 SPECIAL TOPICS IN ELECTRICAL/ELECTRONICS DRAFTING: INTEGRATED CIRCUIT LAYOUT AND DESIGN III (4-3-3).** This course is designed to build on the knowledge

accumulated in IC I and IC II. The nature of the topics to be covered requires student use of state-of-the-art design and verification tools and the technical support for those tools. For this reason, the class will be held in an industrial setting where the tools and the technical support already exist. The class will be fast paced and it will cover complex topics in depth. Some programming knowledge will be helpful. Fee: \$16 Prerequisites: DFTG 2470, concurrent enrollment in DFTG 2471, and department approval.

- DFTG 1495 SPECIAL TOPICS IN MECHANICAL DRAFTING: PRO/E SURFACE MODELING AND ADVANCED TOPICS (4-3-3).** This course focuses on advanced Pro/E techniques and touches on the Pro/Surface module. Modeling of solid and surface features as well as advanced modeling techniques that provide more flexibility in the design process will be studied. Fee: \$16 Prerequisites: DFTG 2440.
- DFTG 2402 MACHINE DRAFTING (4-3-3).** Production of detail and assembly drawings of machines, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings. This course is a study of machine design dimensioning and tolerancing (including geometric dimensioning and tolerancing) using ASME/ANSI and ISO standards. Also, an introduction to producing part drawings from parametric solid models is provided. Fee: \$16 Prerequisites: DFTG 1405 and DFTG 1433. (EDG 2014)
- DFTG 2404 PRINTED CIRCUIT BOARD DESIGN (4-3-3).** An intermediate course including single-sided and double-sided printed circuit board design, emphasizing the drawings, standards, and processes required to layout printed circuit board and manufacturing documentation. Develop a student's understanding of what a printed circuit board is and how it is designed and manufactured. The study of an electronic schematic and its relationship to the printed circuit board. Includes methods for creating the master layout, skills required to produce master photographic artwork from master layout, and the fabrication of printed circuit boards. Fee: \$16 Prerequisites: DFTG 1458. DFTG 1409 and HART 1401 are recommended. (EDG 2094)
- DFTG 2410 STRUCTURAL DRAFTING (4-3-3).** Discussion of detail drawings of structural shapes for fabrication with emphasis on framed and seated connectors and beam and column detailing. Designed to meet the standards of American Institute of Steel Construction, including units on concrete detailing conforming to American Concrete Institute standards. This course covers the AISI specifications and standards, stressing structural theory and data. Students prepare working drawings depicting structural steel, pipe, and reinforced concrete. Fee: \$16 Prerequisites: DFTG 1409. (EDG 2054)

- DFTG 2412 TECHNICAL ILLUSTRATION (4-3-3).** Topics include pictorial drawing including isometrics, obliques, perspectives, charts, and graphs; shading and transfer lettering; and use of different media. Introduction to 3D CAD drawings as used in manufacturers' catalogues, engineering manuals, and promotional literature. Students will also create 3D Animations. Introduction to design, problem solving, and team building. Fee: \$16 Prerequisites: DFTG 1405 and DFTG 1409. (EDG 2024)
- DFTG 2417 DESCRIPTIVE GEOMETRY (4-3-3).** Examination of the graphical solution to problems involving points, lines, and planes in space. A study of drawing projection (orthographic projection and auxiliary views) used in engineering graphics. Projection principles are applied to analyze drawings using manual and computer graphics. Fee: \$16 Prerequisites: DFTG 1405, High School Drafting or Instructor approval. (EDG 1054)
- DFTG 2421 TOPOGRAPHICAL DRAFTING (4-3-3).** A course in map drafting. Emphasis is given to plotting of surveyors field notes, plotting elevations, contour drawings, plan and profiles, and laying out traverses. This course covers the techniques employed in the creation of civil engineering graphics. Topics include symbology, scales, mapping, computations, surveying notes, drawing plats, and roadway design. Fee: \$16 Prerequisites: DFTG 1409. (EDG 2064)
- DFTG 2428 ARCHITECTURAL DRAFTING<sup>6</sup> COMMERCIAL (4-3-3).** Architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. This course emphasizes accuracy of details and knowledge of building materials. Each student will prepare a set of construction documents for a commercial structure. The course will be operated in the same manner as a typical architectural firm. Fee: \$16 Prerequisites: DFTG 1409 and DFTG 1417. (EDG 2124)
- DFTG 2432 ADVANCED COMPUTER-AIDED DRAFTING (4-3-3).** Exploration of the use of system customization for drawing production enhancement and the principles of data manipulation. Presentation of advanced applications, such as three-dimensional object creation and linking graphic entities to external nongraphic data. This course builds on the skills achieved in earlier Computer-Aided Drafting (CAD) courses. The student exploits advanced and customizable features of the CAD software to build an efficient, integrated, customized CAD environment. The course explores in more detail several advanced concepts aimed at increasing drawing efficiency, including linking with external drawings and documents, creating, editing, and maintaining libraries of drawing components, and creating dimension styles and viewpoints. The student also gains exposure to the customizable features of the CAD software, including linetypes, hatch patterns, scripts, slide shows, macros, shapes, and an integrated custom menu system. The course concludes with a brief introduction to the programming environment accessible from the CAD software to help the student decide whether to continue on into the CAD Programming course. Prerequisites: DFTG 1409.
- DFTG 2436 CAD PROGRAMMING (4-3-3).** Emphasis on the productivity of CAD software through development of computer-aided drafting programs with emphasis on database design, access techniques, and structure methods with particular application in engineering graphics. This course provides instruction on customizing computer-aided-drafting and design programs. Topics discussed include the basic organization of operating systems, including Windows facilities; building custom libraries of line types and hatch patterns; writing script files and creating slide shows; creating customized menus; and basic programming constructions for the creation of LISP routines. Fee: \$16 Prerequisites: DFTG 1405, DFTG 1409 and completion 16 credit hours of EDG course work or Instructor approval. (EDG 2174)
- DFTG 2440 SOLID MODELING/DESIGN (4-3-3).** A computer-aided solid modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. Fee: \$16 Prerequisites: DFTG 1433 and DFTG 2402. (EDG 2014)
- DFTG 2470 INTEGRATED CIRCUIT LAYOUT AND DESIGN I (4-3-3).** This is an introductory course in the design of integrated circuitry and the I.C. designer's role in industry. Students will study I.C. design theory and employ specialized CADD software to plan chips and create icells. Fee: \$16 Prerequisites: DFTG 1409, DFTG 1458, or Instructor approval. May be taken concurrently with HART 1401. CETT 1425 recommended. (EDG 2084)
- DFTG 2471 INTEGRATED CIRCUIT LAYOUT AND DESIGN II (4-3-3).** An advanced course in the layout and design of integrated circuits. Students will study advanced design theory and employ specialized CAD tools to layout and verify circuits. Prerequisites: DFTG 2470 and Instructor approval. May be taken concurrently with CETT 1425. (EDG 2104)
- DFTG 2472 INTRODUCTION TO GIS (4-3-3).** This course will present Geographic Information Systems technology and how GIS works across a variety of industries. Topics may include Geographic Information Systems and city planning, emergency-911 systems, engineering, statistics, real estate, federal and state governments. Prerequisites: DFTG 1409 or instructor approval. (EDG 2134)
- DFTG 2473 INTRODUCTION TO CAD/CAM (4-3-3).** This course is a further study of the parametric modeling software covered in DFTG 2402. This course is also an introduction to the use of software to create numerically controlled machining toolpaths

from 2D and 3D drawing geometry. Fee: \$16  
Prerequisites: DFTG 1433 and DFTG 2402. (EDG 2154)

**DFTG 2474 ARCHITECTURAL MODELING (4-3-3).** This course presents computer techniques used in the creation of three dimensional architectural models. Prerequisites: DFTG 1454 or department approval. (EDG 2114)

**MCHN 1419 MANUFACTURING MATERIALS AND PROCESSES (4-3-3).** A basic study of various materials used in the metals industry and the chemical, physical, and mechanical properties of various metals. Emphasis on manufacturing processes, including casting, forming, machining, and molding. Fee: \$16 Insurance: \$4 Skills: R  
Prerequisites: High School Algebra or equivalent. (EDG 1024)

## ENGLISH

**ENGL 1301 ENGLISH COMPOSITION I (3-3-0).** A study of the principles of composition with emphasis on language, the mechanics of writing, the types of discourse, and research and documentation. Skills: E (ENG 1613)

**ENGL 1301 ENGLISH COMPOSITION I - ESL (3-3-0).** English 1301 ESL is a study of the principles of composition with emphasis on language, the mechanics of writing, documentation and research, and the types of discourse. ENGL 1301 ESL is the equivalent of ENGL 1301 and is designed to help students who are non-native speakers of English develop the skills they will need to succeed academically.

**ENGL 1302 ENGLISH COMPOSITION II (3-3-0).** A continuation of English 1301 with emphasis on analysis of readings in prose fiction. Prerequisites: ENGL 1301 or equivalent. (ENG 1623)

**ENGL 2322 BRITISH LITERATURE I (3-3-0).** Survey of English literature from Anglo-Saxon times through the 18th Century. Prerequisites: ENGL 1301 and 1302 or equivalent. (ENG 2613)

**ENGL 2323 BRITISH LITERATURE II (3-3-0).** Survey of English literature from 1800 to the present. Prerequisites: ENGL 1301 and 1302 or equivalent. (ENG 2623)

**ENGL 2327 AMERICAN LITERATURE I (3-3-0).** Survey of American literature from 1620 to 1865. Prerequisites: ENGL 1301 and 1302 or equivalent. (ENG 2633)

**ENGL 2328 AMERICAN LITERATURE II (3-3-0).** Survey of American literature from 1865 to present. Prerequisites: ENGL 1301 and 1302 or equivalent. (ENG 2643)

**ENGL 2332 WORLD LITERATURE I (3-3-0).** Introduction to masterpieces of the literary tradition from the ancient world to 17th century (the Enlightenment). Prerequisites: ENGL 1301 and 1302 or equivalent. (ENG 2653)

**ENGL 2333 WORLD LITERATURE II (3-3-0).** Introduction to masterpieces of the literary tradition from the 17th century (the Enlightenment) to the 20th century. Prerequisites: ENGL 1301 and 1302 or equivalent. (ENG 2663)

**ENGL 2342 INTRODUCTION TO LITERATURE I (3-3-0).** Selected readings, arranged by types. Prerequisites: ENGL 1301 and ENGL 1302 or equivalent. (ENG 2713)

**ENGL 2343 INTRODUCTION TO LITERATURE II (3-3-0).** Selected readings, arranged by theme. Topics vary. Prerequisites: ENGL 1301 and ENGL 1302 or equivalent. (ENG 2723)

## ENGLISH AS A SECOND LANGUAGE - ACADEMIC

**DESL 0613 HIGH BEGINNING READING AND VOCABULARY (3-4-0).** Designed for high beginning ESL students. Emphasis on comprehension skills, such as identifying main idea, supporting details, and patterns of paragraph development. Features reading short passages of academic materials. Focus on high frequency vocabulary and word forms. Repeatable for up to six-credit hours. Prerequisites: Placement in the course by ESL Assessment or Compass Test. (ESL 0613)

**DESL 0623 ESL READING FOR STUDENTS WHO ARE DEAF OR HARD OF HEARING (3-4-0).** The course emphasizes intensive vocabulary study and will progress from literal understanding to higher levels of comprehension that are inference and critical reading. Students will identify main idea and supporting details in a paragraph and learn how to determine unfamiliar word meanings from context. Following directions and summarizing information will be taught as well as dictionary and thesaurus skills.

**DESL 0643 ESL WRITING FOR STUDENTS WHO ARE DEAF OR HARD OF HEARING (3-4-0).** The course is designed to develop the writing skills necessary for college success. By examining grammatical features of both American Sign Language and American Standard English, the student will recognize how grammatical functions differ and apply this knowledge when writing. The course includes the study of simple and progressive verb tenses, comparison and contrast and the use of articles and time clauses. Students work on developing simple and compound sentences to write descriptive paragraphs.

- DESL 0663 HIGH BEGINNING WRITING AND GRAMMAR ESL (3-4-0).** Designed for high beginning ESL students. Course emphasizes using standard English grammar in writing paragraphs and short essays. Introduction of parts of speech. Study of simple and progressive verb tenses and modal auxiliaries. Practice in writing simple and compound sentences, using transitional expressions and punctuation. Exposure to and practice with different modes of writing. Required lab work will supplement classroom work. Repeatable for up to six credit hours. Prerequisites: Placement in the course by the ESL Assessment or the Compass Test. (ESL 0663)
- DESL 0683 HIGH BEGINNING ORAL COMMUNICATION ESL (3-4-0).** Designed for high beginning ESL students. Course emphasizes speaking and listening to everyday American English. Strong focus on understanding English speaker conversation and using correct pronunciation, including vowel and consonant sounds as well as stress and intonation. Repeatable for up to six credit hours. Prerequisites: Placement in the course by the ESL Oral Assessment. (ESL 0683)
- DESL 1373 LOW INTERMEDIATE READING AND VOCABULARY ESL (3-4-0).** Designed for low intermediate ESL students. Continued emphasis on building comprehension skills. Introduction to analytical components of reading. Continues emphasis on development of vocabulary through analysis of word structure. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 0613 or placement in course by ESL Assessment or the Compass Test. (ESL 1373)
- DESL 1383 HIGH INTERMEDIATE READING AND VOCABULARY ESL (3-4-0).** Designed for high intermediate ESL students. Emphasis on more complex analytical reading skills for reading college textbooks and novels. Introduction to annotation. Advanced study of vocabulary using context. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 1373 or placement in the course by ESL Assessment or the Compass Test. (ESL 1383)
- DESL 1393 ADVANCED READING AND VOCABULARY SKILLS ESL (3-4-0).** Designed for advanced ESL students. This exit-level course prepares students for reading in college courses and the workplace. Emphasis on critical and analytical reading skills and advanced reading strategies for reading college-level textbooks, novels, and periodicals. Continued expansion and application of vocabulary. Repeatable for up to six credit hours. Prerequisites: A grade C or better in DESL 1383 or placement in the course by the ESL Assessment or Compass Test. (ESL 1393)
- DESL 1473 LOW INTERMEDIATE WRITING AND GRAMMAR ESL (3-4-0).** Designed for low intermediate ESL students. Course emphasizes using standard English grammar in writing short essays. Study of perfect tenses, passive voice, gerunds and infinitives. Introduction to clauses. Continued emphasis on writing compound sentences and introduction to complex sentence structures with appropriate conjunctions, transitional expressions, and punctuation. Continued practice in paragraph development and longer academic compositions. Exposure to and practice with different modes of writing. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 0663 or placement in the course by the ESL Assessment. (ESL 1473)
- DESL 1483 HIGH INTERMEDIATE WRITING AND GRAMMAR ESL (3-4-0).** Designed for high intermediate ESL students. Continued study of the perfect tenses, passive voice, modal auxiliaries, gerunds, and infinitives. Emphasis on adjective, noun, and adverb clauses showing relationships. Introduction to conditionals. Further practice in formal essay writing with continued exposure to different modes of writing. Focus on error correction, paraphrasing, and editing. Introduction to using the library to locate and collect resource materials. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 1473 or placement in the course by the ESL Assessment. (ESL 1483)
- DESL 1493 ADVANCED WRITING AND GRAMMAR ESL (3-4-0).** Designed for advanced ESL students. This exit-level course prepares students for English 1301, other college writing, and writing in the workplace. Continued study of clauses and introduction of reduced forms. Practice in writing more sophisticated formal essays and selected modes of writing, including the persuasive mode. Instruction on introduction to the research paper. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 1483 or placement in the course by the ESL Assessment. (ESL 1493)
- DESL 1503 AMERICAN ENGLISH PRONUNCIATION FOR ADVANCED ESL LEARNERS (3-4-0).** This course focuses on the ways in which spoken English differs from written with emphasis on the strategies English speakers use to make their message very clear for listeners. Time is spent learning how difficult English sounds are produced, and how native speakers produce the characteristic rhythm and intonation patterns of the language. Repeatable to 6 hours credit. Prerequisites: Students needs to have been placed in DESL 1493.
- DESL 1513 TASP PREPARATION READING (3-4-0).** Preparation for the reading portion of the Texas Assessment of Academic Skills (TASP). Assists ESL students in developing reading strategies in the six skills covered on the reading portion of the

TASP exam. Repeatable to 6 hours credit.  
Prerequisites: Placement in DESL 1383, 1393 or permission of instructor.

**DESL 1523 TASP PREPARATION: WRITING (3-4-0).** Preparation for the writing portion of the Texas Assessment of Academic Skills (TASP). A review of TASP writing criteria: appropriateness, unity and focus, organization and development in the context of essay writing, and of the grammar points that are most problematic for ESL students. Repeatable to 6 hours credit. Prerequisites: Placement in DESL 1483 or DESL 1493 or permission of instructor.

**DESL 1533 ACADEMIC RESEARCH AND WRITING FOR ESL STUDENTS (3-4-0).** This course is designed to help ESL students acquire essential skills needed for successful college work with the main focus being the research paper. ESL students learn to use the library and the internet to locate appropriate materials, to take notes from those materials, and to write a research paper with documentation. Repeatable up to 6 hours credit. Prerequisites: iCi or better in DESL 1483 and DESL 1383.

**DESL 1773 LOW INTERMEDIATE ORAL COMMUNICATION ESL (3-4-0).** Designed for low intermediate ESL students. Course emphasizes speaking and listening to American English. Development of better listening skills by listening to real-life conversations and short academic talks. Practice in speaking in pairs and groups. Continued focus on correct pronunciation with the goal of helping reduce accents that interfere with communication. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 0683 or placement in the course by the ESL Oral Assessment. (ESL 1773)

**DESL 1783 HIGH INTERMEDIATE ORAL COMMUNICATION ESL (3-4-0).** Designed for high intermediate ESL students. Course emphasizes speaking and listening to formal American English. Development of academic listening and note-taking skills. Exposure to long talks and short college lectures. Practice in giving short presentations and leading group discussions. Continued practice in using correct pronunciation to reduce accent interference. Repeatable for up to six credit hours. Prerequisites: A grade of C or better in DESL 1773 or placement in the course by the ESL Oral Assessment. (ESL 1783)

**DESL 1793 ADVANCED ORAL COMMUNICATION ESL (3-4-0).** Designed for advanced ESL students. This exit-level course prepares students for participation in discussions and presentation of oral reports in the college classroom and the workplace. Emphasizes listening to formal American English. Continued practice in academic listening and note-taking skills. Exposure to real-life formal talks and college lectures. Class activities include explaining and defending one's opinion in group discussions and giving formal

presentations in class. Further work on pronunciation problems and development of vocal variety including intonation, emphasis, and pitch. Repeatable for up to six-credit hours. Prerequisites: A grade of C or better in DESL 1783 or placement in the course by the ESL Oral Assessment. (ESL 1793)

## ENVIRONMENTAL SCIENCE AND TECHNOLOGY

**EPCT 1205 ENVIRONMENTAL REGULATIONS OVERVIEW (2-2-0).** An introduction to the history of the environmental movement, including basic requirements for compliance with the environmental regulations. Discussion of local, state, and national regulations, ordinances, laws and court decisions relating to environmental hazards, pollution, conservation, and environmental preservation. Description of the process of permit application, compliance, and enforcement of environmental regulations. Skills: E

**EPCT 1344 ENVIRONMENTAL SAMPLING AND ANALYSIS (3-2-3).** Sampling protocol, procedures, quality control, preservation technology, and field analysis of surface and ground water. The emphasis is on analysis commonly performed by the field technician, especially on natural waters. Laboratory exercises will involve monitoring and sampling water wells and nearby lakes and creeks. Field trips will be required. Fee: \$20 Insurance: \$2 Skills: G Prerequisites: CHEM 1405 or permission of instructor.

**EPCT 2403 SURFACE AND GROUND WATER COLLECTION (4-3-3).** In-depth study of operations and maintenance procedures for surface- and ground-water collection and control. Included are procedures for the monitoring of water flow, turbidity, and temperature, as well as the calculation of capacities and flow rates. Exercises will involve field measurement of flow conditions in nearby creeks and lakes, calculation of well capacities and stream discharge, interpretation of state well reports, source water assessments, field recognition of recharge and discharge features, and visits to a dam and water treatment plant. Field trips will be required. Fee: \$20 Insurance: \$2 Skills: G Prerequisites: Previous or co-enrollment in GEOL 1105 or permission of instructor.

**EPCT 2415 WATER CHEMISTRY (4-3-3).** Basic techniques for sampling and chemical and microbiological analysis of water. Laboratory exercises will involve analysis of ground and surface water, interpretation of water and microbial analyses from government agencies and commercial laboratories, and visits to such facilities. Field trips will be required. Fee: \$20 Insurance: \$2 Skills: G Prerequisites: Previous or co-enrollment in CHEM 1411 or permission of instructor.

- EPCT 2488 ENVIRONMENTAL TECHNOLOGY - INTERNSHIP (4-1-20).** A capstone experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a government agency, business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college that directly relate to specific occupational outcomes. This may be paid or unpaid experience and may be repeated if topics and learning outcomes vary. Insurance: \$2 Prerequisites: As assigned by college.
- PSC 1603 SCIENCE AND THE ENVIRONMENT (3-3-0).** A course that relates scientific knowledge to environmental problems and explores scientific, economic, and political approaches to solutions. Topics may include pollution, consumer practice, population, and resources. A field trip may be required. Insurance: \$2 Skills: R
- PSC 1613 SCIENCE: AN INTERDISCIPLINARY APPROACH (3-3-0).** This course is designed for the general interest student and requires a minimum of previous science preparation. The course considers the philosophy and methods of science in a humanistic and interdisciplinary perspective through a carefully selected set of topics in physics, chemistry, geology, astronomy, meteorology, and life science.
- PSC 1633 ENERGY RESOURCES (3-3-0).** A general survey of the manner in which mankind's energy needs are and will be met by electro-chemical sources, nuclear energy, solar energy, and wind-tide-geothermal action, and other resources. Skills: B Prerequisites: MATD 0370 or equivalent.
- PSC 1643 SCIENCE AND CONTEMPORARY SOCIAL PROBLEMS (3-3-0).** Interrelationships between science and problems of society or the individual. Stresses influence of technology and philosophy on society. Recommended for non-science majors. A field trip may be required. Insurance: \$2 Skills: R

## FINANCIAL MANAGEMENT

- BNKG 1357 INVESTOR ACCOUNTING (3-3-0).** An introduction to investor & accounting reporting functions that relate to the financial aspects of servicing mortgages that are in the first or second position. Topics include custodial and remittance accounting methods, reporting procedures, and rules for establishment of a custodial account. (Previously FNM 2213) Skills: R Prerequisites: RELE 1324 or department approval. (FNM 2213)
- BNKG 1358 SECONDARY MARKETS (3-3-0).** A study of the purpose of the secondary mortgage market and its history. Included are secondary market conduits, review of the basic strategies used in the selling of closed real estate mortgages into the secondary market, conventional and governmental segments, mortgage-backed securities and bonds, regulatory requirements, GNMA mortgage-backed securities, preparing and completing loans for sale, and servicing sold loans. Other topics included are institutional and non-institutional lenders, types of mortgages, and alternative mortgage instruments. Skills: R Prerequisites: RELE 1324 or department approval. (FNM 2223)
- BNKG 1371 LOAN UNDERWRITING (3-3-0).** This course is designed to provide the student with an in-depth training of mortgage loan underwriting for all facets of conventional loans as well as some discussion of FHA/VA lending practices. It provides a thorough understanding of Underwriting Guidelines as set forth by the Federal National Mortgage Association, Federal Home Loan Mortgage Corporation and most institutional type lenders. Topics include analyzing and evaluating documentation, analyzing IRS forms and working with private and secondary market investors. Skills: R Prerequisites: RELE 1324 or department approval. (FNM 1123)
- BNKG 1372 LOAN QUALITY CONTROL (3-3-0).** This course provides the student with the understanding of quality control, its purpose and procedure. Skills: R Prerequisites: RELE 1324 or department approval. (FNM 1141)
- BNKG 1373 LOAN CLOSING (3-3-0).** This course provides the student with comprehensive training in mortgage loan closing with an in-depth study of title commitments/policies, engineer's survey, deed restrictions, and various documents (legal and other) used for residential mortgage loans. Skills: R (FNM 1133)
- BUSA 1313 INVESTMENTS (3-3-0).** An overview of the theory and mechanics of business investment decisions and management of business financial assets using quantitative management techniques. Topics include time value of money, cash flow, capital budgeting, sources of funds, break-even analysis, and investment decisions. Skills: B
- BUSG 1341 SMALL BUSINESS FINANCING (3-3-0).** A study of the financial structure of a small business. Topics address business finance, including where the funds come from and what they are used for; budgeting including planning and preparing, record keeping, taxation, insurance, and banking. Skills: R
- BUSG 1345 BUSINESS FINANCE (3-3-0).** Survey of financial dynamics of the business firm. Study of monetary and credit theory, cash inventory, capital management, and consumer and government finance with emphasis on the relationship of time to money. Stresses initial & follow-up considerations in financing a business. Skills: R (FNM 2093)
- BUSI 1307 PERSONAL FINANCE (3-3-0).** Personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting and homeownership, and wills & trusts plans. Skills: R (FNM 1093)

**IBUS 2339 INTERNATIONAL BANKING AND FINANCE (3-3-0).** A course in international monetary systems, financial markets, flow of capital, foreign exchange, and financial institutions. Topics include export-import payments and financing, the preparation of letters of credit, related shipping documentation, and electronic transfers. An introduction to multinational financial decisions, such as financing foreign investment or working capital. (FNM 2073)

**RELE 1324 LOAN ORIGATION AND QUALITY CONTROL (3-3-0).** An introduction to the mortgage loan application process. Topics include regulatory compliance and documentation; real estate contracts; the mortgage application process, interview techniques; credit, income and property qualification, quality controls and procedures. Skills: R (FNM 1213)

## FIRE PROTECTION TECHNOLOGY

**FIRS 1313 FIREFIGHTER CERTIFICATION III (3-2-4).** General principles of fire apparatus, pump operations, fire streams, and public relations as they relate to fundamental development of basic firefighter skills. Familiarization of fire apparatus including pumpers, aerials, tankers and brush trucks. Fee: \$90 Insurance: \$4 Skills: R (FIPR 1063)

**FIRS 1323 FIREFIGHTER CERTIFICATION V (3-2-4).** The study of ropes and knots, rescue procedures and techniques and hazardous materials. Preparation for certification as a basic firefighter. Student will be trained to the level of a hazardous materials first responder. Fee: \$90 Insurance: \$4 Skills: R (FIR 1082)

**FIRS 1401 FIREFIGHTER CERTIFICATION I (4-3-3).** An introduction to firefighter safety and development. Topics include Texas Commission on Fire Protection Rules and Regulations, firefighter safety, fire science, personal protective equipment, self contained breathing apparatus, and fire reports and records. Fee: \$90 Insurance: \$4 (FIR 1053)

**FIRS 1407 FIREFIGHTER CERTIFICATION II (4-3-3).** The study of basic principles and skill development in handling fire service hose and ladders. Topics include the distribution system of water supply, basic building construction, and emergency service communication, procedures, and equipment. Fee: \$90 Insurance: \$4 Skills: R (FIR 1062)

**FIRS 1433 FIREFIGHTER CERTIFICATION VII (4-3-3).** An in-depth study and practice of simulated emergency operations and hands-on portable live fire training exercises, incident command procedures, and combined operations using proper extinguishing methods. The course emphasis is on safety. Fee: \$83 Insurance: \$4 Skills: R (FIPR 1092)

**FIRT 1301 FUNDAMENTALS OF FIRE PROTECTION (3-3-0).** Study of the philosophy, history and fundamentals of public and private fire protection. Topics include statistics of fire and property loss, agencies involved in public and private protection, legislative development, departmental organization, training and staffing.

**FIRT 1303 FIRE AND ARSON INVESTIGATION I (3-3-0).** In-depth study of basic fire and arson investigation practices. Emphasis on fire behavior principles related to fire cause and origin determination.

**FIRT 1307 FIRE PREVENTION CODES AND INSPECTIONS (3-3-0).** Study of local building and fire prevention codes. Emphasis on fire prevention inspections, practices, and procedures. (FIR 1023)

**FIRT 1309 FIRE ADMINISTRATION I (3-3-0).** Introduction to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer.

**FIRT 1315 HAZARDOUS MATERIALS I (3-3-0).** This is a basic course designed for first responders (police, fire, medical) to hazardous materials incidents. The course materials include an introduction to Haz-Mat, identifying hazardous materials, community risk assessment, command and control of incidents, and operations at incidents. Federal, state, and local regulations that apply to hazardous material will also be studied. Recognition of shipping containers and knowledge of labels, placards, and other marking systems will be learned. Skills: R (FIPR 2043)

**FIRT 1319 FIREFIGHTER HEALTH AND SAFETY (3-3-0).** Study of firefighter occupational safety and health in emergency and non-emergency situations.

**FIRT 1323 BUILDING CODES/FIRE CODES (3-3-0).** Survey of model codes used nationally to develop understanding of the interrelationships of building construction, occupancy, and related safety issues. Topics include Underwriters Laboratory (U.L.) listings and Factory Mutual (F.M.) approvals.

**FIRT 1327 BUILDING CONSTRUCTION IN FIRE SERVICE (3-3-0).** Exploration of building construction and design related to fire spread and suppression in various structures. Examination of potential hazards resulting from construction practices and materials.

**FIRT 1331 FIREFIGHTING STRATEGIES AND TACTICS (3-3-0).** This course is designed to meet specific needs of fire officers with responsibilities to manage the operations of companies in structural firefighting operations. The course components include preparations for response and decision

making. The foundation of the course is an extensive use of simulation to provide application of concepts and the development of skills. Skills: R (FIPR 2123)

- FIRT 1338 FIRE PROTECTION SYSTEMS (3-3-0).** Study of fire detection, alarm, and extinguishing systems.
- FIRT 1345 HAZARDOUS MATERIALS II (3-3-0).** In-depth study of mitigation practices and techniques to effectively control hazardous material spills and leaks. Prerequisites: FIRT 1315.
- FIRT 1347 INDUSTRIAL FIRE PROTECTION (3-3-0).** Study of industrial emergency response teams and specific concerns related to business and industrial facilities.
- FIRT 1349 FIRE ADMINISTRATION II (3-3-0).** In-depth study of fire service management as pertaining to budgetary requirements, administration, organization of divisions within the fire service, and relationships between the fire service and outside agencies. This course is a continuation of the subject matter presented in Fire Administration I. It is designed to prepare the student for middle and upper level management challenges in the fire service. Prerequisites: FIR 2013. (FIRT 1309)
- FIRT 1353 LEGAL ASPECTS OF FIRE PROTECTION (3-3-0).** Study of the rights, duties, liability concerns, and responsibilities of public fire protection agencies while performing assigned duties. (FIR 2063)
- FIRT 1355 METHODS OF TEACHING (3-3-0).** Preparation of public safety personnel to effectively teach technical skills, techniques, and information.
- FIRT 2333 FIRE AND ARSON INVESTIGATION II (3-3-0).** Continuation of Fire and Arson Investigation I. Topics include reports, courtroom demeanor, and expert witnesses. Prerequisites: FIRT 1303.

## FRENCH

- FREN 0041 FRENCH I LAB (1-0-2).** An elective lab course for students desiring improvement of listening, writing, reading, or speaking skills in French I, a course in which they are enrolled. Content to come from text, workbook, and tapes required in the French course and any additional materials provided by the lab instructor. (FRN 0041)
- FREN 0041 FRENCH II AND III LAB (1-0-2).** An elective lab course for students desiring improvement of listening, writing, reading, or speaking skills in French II or III, a course in which they are enrolled. Content to come from text, workbook, and tapes required in the French course and any additional materials provided by the lab instructor. (FRN 0041)

- FREN 1200 FRENCH CONVERSATION (2-3-0).** The primary objective of the course is to develop the student's competency in communicating through the spoken medium. Class time will be spent in simple conversation and discussion of material read outside class. Emphasis will be on idiomatic expressions used in daily speech, pronunciation, and vocabulary building. Prerequisites: FREN 1511 or equivalent, or instructor approval. (FRN 1642)
- FREN 1511 FRENCH I (5-5-0).** Study of fundamentals of French: conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. It is highly recommended that students with no previous experience with a foreign language also enroll in a French I Lab course. No prerequisite. Skills: E (FRN 1615)
- FREN 1512 FRENCH II (5-5-0).** Continuation of FREN 1511 with more advanced conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. Prerequisites: Students must have completed a first semester college French course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in FREN 1512. (FRN 1625)
- FREN 2311 FRENCH III (3-3-0).** Advanced French grammar, directed composition, conversation, and discussion of culture based on readings. Class conducted largely in French. Prerequisites: Students must have completed a second semester college French course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in FREN 2311. (FRN 2613)
- FREN 2312 FRENCH IV (3-3-0).** Continuation of FREN 2311. Prerequisites: FREN 2311 with a grade of C or better, or equivalent. (FRN 2623)

## GEOGRAPHY

- GEOG 1301 INTRODUCTION TO PHYSICAL GEOGRAPHY (3-3-0).** This course introduces the student to an area of study that brings together and interrelates the important elements of the physical environment of humans. The nature and characteristics of the physical environment, their development and distribution are emphasized. Skills: E (GOG 2403)
- GEOG 1302 INTRODUCTION TO CULTURAL GEOGRAPHY (3-3-0).** This course explores how humans create places through culture and their adaptation to the physical environment. Formal and functional aspects of spatial decision making are stressed. Skills: E (GOG 2413)
- GEOG 1410 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (4-3-3).** This course is designed to introduce the student to the basic principles and techniques of GIS. The lab material will emphasize GIS data collection, entry, storage, manipulation, and output using ArcView.

**GOG 1413 INTRODUCTION TO ELEMENTARY METEOROLOGY (3-3-0).** This course is designed to introduce the student to the processes involved in the formation of weather patterns and the longer term patterns of climate. Emphasis is placed on the interpretation of aerial photography and radar imaging.

**GOG 2433 WORLD/REGIONAL GEOGRAPHY (3-3-0).** This course focuses on the culture and physical environments of the world's geographic regions. It is both a survey course and an introduction to the discipline of geography. Skills: E

## GEOLOGY

**GEO 1653 ENVIRONMENTAL OCEANOGRAPHY (3-3-0).** The study of the oceanic environment and its influence on human physical and historical development, its impact on geopolitical and economic systems, and the interrelationships between man and the marine environment including oceanic pollutants and the development and exploitation of marine resources. Skills: B

**GEO 2614 PALEONTOLOGY (4-3-3).** A survey of invertebrate and vertebrate organisms, including dinosaurs, the use of fossils in paleoecological and stratigraphic interpretation, and evolutionary processes and principles. A field trip will be required. Offered once per year in the Spring semester. Fee: \$20 Insurance: \$2 Skills: G Prerequisites: GEOL 1403 or equivalent.

**GEOL 1105 LABORATORY IN ENVIRONMENTAL GEOLOGY (1-0-3).** A companion laboratory/activity course to GEOL 1305. Investigates topics and techniques in environmental geology with demonstrations, lab activities and field trips. Emphasis is placed on water, soils, and landforms in Central Texas. Designed for science majors or students with a strong science background. Field trips will be required. Fee: \$20 Insurance: \$2 Prerequisites: Credit for or concurrent enrollment in GEOL 1403 or GEOL 1305.

**GEOL 1305 ENVIRONMENTAL GEOLOGY (3-3-0).** A study of earth processes and natural hazards and their influences on rocks, soils, fluids, and life in ways that either affect or control man's environment. A field trip may be required. Insurance: \$2 Skills: R

**GEOL 1403 PHYSICAL GEOLOGY (4-3-3).** An introduction to geology, minerals, rocks, plate tectonics, geological processes, landforms, and structural geology. A field trip will be required. Fee: \$20 Insurance: \$2 Skills: B Prerequisites: One year of high school science.

**GEOL 1404 HISTORICAL GEOLOGY (4-3-3).** A geological history of the earth with emphasis on fossils, evolution, and depositional environments. A field trip will be required. Fee: \$20 Insurance: \$2 Prerequisites: GEOL 1403.

**GEOL 1445 INTRODUCTION TO OCEANOGRAPHY (4-3-3).** Description of basic biological, chemical, geological, hydrological, and physical features and processes of the oceans including origin, evolution, uses, and resources. A field trip will be required. Fee: \$20 Insurance: \$2 Skills: B (GEOL 1345)

## GEOMATICS/LAND SURVEYING TECHNOLOGY

**SRVY 1301 INTRODUCTION TO SURVEYING (3-3-0).** An overview of the surveying profession. The history of surveying and its impact on the world. Review of the mathematics used in surveying. Introduction to basic surveying equipment with emphasis on horizontal and vertical measurements. Instruction on surveying procedures and the limitation of errors. Calculation to determine precision and error of closure. (SRV 1003)

**SRVY 1341 LAND SURVEYING (3-3-0).** An introduction to the measurement and determination of boundaries, areas, shapes, location through traversing techniques. Instruction in a variety of adjustment methods using programmed and non-programmed calculators, as well as computers. Methods of traversing and adjustment of errors in accordance with prevailing and applicable professional standards and the standards of the Texas Board of Professional Land Surveying. Prerequisites: SRVY 1301. (SRV 1033)

**SRVY 1345 LAND SURVEYING APPLICATIONS (3-2-4).** An intermediate lab course covering the equipment, techniques, and hardware of the profession necessary to measure horizontal and vertical angles and distances used in traversing according to prevailing and applicable professional standards: e.g. electronic distance measuring equipment, total stations, theodolites, compasses, remote sensing equipment, global positioning receivers, data collectors and hand-help programmable calculators. Practice in the establishment of monuments, corners, lines and witness points in accordance with available data. Prerequisites: SRVY 1301 and SRVY 1341 (May be taken concurrently). (SRV 1043)

**SRVY 1391 SPECIAL TOPICS IN SURVEYING (3-2-4).** Designed for the advanced students who wish to pursue special topics in surveying. Topics address recently identified current events, skill, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. (SRV 2043)

**SRVY 2339 ENGINEERING DESIGN SURVEYING (3-3-0).** A study of the theory and field methods of surveying alignments; e.g., highway routes, pipeline, utility and waterway construction, transmission lines and site stakeout, including the study of horizontal circular curves, parabolic curves, areas, and earthwork volumes. Prerequisites: SRVY 1341. (SRV 2023)

**SRVY 2341 ENGINEERING DESIGN SURVEYING LAB (3-2-4).** The companion lab for Engineering Design Surveying. Emphasis on field methods of surveying alignments; e.g., highway routes, pipelines, utility and waterway construction, transmission lines, including the study of procedures for route construction, design, calculation and stakeout. Fee: \$12 Prerequisites: SRVY 1345 and SRVY 2339 (may be taken concurrently). (SRV 2033)

**SRVY 2343 SURVEYING LEGAL PRINCIPLES I (3-3-0).** An introductory course in the study of location, conveyance, ownership and transfer of real property under the laws of the State of Texas. Emphasis on the history of the disposition of public land, interpreting written descriptions, dignity of calls and evidence, record search of public and private land records and preparation of a deed record sketch. (SRV 1023)

**SRVY 2344 SURVEYING LEGAL PRINCIPLES II (3-3-0).** An advanced course in legal principles, retracement and boundary location with application of legal principles and rules of construction including writing survey reports, property descriptions, and a review of boundary law cases. Prerequisites: SRVY 2343. (SRV 2073)

**SRVY 2486 INTERNSHIP & SURVEYING (4-1-6).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. Prerequisites: SRVY 2339 and SRVY 2343.

## GERMAN

**GERM 0041 GERMAN I LAB (1-0-2).** An elective lab course for students desiring improvement of listening, writing, reading, or speaking skills in German I, a course in which they are enrolled. Content to come from text, workbook, and tapes required in the German course and any additional materials provided by the lab instructor. (GER 0041)

**GERM 0041 GERMAN II AND III LAB (1-0-2).** An elective lab course for students desiring improvement of listening, writing, reading, or speaking skills in German II or III, a course in which they are enrolled. Content to come from text, workbook, and tapes required in the German course and any additional materials provided by the lab instructor. (GER 0041)

**GERM 1200 GERMAN CONVERSATION (2-3-0).** The primary objective of the course is to develop the student's competency in communicating through the spoken medium. Class time will be spent in

simple conversation and discussion of material read outside class. Emphasis will be on idiomatic expressions used in daily speech, pronunciation and vocabulary building. Prerequisites: GERM 1511 or equivalent, or instructor approval. (GER 1642)

**GERM 1511 GERMAN I (5-5-0).** Study of fundamentals of German: conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. It is highly recommended that students with no previous experience with a foreign language also enroll in a German I lab course. No prerequisite. Skills: E (GER 1615)

**GERM 1512 GERMAN II (5-5-0).** Continuation of GERM 1511 with more advanced conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. Prerequisites: Students must have completed a first semester college German course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in GERM 1512. (GER 1625)

**GERM 2311 GERMAN III (3-3-0).** Advanced German grammar, directed composition, conversation, and discussion of culture based on readings. Class conducted largely in German. Prerequisites: Students must have completed a second semester college German course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in GERM 2311. (GER 2613)

**GERM 2312 GERMAN IV (3-3-0).** Continuation of GERM 2311. Prerequisites: GERM 2311 with a C or better, or equivalent. (GER 2623)

## GOVERNMENT

**GOV 2633 SPECIAL TOPICS IN UNITED STATES GOVERNMENT (3-3-0).** Currently, ACC offers two special topics courses, one examining U.S. foreign policy, and one examining civil liberties & civil rights. (See detailed course descriptions below.) A special topics course is required for Government majors. For non-majors, this course may be substituted for GOVT 2305 for degree and graduation requirements. Skills: E

**GOV 2633 UNITED STATES FOREIGN POLICY (3-3-0).** This course focuses on United States foreign policy since World War II. Topics covered include the United States Constitution, the institutions and processes involved in making United States foreign policy, United States relations with other nations since World War II, and contemporary issues in United States foreign policy. This course may be substituted for GOVT 2305 for degree and graduation requirements. Skills: E

**GOV 2633 CIVIL LIBERTIES AND CIVIL RIGHTS (3-3-0).** This course surveys United States national government with an emphasis on civil liberties and civil rights and on the substantive

issues that face the United States Supreme Court in determining the nature and scope of civil liberties and civil rights. This course may be substituted for GOVT 2305 for degree and graduation requirements. Skills: E

**GOVT 2305 UNITED STATES GOVERNMENT (3-3-0).** This course is an introduction to United States national government. The course includes a framework for understanding United States government and politics, and the constitutional basis for the processes of, the institutions of, and the policies of United States government and politics. Skills: E (GOV 2613)

**GOVT 2305 UNITED STATES GOVERNMENT6 OPEN CAMPUS6PRN (3-3-0).** This course is an introduction to United States national government. The course includes a framework for understanding United States government and politics, the constitutional basis for, the processes of United States government and politics, and the constitutional basis for the processes of, the institutions of, and the policies of United States government and politics. However, students do not attend scheduled classes, but study a textbook and use a study guide to complete assignments. Students must attend an orientation meeting during the first week of classes, take all exams in ACC testing centers, and maintain satisfactory progress in the course to remain enrolled. Skills: E (GOV 2613)

**GOVT 2305 UNITED STATES GOVERNMENT: MINORITIES6PCM (3-3-0).** This course views national government through the perspectives of its political cultures. Four groups are identified and studied: African-Americans, Hispanics, Asian-Americans, and Native Americans. Study of the United States Constitution and the institutions and processes of the United States government are an integral part of this course. However, students do not attend scheduled classes, but study a textbook and use web-based resources to complete assignments. Students must complete an online orientation during the first week of classes, take all exams in ACC testing centers, and maintain satisfactory progress in the course to remain enrolled. Students are required to have an Internet account to take this course. ACC does not provide Internet accounts. Skills: E (GOV 2613)

**GOVT 2305 UNITED STATES GOVERNMENT6 OPEN CAMPUS6PCM (3-3-0).** This course is an introduction to United States national government. The course includes a framework for understanding United States government and politics, the constitutional basis for United States government and politics, the processes of United States government and politics, the institutions of United States government and politics, and the policies of United States government and politics. However, students do not attend scheduled classes, but study a textbook and use web-based resources to complete assignments. Students must complete an

online orientation during the first week of classes, take all exams in ACC testing centers, and maintain satisfactory progress in the course to remain enrolled. Students are required to have an Internet account to take this course. ACC does not provide Internet accounts. Skills: E (GOV 2613)

**GOVT 2305 UNITED STATES GOVERNMENT - INTERNSHIP (3-3-0).** This course is an introduction to United States national government. The course includes an introduction to a framework for understanding United States government and politics and the constitutional basis for the processes of, the institutions of, and the policies of United States government and politics. However, students attend scheduled classes for part of the semester and work as interns in federal agencies located in Austin for the remainder of the semester. Students will spend time away from the campus while participating in the internship. Students may not intern in a government office where they are currently employed. Skills: E (GOV 2613)

**GOVT 2306 TEXAS STATE AND LOCAL GOVERNMENT (3-3-0).** This course is an introduction to Texas state and local government. The course includes an introduction to a framework for analyzing Texas government and politics and the constitutional basis for, the processes of, the institutions of, and the policies of Texas government and politics. Skills: E (GOV 2623)

**GOVT 2306 TEXAS STATE AND LOCAL GOVERNMENT WITH EMPHASIS ON LAND USE POLICY (3-3-0).** This course is an introduction to Texas state and local government with an emphasis on land use policy. The course includes the powers and practices of local governments in controlling land use. Topics include annexation, extraterritorial jurisdiction (ETJ), the legal issue of takings, eminent domain, zoning, Municipal Utility Districts (MUDs), environmental impact considerations, subdivision ordinances, and deed restrictions. This course substitutes for GOVT 2306 for degree and graduation requirements. Skills: E (GOV 2623)

**GOVT 2306 TEXAS STATE AND LOCAL GOVERNMENT6INTERNSHIP6DIR (3-3-0).** This course is an introduction to Texas state and local government. The course includes a framework for analyzing Texas government and politics and the constitutional basis for, the processes of, the institutions of, and the policies of Texas government and politics. However, students attend scheduled classes for part of the semester and work as interns in state and local government offices for the remainder of the semester. Students will spend time away from the campus while participating in the internship. Students may not intern in a government office where they are currently employed. Skills: E (GOV 2623)

- GOVT 2306 TEXAS STATE AND LOCAL GOVERNMENT6HONORS INTERNSHIP6DIR (3-3-0).** This course is an introduction to Texas state and local government. It consists of experiential learning in which the student serves as an intern to a state legislator or in another state or local government agency. The goal of this course is to provide the student with first-hand experience in the daily workings of state and local government. Through self-study, seminars, and online discussions, the course introduces a framework for understanding Texas state government and politics, its constitutional basis, and its processes, institutions, and policies. The objective is to compare the intent of the 1876 Texas Constitution with the realities of modern economic and political life in the state. The student will analyze the effects of government structure and regulation on our society today, compare those effects with the original intent, and assess why differences exist and how they affect the student's world. Skills: E (GOV 2623)
- GOVT 2306 TEXAS STATE AND LOCAL GOVERNMENT6OPEN CAMPUS6PRN (3-3-0).** This course is an introduction to Texas state and local government. The course includes a framework for analyzing Texas government and politics and the constitutional basis for, the processes of, the institutions of, and the policies of Texas government and politics. However, students do not attend scheduled classes, but study a textbook and follow a study guide to complete assignments. Students must attend an orientation meeting during the first week of classes, take all exams in ACC testing centers, and maintain adequate progress in the course to remain enrolled. Skills: E (GOV 2623)
- GOVT 2306 TEXAS STATE AND LOCAL GOVERNMENT6OPEN CAMPUS6PCM (3-3-0).** This course is an introduction to Texas state and local government. The course includes a framework for analyzing Texas government and politics and the constitutional basis for, the processes of, the institutions of, and the policies of Texas government and politics. However, students do not attend scheduled classes, but study a textbook and use web-based resources to complete assignments. Students must complete an online orientation during the first week of classes, take all exams in ACC testing centers, and maintain satisfactory progress in the course to remain enrolled. Students are required to have an Internet account to enroll in this course. ACC does not provide Internet accounts. Skills: E (GOV 2623)

## HEALTH AND KINESIOLOGY

- KINE 1101 AEROBICS I (1-1-2).** Aerobic exercise to music. Students will be provided with an opportunity to strengthen their cardiorespiratory system, decrease percent body fat, tone and firm muscles. This course is designed to increase energy, mental clarity and health as a part of one's lifestyle. The class will incorporate high, light, and low impact movements, flexibility. Some classes incorporate bench-step, slide, kick-boxing, body sculpting, NIA dance, and circuit aerobics. Insurance: \$4 (HKN 1601)
- KINE 1103 AQUA FITNESS (1-1-2).** A water aerobics class incorporating a warm up, cardiorespiratory conditioning, a muscle strengthening segment and a cool down. The buoyancy of the water lessens the stress and impact of exercise on the joints while providing resistance, which tones and conditions the muscles and cardiovascular system. Some fundamental swimming skills are incorporated into the class but no swimming experience is necessary. Insurance: \$4 (HKN 1601)
- KINE 1105 BASKETBALL (1-1-2).** Instruction for all levels of skill in the fundamentals of basketball. Emphasis upon the development and improvement of total fitness, skill and general knowledge about basketball for leisure time use. Insurance: \$4 (HKN 1601)
- KINE 1106 BOWLING I (1-1-2).** Fundamentals of bowling skills, strategies and scoring. For beginning and intermediate skill levels. Site fee: \$75.00 Insurance: \$4 (HKN 1601)
- KINE 1107 CONDITIONING6STRETCHING/ FLEXIBILITY (1-1-2).** A self-paced physical-conditioning course that emphasizes correct techniques for improving flexibility with individual and partner stretches from athletics, dance and yoga. May include Pilates exercises. Insurance: \$4 (HKN 1701)
- KINE 1108 CONDITIONING6WALK/JOG (1-1-2).** A self-paced physical conditioning course that emphasizes cardiovascular fitness through your choice of walking, jogging, or a combination of both. Students will not be required to run. Correct techniques in striding and form will be introduced in addition to discussion of the benefits of aerobic exercise, nutrition, weight management, and associated topics. Insurance: \$4 (HKN 1701)
- KINE 1109 DANCE6BALLET I (1-1-2).** An introduction to the fundamentals of classical ballet designed for students with little or no training. Primary emphasis on placement and alignment of the body, turnout, stretches, barre work, simple addagio and allegro movements, brief history and French terminology, as well as other preparatory work necessary for the establishment of a basic technical foundation. Insurance: \$4 (HKN 1601)

- KINE 1110 DANCE COUNTRY/WESTERN (1-1-2).** A variety of traditional and modern country/western dances will be taught, including two-step, polkas, waltzes, schotische and line dances. Insurance: \$4 (HKN 1701)
- KINE 1112 DANCE6IMPROVISATIONAL (1-1-2).** An introductory course designed for the beginning dance student. Improvisational dance techniques provide opportunities for students to explore and expand their personal range of creativity, movement and awareness. Activities include exercises and information on body alignment, muscular development, and effective relaxation/breathing techniques. Insurance: \$4 (HKN 1601)
- KINE 1113 DANCE6JAZZ I (1-1-2).** An introductory course designed for the student with little or no previous training. Primary emphasis on jazz technique; placement and alignment of the body, footwork, stretches musicality, and other preparatory work necessary for the establishment of a basic foundation. Different styles of jazz dance such as musical theatre, television, and movie styles are explored. Insurance: \$4 (HKN 1601)
- KINE 1114 DANCE6MID-EAST (1-1-2).** Traditional and modern techniques of middle eastern dancing emphasizing fluidity of movement. Insurance: \$4 (HKN 1601)
- KINE 1115 DANCE6MODERN I (1-1-2).** An introductory course in the fundamentals of modern dance technique. Students learn and practice warm-up exercises and dance sequences emphasizing articulation and coordination of body parts, rhythm, musicality and expressive qualities of movement. NIA dance may be included. Insurance: \$4 (HKN 1601)
- KINE 1116 SOCIAL DANCE (1-1-2).** A survey of popular and traditional social and ballroom dances including the Waltz, Fox Trot, Polka, Swing, Cha-Cha, Tango, Latin Rhythms, Country Western, and other current dances. Emphasis on partnering techniques and variations of each dance. Insurance: \$4 (HKN 1701)
- KINE 1118 FENCING I (1-1-2).** Beginning fencing techniques and strategies of proper footwork and bladework. The beginning fencer will also learn the methodology of bouting along with a brief history of fencing. Fee: \$8 Insurance: \$4 (HKN 1601)
- KINE 1120 GOLF I (1-1-2).** Golf I covers the swing and the use of long irons, mid irons, short irons, and the putter. Application of the golf swing for all irons is included with course etiquette. Fee: \$24 Insurance: \$4 (HKN 1601)
- KINE 1121 GYMNASTICS I (1-1-2).** Beginning to intermediate individual skill performance on tumbling, uneven parallel bars, balance beam and vaulting for women, and tumbling, parallel bars, high bar, rings, pommel horse, and vaulting for men. Emphasis on strength, flexibility, balance and coordination. Insurance: \$4 (HKN 1601)
- KINE 1125 JUDO (1-1-2).** Fundamentals of a Japanese Martial Art form for personal safety and self-defense and to improve physical condition and mental discipline. Activities will include breakfalls, throws, grappling, holds, and practical self defense techniques. Short lectures on history, rules, and ranking requirements will be given. Insurance: \$4 (HKN 1601)
- KINE 1126 LIFE GUARDING (1-1-2).** A swimming conditioning and training program leading to American Red Cross lifeguarding certification. Community First Aid and CPR for the Professional Rescuer will also be included in the class. Insurance: \$4 (HKN 1601)
- KINE 1127 MARTIAL ARTS AIKIDO (1-1-2).** Aikido is a no punch, no kick art of self-defense. Using Aikido is throwing and pinning arts properly, an attack can be neutralized without inflicting serious injury. At its higher levels, it is an effective discipline for the development, integration and utilization of all human powers of physical, mental and spiritual. Aikido I covers history, philosophy and basic techniques. Insurance: \$4 (HKN 1601)
- KINE 1128 MARTIAL ARTS CONDITIONING (1-1-2).** A comprehensive physical conditioning course, which includes calisthenics, plyometrics with medicine balls and strength and speed drills. Prepares and/or supplements conditioning for all forms of martial arts. Insurance: \$4 (HKN 1701)
- KINE 1130 MARTIAL ARTS TAE KWON DO (1-1-2).** This physical activity course will enable the student to learn Korean Tae Kwon Do, a practical form of self-defense; to improve physical conditioning and mental discipline; and to develop an appreciation for Tae Kwon Do as an Olympic sport. Class activities will include principles of movement such as kicking, punching, offensive and defensive techniques, and basic self-defense. Insurance: \$4 (HKN 1601)
- KINE 1131 MARTIAL ARTS TAI CHI I (1-1-2).** Fundamentals of a Chinese martial art form emphasizing health and self-defense (non-contact). It involves slow movements that resemble various animals in motion. It may be considered moving meditation. Insurance: \$4 (HKN 1601)
- KINE 1132 MARTIAL ARTS WEAPONRY (1-1-2).** A wide variety of martial arts weapons skills will be covered beginning with the short and long sticks. Conditioning drills will be included. Insurance: \$4 (HKN 1701)
- KINE 1138 SELF DEFENSE (1-1-2).** Safety principles and skills which will enable students to avoid and/or minimize violence will be taught. Information on acculturated and lifestyle factors, which influence a victim profile will be covered. Insurance: \$4 (HKN 1701)
- KINE 1139 SOCCER (1-1-2).** Basic offensive and defensive skills and strategies of soccer. Conditioning drills will be included. Fee: \$8 Insurance: \$4 (HKN 1601)

- KINE 1141 SWIMMING I (1-1-2).** Beginning swimming skills are taught including the American crawl, backstroke, breaststroke and sidestroke. Correct breathing skills are emphasized. Insurance: \$4 (HKN 1601)
- KINE 1142 TENNIS I (1-1-2).** The fundamentals of tennis strokes, forehand, backhand, serve and volley as well as game scoring, positioning and etiquette for beginning player with emphasis for lifetime activity. Fee: \$8 Insurance: \$4 (HKN 1601)
- KINE 1143 TRACK AND FIELD (1-1-2).** Designed for all levels of skill in track and field performance. Events covered in the course include sprints, middle distance, long distance running, jumps, throws and multi-event performance. The emphasis is on the development of total fitness and skills for leisure use. Insurance: \$4 (HKN 1701)
- KINE 1144 VOLLEYBALL (1-1-2).** An introductory course to the fundamentals of volleyball including passing, serving, setting, and spiking. Students will learn rules and court strategy for playing the game. Emphasis on total fitness and recreational skills for leisure. Insurance: \$4 (HKN 1601)
- KINE 1145 WEIGHT TRAINING I (1-1-2).** This course is designed to help students identify and understand the benefits of weight training and how weight training affects the body. They will also be able to design and develop a balanced weight training program to meet their individual needs. Fee: \$24 Insurance: \$4 (HKN 1601)
- KINE 1146 YOGA I (1-1-2).** Introduction to yoga including traditional yoga postures emphasizing flexibility, breathing and relaxation techniques as well as careful attention to alignment in classical yoga poses. Props will be utilized depending upon the instructor. Insurance: \$4 (HKN 1601)
- KINE 1147 MARTIAL ARTS KARATE I (1-1-2).** Japanese-American Martial Art form stressing physical fitness and self defense. Insurance: \$4 (HKN 1601)
- KINE 1153 SWIMMING II (1-1-2).** A conditioning swimming class to improve cardiorespiratory endurance, swimming skills and speed. The front crawl, breast stroke, sidestroke, backstroke, and butterfly will be covered. Insurance: \$4 Prerequisites: Ability to swim 100 meters. (HKN 2611)
- KINE 1201 DIRECTED PHYSICAL FITNESS CONCEPTS (2-1-2).** Students set-up their workout schedule (must be completed at the Riverside Campus). This course was designed to provide the diagnosis and explanation of cardiovascular fitness. It includes the meaning and use of selected physiological parameters of fitness, weight training, flexibility, and wellness concepts. Orientation must be attended. Insurance: \$4 (HKN 1612)
- KINE 1301 FOUNDATIONS OF PHYSICAL EDUCATION (3-3-0).** An introduction to the profession of physical education, including philosophical, historical and scientific foundations. Course includes assessment of physical qualities and personal and professional qualifications. (PHED 1301) Skills: R (HKN 1613)
- KINE 1304 PERSONAL HEALTH (3-3-0).** A fundamental course in principles and problems of healthful living, as they apply today. This course emphasizes assessment of health status and a body of information that can lead to rational choice in lifestyle. Skills: R (HKN 1673)
- KINE 1305 COMMUNITY HEALTH (3-3-0).** The principles of personal health: nutrition, mental health, stimulants and narcotics, exercise, sleep and rest; also includes community health, sanitation, community services and public health agencies. Skills: R (HKN 1683)
- KINE 1306 FIRST AID AND SAFETY (3-3-0).** A course designed to enable the student to recognize and avoid hazards within his/her environment; to intelligently assist in case of accident or illness; to develop skills necessary for immediate and temporary care of a victim. First Aid and CPR Certification will be offered. (PHED 1306) Fee: \$8 Skills: R (HKN 1653)
- KINE 1308 OFFICIATING BASEBALL/ SOFTBALL/SOCCER (3-3-0).** This course is for students desiring to officiate and to increase their knowledge and appreciation of sports. Students will be given an insight into the rules of various sports (soccer and baseball in the spring) and the technique, procedure and practice of officiating. (HKN 2613)
- KINE 1309 OFFICIATING VOLLEYBALL/ BASKETBALL (3-3-0).** This course is for students desiring to officiate and to increase their knowledge and appreciation of sports. Students will be given an insight into the rules of various sports (basketball and volleyball in the fall) and the technique, procedure, and practice of officiating. (HKN 2613)
- KINE 1321 COACHING (3-3-0).** A course designed to teach fundamentals of team play (e.g., volleyball, basketball, soccer, baseball, football), comparison of systems, strategy, training and conditioning, selection of individuals for positions, responsibilities of the coach and public relations. (HKN 2623)
- KINE 1322 AEROBIC INSTRUCTOR (3-2-2).** A course to train individuals in skills necessary to lead group instruction in the areas of aerobic step, slide, interval training, circuit training and aqua fitness. Other topics covered are physiology, anatomy, biomechanics, applied kinesiology, nutrition and weight control. Areas of instruction include assessment, programming and instruction,

individual needs, and instructor responsibilities. Insurance: \$4 Prerequisites: KINE 1101 or equivalent experience recommended. (HKN 2503)

**KINE 1370 FOUNDATIONS OF HEALTH**

**EDUCATION (3-3-0).** Concepts essential to understanding health education as a discipline; competencies and career opportunities related to school and community health education are discussed. (HKN 1623)

**KINE 2101 AEROBICS II (1-1-2).** A well structured course in which the student will achieve coordination and strength through a cardiovascular workout. This achievement will come from combining high and low impact movement performed at a level suitable to the individual. The course includes an easy understanding of anatomy and physiology as well as nutrition and diet control. Insurance: \$4 Prerequisites: KINE 1101 or equivalent. (HKN 2601)

**KINE 2103 BOWLING II (1-1-2).** Intermediate and advanced level skills will be covered in the course. Strategies, scoring and conditioning will be introduced. Site Fee: \$75.00. Insurance: \$4 Prerequisites: KINE 1106 or equivalent experience. (HKN 2601)

**KINE 2105 DANCE6BALLET II (1-1-2).** A continued study of the technical fundamentals of classical ballet. Designed for the student with at least one semester of previous ballet training. Primary emphasis on sequence combinations, of beginning ballet movements, positions of the body, vertical posture, centering coordination of port de bras, with addagio and allegro movements and continuation of French terminology. Insurance: \$4 Prerequisites: KINE 1109 or consent of instructor. (HKN 2601)

**KINE 2106 DANCE6JAZZ II (1-1-2).** A continuation of Dance Jazz I (KINE 1112). Designed for the student with at least one semester of previous jazz dance training. Primary emphasis on jazz dance techniques; placement and alignment of the body, footwork, stretches, turns, musicality, and other work necessary for continued growth in jazz technique. Work on developing each dancer's unique style will be emphasized. Insurance: \$4 Prerequisites: KINE 1113 or equivalent experience. (HKN 2601)

**KINE 2107 DANCE6MODERN II (1-1-2).** Creative way of moving involving technical skill and improvisation. Begun as a way of breaking the boundaries and confines of ballet, modern dance expands your range of movement and awareness of space and time. Insurance: \$4 Prerequisites: KINE 1115 or equivalent experience. (HKN 2601)

**KINE 2108 DANCE-MIDEAST II (1-1-2).** More intricate movements and choreography of Middle Eastern dancing will be covered. Traditional and modern techniques will be offered. Insurance: \$4 Prerequisites: KINE 1114 or equivalent experience. (HKN 2601)

**KINE 2110 FENCING II (1-1-2).** Students required to have had previous fencing training. Fitness, footwork, bladework and bouts emphasized. Students may continue with the foil or other weapons. Fee: \$8 Insurance: \$4 Prerequisites: KINE 1118 or equivalent experience. (HKN 2601)

**KINE 2111 GOLF II (1-1-2).** Golf II addresses individual problems and strives to improve techniques. Fee: \$24 Insurance: \$4 Prerequisites: Have played on a high school golf team, completed KINE 1120, or had experience playing golf. (HKN 2601)

**KINE 2112 GYMNASTICS II (1-1-2).** Intermediate and advanced tumbling and apparatus skills. Improve flexibility, conditioning and muscle tone. Continuation of skill development from Gymnastics I. Insurance: \$4 Prerequisites: KINE 1121 or equivalent experience. (HKN 2601)

**KINE 2113 MARTIAL ARTS AIKIDO II (1-1-2).** This course is a further clarification of the basic techniques and their applied variations. Students should have previous Aikido instruction. Insurance: \$4 (HKN 2601)

**KINE 2114 MARTIAL ARTS KARATE II (1-1-2).** Advanced techniques of a Japanese-American Martial Art form emphasizing fitness and self-defense. Insurance: \$4 Prerequisites: KINE 1147 or equivalent experience. (HKN 2601)

**KINE 2115 MARTIAL ARTS TAI CHI II (1-1-2).** This course is designed for students who have completed Tai Chi I. The continuation and progression includes moving meditation and the remainder of the 108 movements that comprise the form. Emphasis will be placed on deepening one's own practice by focusing on the inner vertical; learning within each movement. Insurance: \$4 Prerequisites: KINE 1131 or previous Tai Chi experience. (HKN 2601)

**KINE 2118 SNORKELING (1-1-2).** Mastery of techniques of snorkeling including the use of mask, fins, and snorkel. Physical conditioning will be emphasized. Insurance: \$4 Prerequisites: Ability to swim. (HKN 2611)

**KINE 2119 SOCCER II (1-1-2).** Intermediate and advanced offensive and defensive techniques, player positions and responsibilities, shielding and tracking skills, systems of play, terminology and rules of the game are covered. Fee: \$8 Insurance: \$4 Prerequisites: KINE 1139 or equivalent experience. (HKN 2601)

**KINE 2120 TENNIS II (1-1-2).** Continuation and progression from beginning tennis. Students with mastery of fundamental strokes will learn through play and instruction in the more advanced strategies and skills. Emphasis on development of total fitness and more advanced play for leisure use. Fee: \$8 Insurance: \$4 Prerequisites: KINE 1142 or equivalent experience. (HKN 2601)

- KINE 2121 VOLLEYBALL II (1-1-2).** Continuation and progression from beginning volleyball. Students with mastery of the fundamental skills of volleyball will learn more advanced strategies and skills of the game. Emphasis on development of total fitness and more advanced play for leisure use. Insurance: \$4 Prerequisites: KINE 1144 or equivalent experience. (HKN 2601)
- KINE 2122 WEIGHT TRAINING II (1-1-2).** Intermediate and advanced level training routines for complete muscular development. Fee: \$24 Insurance: \$4 Prerequisites: KINE 1145 or equivalent experience. (HKN 2601)
- KINE 2123 YOGA II (1-1-2).** Continuation and progression from beginning Yoga to include advanced traditional Yoga postures emphasizing flexibility, breathing and relaxation techniques. Insurance: \$4 Prerequisites: KINE 1146 or previous Yoga training. (HKN 2601)
- KINE 2155 WATER SAFETY (1-0-3).** Instruction in life saving and water safety for leaders in schools, camps and recreation centers; leads to American Red Cross Water Safety Certificate. Insurance: \$4 (HKN 2621)
- KINE 2356 CARE AND PREVENTION OF ATHLETIC INJURIES (3-3-0).** The study of the treatment and prevention of specific sport injuries resulting from activities in the home, recreational, intramural, and extramural settings. Identification of injuries, proper treatment after they occur, and preventative measures. Students learn how to create a safe environment for athletes. Cramer and American Red Cross techniques will be covered.

## HEATING, AIR CONDITIONING, AND REFRIGERATION TECHNOLOGY

- CETT 1402 ELECTRICITY PRINCIPLES (4-3-3).** Principles of electricity including proper use of test equipment, A/C and D/C circuits, and component theory and operation. Insurance: \$3 (ELN 1034)
- HART 1403 A/C CONTROL PRINCIPLES (4-3-3).** A basic study of electrical, pressure, and temperature controls including motor starting devices, operating relays, and troubleshooting safety controls and devices. Emphasis on use of wiring diagrams to analyze high and low voltage circuits. A review of Ohm's law as applied to A/C controls and circuits. Insurance: \$3 Prerequisites: CETT 1402. (ACR 1024)
- HART 1407 REFRIGERATION PRINCIPLES (4-3-3).** An introduction to the refrigeration cycle, basic thermodynamics, heat transfer, temperature/pressure relationship, safety, refrigeration containment, and refrigeration components. Insurance: \$3 (ACR 1014)
- HART 1441 RESIDENTIAL AIR CONDITIONING (4-3-3).** A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems. Fee: \$24 Insurance: \$3 Prerequisites: CETT 1402, HART 1403 and HART 1407. (ACR 1034)
- HART 1442 COMMERCIAL REFRIGERATION (4-3-3).** Theory of and practical application in the maintenance of commercial refrigeration; high, medium, and low temperature applications and ice machines. Offered in the Fall Semester. Fee: \$24 Insurance: \$3 Prerequisites: HART 2431. (ACR 2024)
- HART 1445 GAS AND ELECTRIC HEATING (4-3-3).** A study of the procedures and principles used in servicing heating systems including gas fired and electric furnaces. Fee: \$24 Insurance: \$3 Prerequisites: HART 1441. (ACR 1044)
- HART 1449 HEAT PUMPS (4-3-3).** A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. Offered in the Fall Semester. Fee: \$24 Insurance: \$3 Prerequisites: HART 2431. (ACR 2064)
- HART 1491 SPECIAL TOPICS IN HEATING, AIR CONDITIONING AND REFRIGERATION: AIR CONDITIONING MECHANICAL CODES AND INSPECTION (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Offered in the Spring Semester. Prerequisites: HART 2431. (ACR 2035)
- HART 2288 INTERNSHIP<sup>6</sup> HEATING, AIR CONDITIONING, REFRIGERATION MECHANIC (2-1-7).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Insurance: \$3 Prerequisites: HART 2431. (ACR 2083)
- HART 2431 ADVANCED ELECTRICITY (4-3-3).** Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution and introduction to solid state devices. Fee: \$24 Insurance: \$3 Prerequisites: HART 1441. (ACR 1044)
- HART 2441 COMMERCIAL AIR CONDITIONING (4-3-3).** A study of components, applications, and installation of air conditioning systems with

capacities of 25 tons or less. Offered in the Fall Semester. Fee: \$24 Insurance: \$3 Prerequisites: HART 2431. (ACR 2054)

**HART 2443 INDUSTRIAL AIR CONDITIONING (4-3-3).** A study of components, accessories, applications, and installation of air conditioning systems above 25 tons capacity. Offered in the Spring Semester. Fee: \$24 Insurance: \$3 Prerequisites: HART 2431. (ACR 2064)

**HART 2445 AIR CONDITIONING SYSTEMS DESIGN (4-3-3).** A study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system. Offered in the Spring Semester. Fee: \$24 Insurance: \$3 Prerequisites: HART 2431. (ACR 2044)

## HISTORY

**HIS 1643 U.S. HISTORY II6AFRICAN-AMERICAN EMPHASIS (3-3-0).** A continuation of HIST 2381, beginning with Reconstruction and continuing to the present. Skills: E

**HIS 1663 U.S. HISTORY II6MEXICAN-AMERICAN EMPHASIS (3-3-0).** A continuation of HIST 2380, emphasizing the modern contributions and leaders of the Mexican-American culture in America. Counts toward U.S. History requirement or as an elective.

**HIS 2653 EAST ASIAN HISTORY I (3-3-0).** A survey of the political, social, and cultural history of East Asia until 1800 concentrating on China, Japan, and Korea.

**HIS 2663 EAST ASIAN HISTORY II (3-3-0).** A survey of the political, social, and cultural history of East Asia from 1800 to the present concentrating on China, Japan, and Korea.

**HIST 1301 UNITED STATES HISTORY I (3-3-0).** A study of the history of the United States to 1877. Skills: E (HIS 1613)

**HIST 1302 UNITED STATES HISTORY II (3-3-0).** A study of the history of the United States from 1877 to present. Skills: E (HIS 1623)

**HIST 2301 HISTORY OF TEXAS (3-3-0).** A survey of the political, economic, social, cultural, and intellectual development of Texas from prehistoric time to the present with attention given to ethnic minorities. Counts toward U.S. History requirement or as an elective. Skills: E (HIS 1693)

**HIST 2311 WESTERN CIVILIZATION I (3-3-0).** Development of ancient, medieval, and early modern civilizations to 1660. Skills: E (HIS 1673)

**HIST 2312 WESTERN CIVILIZATION II (3-3-0).** Development of modern western civilization from 1660 to present. Skills: E (HIS 1683)

**HIST 2331 LATIN AMERICAN HISTORY I: THE COLONIAL EXPERIENCE (3-3-0).** An historical survey of the political, economical, social, and cultural developments of Spanish and Portuguese America prior to independence in the 1830s. Skills: E (HIS 2633)

**HIST 2332 LATIN AMERICAN HISTORY II: THE NATIONAL EXPERIENCE (3-3-0).** An historical survey of the political, economical, social, and cultural developments of Spanish and Portuguese America since independence. Skills: E (HIS 2643)

**HIST 2341 STUDIES IN U.S. HISTORY (3-3-0).** A treatment of selected topics in the history of the United States. May be repeated when topics vary. Counts toward U.S. History requirement or as an elective. Skills: E (HIS 2613)

**HIST 2341 MILITARY HISTORY OF THE U.S. (3-3-0).** A survey of American military policy and development from the 17th century to the present. Skills: E (HIS 2613)

**HIST 2341 THE SOUTHWEST (3-3-0).** A survey of the political, social, and cultural developments of the border region. Skills: E (HIS 2613)

**HIST 2341 CIVIL WAR (3-3-0).** A survey of the political, military, constitutional, economic, and social events in the American Civil War. Skills: E (HIS 2613)

**HIST 2341 AMERICAN INDIANS (3-3-0).** A survey of the society and culture of American Indians and how it changed through time. Skills: E (HIS 2613)

**HIST 2341 WORLD WAR II (3-3-0).** A survey of the political, military, and social history of the United States in World War II. Skills: E (HIS 2613)

**HIST 2341 DEPRESSION ERA U.S. (3-3-0).** A survey of the political, economic, social, and cultural events of the Twenties and Thirties in the United States. Skills: E (HIS 2613)

**HIST 2341 WOMEN IN THE UNITED STATES (3-3-0).** A comprehensive survey of events and issues in United States history, focusing on the specific contributions of women and the relationship between race, class, and gender. Skills: E (HIS 2613)

**HIST 2341 LATINOS IN THE UNITED STATES (3-3-0).** A comprehensive survey of the different Latino experiences in the history of the United States. Skills: E (HIS 2613)

**HIST 2341 OLD SOUTH (3-3-0).** A survey of the political, economic, social, and constitutional events in the American South from 1607 to 1861. Skills: E (HIS 2613)

**HIST 2341 NEW SOUTH (3-3-0).** A survey of the political, economic, social, and constitutional events in the American South from 1865 to present. Skills: E (HIS 2613)

- HIST 2341 COLD WAR (3-3-0).** A history of conflict between the United States and Soviet Union after 1945. Counts toward U.S. History requirement or as an elective. Skills: E (HIS 2613)
- HIST 2341 THE WEST IN UNITED STATES HISTORY (3-3-0).** The course will focus on the area, people, economy and ecology of the United States west of the Mississippi River, from European conquest to about 1900, with primary focus on the 19th century. Skills: E (HIS 2613)
- HIST 2380 U.S. HISTORY 16MEXICAN-AMERICAN EMPHASIS (3-3-0).** A study of the economic, social, cultural, and political development of Mexican-American people with particular emphasis upon their contribution to American society. Counts toward U.S. History requirement or as an elective. Skills: E (HIS 1653)
- HIST 2381 U.S. HISTORY 16AFRICAN-AMERICAN EMPHASIS (3-3-0).** A study of the history of African-Americans in the United States. Includes the role African-American culture has played in the development of the American nation to 1865. Counts toward U.S. History requirement or as an elective. Skills: E (HIS 1633)

## HOSPITALITY MANAGEMENT

- DITA 2331 PURCHASING, RECEIVING AND STORAGE OF FOOD (3-3-0).** Study of the quality of various purchased forms of food; receiving and inspection of food and supplies; food storage procedures; resources and energy conservation; and ethical purchasing practices. The basics of purchasing to include specification, methods, ordering, inventory, and receiving controls. In depth study of meat, poultry, fish, dairy, and fruits and vegetables and how they relate to inspection, regulations, storage and receiving. Emphasis on alcoholic beverage purchasing, receiving, and storeroom control to include an understanding of wines, beer and distilled spirits. (HHM 1633)
- EHKP 1301 HOUSEKEEPING SUPERVISION (3-3-0).** An overview of the fundamentals of housekeeping management in the hospitality industry including the management functions, tools, and practices in today's lodging and institutional housekeeping departments.
- HAMG 1219 COMPUTERS IN HOSPITALITY (2-1-2).** An introduction to computers and their relationship as an information system to the hospitality industry. Offered in Spring. (HHM 1031)
- HAMG 1291 SPECIAL TOPICS IN HOSPITALITY ADMINISTRATION AND MANAGEMENT 6 FORMAL SERVICE (2-2-0).** An overview of the art of business entertaining and being entertained as well as the proper service etiquette in formal dining. Objectives with emphasis on navigating the place setting, correct handling of the knife, fork and napkin, the silent service codes, American, Continental, and Japanese styles of eating, making the toast, managing difficult-to-eat foods, invitations and arrivals, description of table equipment; i.e., glasses, flatware, plates, etc., arriving at the dining table and order of service, and host etiquette will be included.
- HAMG 1313 FRONT OFFICE PROCEDURES (3-3-0).** A study of the flow of activities and functions in today's lodging operation. Topics include a comparison of manual, machine assisted, and computer based methods for each front file function. Skills: R (HHM 2043)
- HAMG 1321 INTRODUCTION TO HOSPITALITY INDUSTRY (3-3-0).** Overview of the elements of the hospitality industry, discussion of current issues facing the food service, lodging, travel/tourism and meeting management industry. Discussion of current guest needs and service and the role of service in the hospitality industry.
- HAMG 1324 HOSPITALITY HUMAN RESOURCES MANAGEMENT (3-3-0).** A study of the principles and procedures of managing people in the hospitality industry. (HHM 1643)
- HAMG 1340 HOSPITALITY LEGAL ISSUES (3-3-0).** A course in legal and regulatory requirements that impact the hospitality industry. Topics include Occupational Safety and Health Administration (OSHA), labor regulations, tax laws, tip reporting, franchise regulations, and product liability laws. Hospitality Management policies are presented to ensure compliance and minimize the danger of legal liability. Innkeeping, restaurants, alcoholic beverage, insurance and labor laws and legislation affecting the hospitality industry are the major themes of the course. Offered in Fall. Skills: R (HHM 2013)
- HAMG 1391 SPECIAL TOPICS IN HOSPITALITY ADMINISTRATION AND MANAGEMENT 6 HISTORY OF THE HOSPITALITY INDUSTRY IN NEW YORK CITY (3-3-0).** Classroom lectures on the historical impact on the hospitality industry complement on-site experiences at famous hotels, restaurants in New York City, New York. Additional presentations familiarize the student with the host city's culture as well as its innkeeping and tourism.
- A trip is planned to attend the American Hotel/Motel & Restaurant Show in New York City. The approximate cost will be published in the course schedule.
- HAMG 1391 SPECIAL TOPICS IN HOSPITALITY ADMINISTRATION AND MANAGEMENT 6 CASINOS AND GAMING (3-3-0).** Classroom lectures. Overview of the casino; topics include the economics of the casino, its interface with the hotel, organizations and terminology. Lectures will also include practices and problems associated with

casino management including staffing, security and control, taxation, and entertainment.

- HAMG 2201 PRINCIPLES OF FOOD AND BEVERAGE OPERATIONS (2-2-0).** An introduction to food, beverage, and labor cost controls with an overview of the hospitality industry from procurement to marketing. Examination of cost components including forecasting, menu planning and pricing, logistical support, production, purchasing, and quality assurance.
- HAMG 2301 PRINCIPLES OF FOOD AND BEVERAGE COST CONTROL (3-3-0).** An introduction to food, beverage, and labor cost controls with an overview of the hospitality industry from procurement to marketing. Examination of cost components including forecasting, menu planning and pricing, logistical support, production, purchasing, and quality assurance.
- HAMG 2305 HOSPITALITY MANAGEMENT AND LEADERSHIP (3-3-0).** An overview of management and leadership in the hospitality industry with an emphasis on management philosophy, policy formulation, communications, motivation and team building. Offered in Spring. (HHM 2063)
- HAMG 2307 HOSPITALITY MARKETING AND SALES (3-3-0).** Identification of the core principles of marketing and their impact on the hospitality industry. Offered in Fall. Skills: R (HHM 1051)
- HAMG 2332 HOSPITALITY FINANCIAL MANAGEMENT (3-3-0).** Methods and application of financial management within the hospitality industry. Primary emphasis on sales accountability, internal controls, and report analysis. Offered in Fall. Skills: R Prerequisites: HAMG 2201. (HHM 1041)
- HAMG 2337 HOSPITALITY FACILITIES MANAGEMENT (3-3-0).** Identification of building systems, facilities management, security and safety procedures.
- HAMG 2389 INTERNSHIP/HOSPITALITY ADMINISTRATION AND MANAGEMENT (3-1-12).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Prerequisites: Department approval required. (HHM 2113)

## HUMAN DEVELOPMENT

- CREX 1309 CAREER EXPLORATION/PLANNING (3-3-0).** An introduction to the process of career decision-making, educational planning, and job searching. Topics includes analyzing personal career interests, values, and aptitudes; surveying and researching career fields with related educational and training requirements; practicing the decision-making process; and basic job search skills such as completing applications, writing letters of application, developing and using resumes and interviewing. Formerly called HDP 1643 Career Development. Skills: R
- EDUC 1301 SCHOOLS AND SOCIETY (3-3-0).** An integrated pre-service course and content experience for those interested in a teaching career. The course will provide active recruitment and support for those interested in a teaching career, field experiences, and support from college and school faculty for the purpose of introducing and analyzing the culture of schooling and classrooms from a variety of perspectives. Skills: E
- HUDE 0111 TRANSITION TO COLLEGE SUCCESS (1-1.5-0).** This is a developmental level course designed for entering freshmen with priority needs. It provides an overview of key aspects, knowledge, and skills needed in the transition to college life. Students identify their educational goals, personal strengths, and areas for development; become familiar with college resources and services; and briefly explore strategies for academic success such as time management and study skills. Course formerly called Orientation. (HDP 1601)
- PSYC 1300 EFFECTIVE LEARNING: STRATEGIES FOR COLLEGE SUCCESS (3-3-0).** This course teaches learning and self-management principles and practices that increase a student's success in college and in life. Drawing from cognitive, affective, and behavioral theories in psychology, students examine the factors which impact their learning, select relevant methods of deepening their learning and thinking processes, and develop self-regulation strategies for maximizing the effectiveness of their efforts. Formerly titled Creative Learning: Keys to College Success. Skills: E (HDP 1603)

## HUMAN SERVICES

- CMSW 1323 THE EXCEPTIONAL PERSON (3-3-0).** This course will provide an overview of the disabling conditions most often encountered by human service professionals. Studies will include sensory deficits, physical, intellectual and learning disabilities as well as giftedness. Attitudes, definitions, etiologies, prevalence, treatments and service delivery systems will be discussed. Skills: E (HSR 1053)

- DAAC 1307 ADDICTED FAMILY INTERVENTION (3-3-0).** An introduction to the family as a dynamic system focusing on the effects of addiction pertaining to family roles, rules, and behavior patterns. Discusses the impact of mood altering substances and behaviors and therapeutic alternatives as they relate to the family from a multicultural and transgenerational perspective. Skills: E Prerequisites: DAAC 1319. (HSR 2183)
- DAAC 1319 INTRODUCTION TO ALCOHOL AND OTHER ADDICTIONS (3-3-0).** Causes and consequences of addiction as they relate to the individual, family, community, and society are discussed. Response alternatives regarding intervention, treatment, education, and prevention are reviewed. Competencies and requirements for licensure in Texas are explained. Addiction issues related to diverse populations are presented. (HSR 2033)
- DAAC 1391 SPECIAL TOPICS IN ALCOHOL/ DRUG COUNSELING: SUBSTANCE ABUSE TREATMENT MODELS (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Skills: E Prerequisites: DAAC 1319. (HSR 2263)
- PSYT 1303 DYNAMICS OF HUMAN RELATIONS (3-3-0).** Discussion of the dynamics necessary for developing and maintaining positive/productive interpersonal and work relationships. Exploration will include open communication, assertiveness, self-disclosure, and building relationships with group members in a way that enhances trust and mutual concern. Knowledge gained in class is designed to transfer to actual working situations. (HSR 1013)
- PSYT 1345 PRINCIPLES OF BEHAVIOR MANAGEMENT AND MODIFICATION (3-3-0).** A study of the theories and principles of behavior management, cognitive theories and techniques. Emphasis will be on their applications including managing self-behavior. In-depth study will be in operant conditioning techniques. Skills: E (HSR 2013)
- PSYT 1394 SPECIAL TOPICS IN COUNSELING PSYCHOLOGY: COUNSELING SKILLS AND ISSUES (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Skills: E Prerequisites: PSYT 2339. (HSR 2253)
- PSYT 2339 COUNSELING THEORIES (3-3-0).** An examination of major theories of various treatment modalities. Topics include reality therapy, psychodynamics, grief therapy, person-centered therapy, rational emotive therapy, and cognitive behavioral approaches. Attention is given to the role of counselor as part of the total spectrum of human services. Skills: E (HSR 2243)
- RECT 1301 INTRODUCTION TO THERAPEUTIC RECREATION (3-3-0).** Introduction to the value, history, philosophy, terminology, process, and outcomes of therapeutic recreation. Emphasis on identification of client groups, leisure activities, application of therapeutic recreation in human services various settings, and professional development and career opportunities. Fieldwork is required. (HSR 2023)
- RECT 1341 THERAPEUTIC RECREATION LEADERSHIP I (3-3-0).** Provides the student with the knowledge and practice necessary to plan and implement therapeutic activities that involve music, drama, dance, arts, and crafts. Focus on the range of individuals who may benefit from these activities. Leadership skills, rather than mastery of performance skills, will be stressed. Fieldwork is required. Prerequisites: Prior completion or concurrent enrollment in RECT 1301. (HSR 2303)
- RECT 1342 THERAPEUTIC RECREATION LEADERSHIP II (3-3-0).** Provides the student with the knowledge and practice necessary to plan and implement therapeutic activities that involve sports, games, fitness, and outdoor recreation activities with emphasis on the range of individuals who benefit from these activities. Leadership skills, rather than mastery of performance, will be stressed. Fieldwork is required. Skills: E Prerequisites: Prior completion or concurrent enrollment in RECT 1301. (HSR 2313)
- RECT 2431 THERAPEUTIC RECREATION PROGRAM PLANNING (4-3-3).** Development of the knowledge and skills required to effectively plan recreation and leisure programs that meet the physical, psychological, and social needs of participants. Major topics include assessment techniques, goal writing, developing outcome measures, facilitation and implementation techniques, adaptations, and evaluation. Fieldwork is required. Skills: E Prerequisites: RECT 1301 and prior completion or concurrent enrollment in RECT 1341 and RECT 1342. (HSR 1254)
- SCWK 1305 GROUP WORK INTERVENTION (3-3-0).** Examination of the various stages of the group work treatment process with emphasis on roles, tasks, and potential problem areas. Topics include mechanics of group function, structure of groups, communication patterns within groups, effective group facilitation skills, and techniques used to address special population issues and needs. Skills: E Prerequisites: PSYT 2339. (HSR 2233)
- SCWK 1321 ORIENTATION TO SOCIAL SERVICES (3-3-0).** Introduction to the basic concepts, information, and practices within the field of social services. Topics include a survey of the historical development of social services; social, legal, and clinical definitions; and review of current information regarding indications for and methods of treatment and/or services. (HSR 1023)

- SCWK 1391 SPECIAL TOPICS IN SOCIAL WORK: ETHICAL ISSUES IN HUMAN SERVICES (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Skills: E (HSR 1623)
- SCWK 2307 HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT (3-3-0).** A basic framework for creating and organizing knowledge of human behavior and the social environment. Introduction of social system, life span, and strength approaches to understanding human behavior and environmental impact. Emphasis on the impact of human diversity, discrimination, and oppression on the individual's ability to reach or maintain optimal health and well-being. Skills: E Prerequisites: PSYT 1303 and SCWK 1321. (HSR 1043)
- SCWK 2331 ABNORMAL BEHAVIOR (3-3-0).** An introduction to the literature concerning maladaptive behavior including characteristics, classification, diagnosis, and treatment modalities. Topics include factors associated with defining and identifying abnormal behavior. Students will better understand diagnosis, medications, and treatment strategies for a variety of illnesses and settings. Skills: E Prerequisites: PSYT 2339. (HSR 2153)
- SCWK 2486 INTERNSHIP I (4-2-10).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: E Prerequisites: Department approval required. (HSR 1054)
- SCWK 2487 INTERNSHIP II (4-2-10).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: E Prerequisites: Department approval required. (HSR 2054)
- SLNG 1317 INTRODUCTION TO THE DEAF COMMUNITY (3-3-0).** An overview of the physical, educational, social, and cultural implications of deafness and hearing loss within the context of the individual's personal life, family, and community in today's multicultural world. Emphasis on current educational and vocational programs, legislation, technology, and other issues. (HSR 1183)
- SLNG 1321 INTRODUCTION TO THE INTERPRETING PROFESSION (3-3-0).** An overview of the field of sign language interpretation. Provides an historical framework for the principles, ethics, roles, responsibilities, and standard practices of the interpreting profession. Skills: E (HSR 1163)
- SLNG 1391 SPECIAL TOPICS IN SIGN LANGUAGE INTERPRETER: AMERICAN SIGN LANGUAGE V (3-2-3).** This course will continue to build, among students entering the field of deafness, and interpreting, further knowledge and skills of American Sign Language. Students will be exposed to various topics related to American Sign Language as well as interpreting topics. Expressive skills development will focus on continued implementation of expansion techniques, including role shift, 3-D, contrasting, and faceting. Using articles on Deaf culture as the stimulus material, students will engage in dialogue and debate during which they will apply the linguistic and grammatical principles mastered to date. Skills: E Prerequisites: SLNG 1445. (HSR 2373)
- SLNG 1404 AMERICAN SIGN LANGUAGE: BEGINNING I (4-3-3).** An introduction to the basic skills in production and comprehension of American Sign Language (ASL). Includes the manual alphabet and numbers. Develops conversational ability, culturally appropriate behaviors, and exposes students to ASL grammar. (HSR 1035)
- SLNG 1405 AMERICAN SIGN LANGUAGE: BEGINNING II (4-3-3).** Develops receptive and expressive ability and allows recognition and demonstration of more sophisticated grammatical features of American Sign Language (ASL). Increases fluency and accuracy in fingerspelling and numbers. Provides opportunities for interaction within the deaf community. Prerequisites: SLNG 1404. To be eligible to enroll in this sign language class, you must have at least a grade of C in the prerequisite. Course requires significant time outside of class. (HSR 1135)
- SLNG 1444 AMERICAN SIGN LANGUAGE: INTERMEDIATE I (4-4-0).** Integrates and refines expressive and receptive skills in American Sign Language (ASL), including recognition of sociolinguistic variation. A practice oriented approach to language acquisition, including the use of multimedia. Prerequisites: SLNG 1405. To be eligible to enroll in this sign language class, you must have at least a grade of C in the prerequisite. Course requires significant time outside of class. (HSR 2134)
- SLNG 1445 AMERICAN SIGN LANGUAGE: INTERMEDIATE II (4-4-0).** An integration of expressive and receptive skills with emphasis on literature, discourse styles, and contextualization at an intermediate level. Provides students with information on idiomatic/colloquial usages for signs and grammatical structures for complex sentences.

Skills: E Prerequisites: SLNG 1444. To be eligible to enroll in this sign language class, you must have at least a grade of C in the prerequisite. Course requires significant time outside of class. (HSR 2144)

- SLNG 2311 SPECIALIZED INTERPRETING/ TRANSLITERATING (3-2-3).** A focus on interpreting/transliterating with special populations (e.g., deaf/blind, high visual, oral) in special settings (e.g., religious, artistic, medical, legal, mental health). Reinforce basic theories and techniques in relation to the special population(s) and/or setting(s). Skills: E Prerequisites: SLNG 2331. (HSR 2383)
- SLNG 2315 INTERPRETING IN EDUCATIONAL SETTINGS (3-2-3).** Increases awareness of current techniques, issues, and ethics in mainstreaming and bilingual/bicultural education practices. Includes a survey of technical signs and signed English systems currently in use. Skills: E Prerequisites: SLNG 2401 or permission of instructor. (HSR 2393)
- SLNG 2392 SPECIAL TOPICS IN SIGN LANGUAGE INTERPRETER: AMERICAN SIGN LANGUAGE VI (3-2-3).** An advanced course in the linguistic structure and vocabulary of American Sign Language. Advanced proficiency in interpreting skills will also be emphasized. Lab exercises are designed to enhance physical and cognitive skills necessary for ASL/English interpreting. Skills: E Prerequisites: SLNG 1391. To be eligible to enroll in this sign language class, you must have at least a grade of C in the prerequisite. Course requires significant time outside of class.
- SLNG 2401 INTERPRETING I (4-3-3).** An overview of the interpreting process and current models. Introduces the skills necessary to achieve message equivalency in interpreting. Skills: E Prerequisites: SLNG 1445 or permission of instructor. (SLNG 2301)
- SLNG 2402 INTERPRETING II (4-3-3).** Enhancement of interpreting skills and discourse analysis to increasingly complex tasks utilizing simulated interpreting experiences via multimedia materials. Emphasis on skill analysis and peer evaluation. Skills: E Prerequisites: SLNG 2401. (SLNG 2302)
- SLNG 2431 INTERPRETING III (4-3-3).** A practice oriented course to strengthen skills in the integration and application of processing more complex selections. Continued exposure to simulated interpreting experience through the use of multimedia material. Skills: E Prerequisites: SLNG 2402. (SLNG 2331)
- SLNG 2488 INTERNSHIP: SIGN LANGUAGE INTERPRETER (4-2-10).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are

developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: E Prerequisites: Instructor approval. (HSR 1054)

## HUMANITIES

- HUMA 1301 INTRODUCTION TO HUMANITIES (3-3-0).** A study of representative samples of literature, art, and music of various periods and cultures. The study of the interrelationships of the arts and their philosophies emphasizes an understanding of human nature and the values of human life. Skills: R (HUM 1613)
- HUMA 1315 THE ARTS IN CONTEMPORARY SOCIETY (3-3-0).** An introductory course designed to enhance a student's understanding and appreciation of the modes of communicating ideas and emotions through the visual and performing arts. May be repeated for a maximum of six credit hours when topics vary. Skills: R (HUM 1603)

## INTERNATIONAL BUSINESS

- IBUS 1301 PRINCIPLES OF IMPORTS-EXPORTS I (3-3-0).** This is a study of export management processes and procedures. Topics include governmental controls, licensing of products, documentation, commercial invoices, and traffic procedures. Students examine the application of export principles to human and public relations, management of personnel, finance and accounting procedures. Skills: R (MGT 2263)
- IBUS 1302 PRINCIPLES OF IMPORTS-EXPORTS II (3-3-0).** Examines practices and processes of import management operations including government controls. Skill development in the preparation and understanding of import documents such as customs invoices, packing lists, and commercial invoices. Customs regulations and a review of the appropriate aspects of NAFTA and GATT are studied. Skills: R (MGT 2273)
- IBUS 1305 INTRODUCTION TO INTERNATIONAL BUSINESS AND TRADE (3-3-0).** The techniques for entering the international marketplace. Emphasis on the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise. Skills: E (MGT 2213)
- IBUS 1366 PRACTICUM OR (FIELD EXPERIENCE) - INTERNATIONAL BUSINESS (3-1-20).** A basic or intermediate type of non-health professions work-based instruction that provides basic career exploration or helps students gain practical experience in the discipline,

enhance skills, and integrate knowledge. The emphasis is on practical work experience. Indirect supervision is provided by the work supervisor. A practicum may be a paid or unpaid learning experience. Student internship placement will serve as a capstone experience to International Business coursework. Prerequisites: Program Coordinator approval.

**IBUS 1391 SPECIAL TOPICS IN INTERNATIONAL BUSINESS (3-3-0).** As the capstone course, a student simulates real workplace problems through the creation of a start-up business where the student prepares a business plan, evaluates the effect of current events such as intellectual property, and utilizes the internet and other communication technologies for staff meetings, exchange rate information and international electronic communications. Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course is the capstone course for the International Business Certificate. Skills: R (MGT 2283)

**IBUS 2335 INTERNATIONAL BUSINESS LAW (3-3-0).** A course in law as it applies to international business transactions in the global marketplace. The student will describe the political legal environment of various countries or regions; select the most appropriate legal organization in a particular area or for a particular purpose; and determine the best appropriate legal assistance in setting up foreign contracts. Skills: R

**IBUS 2345 IMPORT CUSTOMS REGULATIONS (3-3-0).** A study of the duties and responsibilities of the licensed customs broker or customhouse broker. Topics include processes for customs clearance including appraisal, bonded warehouse entry, examination of goods, harmonized tariffs, fees, bonding, penalties, quotas, immediate delivery, consumption, and liquidation, computerized systems, laws, and regulations. The student will take sample examinations for the United States Customs Brokers examination; resolve a wide variety of highly complex problems involving customs, regulations, and processes; and function smoothly as an import trader, international purchasing agent, or other intermediary. Skills: R

## JAPANESE

**JAPN 1511 JAPANESE I (5-5-0).** Study of fundamentals of Japanese: conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. No prerequisites. Skills: E (JPN 1615)

**JAPN 1512 JAPANESE II (5-5-0).** Continuation of JAPN 1511 with more advanced conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture.

Prerequisites: Students must have completed a first semester college Japanese course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in JAPN 1512. (JPN 1625)

**JAPN 2311 JAPANESE III (3-3-0).** Advanced Japanese grammar, directed composition, conversation, and discussion of culture based on readings. Class conducted largely in Japanese. Prerequisites: Students must have completed a second semester college Japanese course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in JAPN 2311. (JPN 2613)

**JAPN 2312 JAPANESE IV (3-3-0).** Continuation of JAPN 2311. Prerequisites: JAPN 2311 with a C or better, or equivalent. (JPN 2623)

## JEWELRY

**HRGY 1401 JEWELRY TECHNIQUES I (4-3-3).** An introduction to basic techniques of jewelry repair, including layout, sawing, filing, emery, soldering, ring construction, and bezel setting. Emphasis on industry standards. Fee: \$24 Insurance: \$3 (WLD 1554)

**HRGY 1402 JEWELRY TECHNIQUES II (4-3-3).** Continuation of Jewelry Techniques I with emphasis on polishing. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 1401.

**HRGY 1409 JEWELRY CASTING I (4-3-3).** Emphasis on lost wax casting, both centrifugal and vacuum processes, including an introduction to wax carving and mold making. Fee: \$24 Insurance: \$3 Prerequisites: HRGY 1401 or Instructor approval. (WLD 1574)

**HRGY 1417 APPLIED JEWELRY PRACTICES (4-3-3).** Survey of the business practices of the jewelry industry. Emphasis on communication skills, security, insurance, copyright/trademark law, industry organizations, and common ethical expectations within the industry. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 2435.

**HRGY 1441 STONESETTING I (4-3-3).** Focus on channel, bead setting, and bright cutting techniques. Fee: \$24 Insurance: \$3 Prerequisites: HRGY 1449 and HRGY 1448 or Instructor approval. (WLD 1504)

**HRGY 1442 STONESETTING II (4-3-3).** Continuation of Stone Setting I. Focus on prong setting, repringing, retipping, and reheading. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 1441.

**HRGY 1443 STONESETTING III (4-3-3).** Continuation of Stone Setting II including fancy bright cuts, bezel sets, and gypsy sets. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 1442.

**HRGY 1448 JEWELRY REPAIR/FABRICATION I (4-3-3).** Emphasis on techniques, the fabrication and repair of jewelry. Introduction to equipment and techniques of jewelry manufacturing, including assembly of findings. This is the Capstone Experience course for the Certificate in Jewelry. Fee: \$24 Insurance: \$3

**HRGY 1449 JEWELRY REPAIR/FABRICATION II (4-3-3).** Continuation of Jewelry Repair/Fabrication I with emphasis on techniques, fabrication, and repair of jewelry. Introduction to equipment and techniques of jewelry manufacturing including chain repair and electroplating. Fee: \$24 Insurance: \$3 Fee: \$24 Insurance: \$3 Prerequisites: HRGY 1449 or Instructor approval. (WLD 1564)

**HRGY 1491 SPECIAL TOPICS IN WATCH, CLOCK, AND JEWELRY REPAIRER 6 INDUSTRY PRACTICES (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to jewelry technology or occupation and relevant to the professional development of the student. Topics initiated by students on current industry practices with instructor approval. Fee: \$24 Insurance: \$4 Prerequisites: Instructor approval.

**HRGY 2433 JEWELRY CASTING II (4-3-3).** Continuation of Casting I. Includes instruction in mold making and vibratory finishing. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 1409.

**HRGY 2435 PRECIOUS METALS I (4-3-3).** Emphasis on layout, bright cuts, baguettes, marquise, pear, cushion, and emerald cut stones. Focus on utilization of commercial shop guidelines. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 1402.

**HRGY 2436 PRECIOUS METALS II (4-3-3).** A continuation of Precious Metals I. Focus on layout, bright cuts, baguettes, marquise, pear, cushion, and emerald cut stones as well as pave in precious metals. Includes utilization of commercial shop guidelines and emphasis on speed. This is the Capstone Experience course for the Associate of Applied Science degree. Fee: \$24 Insurance: \$4 Prerequisites: HRGY 2435.

## JOURNALISM

**COMM 1307 INTRODUCTION TO MASS COMMUNICATIONS (3-3-0).** A survey of the basic factors affecting human communication, including theories and models of communication. In-depth study of the relationship of mass media and society. An overview of trends in newspapers, radio, television, film, and books, and the related institutions of advertising, public relations, and photography. (CB 060101) (JRN 1603)

**COMM 2305 COPY EDITING (3-1-3).** A study of copy editing for errors of fact and expression with emphasis on editing for readability, headline writing, and page make-up. Prerequisites: COMM 2311. (JRN 1623)

**COMM 2311 NEWS REPORTING I (3-3-0).** Gathering and writing news stories for newspapers, newsmagazines, and newsletters. Study of news writing techniques and appeal to reader interest. Prerequisites: ENGL 1301. (Formerly Writing for the Mass Media.) (JRN 1613)

**COMM 2315 NEWS REPORTING II (3-3-0).** Gathering and writing advanced news stories for newspapers, news-magazines, and newsletters. Interviewing techniques for specialized writing assignments (e.g., science, law, drama, literary criticism, music). Prerequisites: COMM 2311. (JRN 2603)

## LATIN

**LATI 1511 LATIN I (5-5-0).** Study of the fundamentals of Latin: grammar, vocabulary building, reading comprehension and culture. (LAT 1615)

**LATI 1512 LATIN II (5-5-0).** Continuation of LATI 1511 with more advanced grammar, vocabulary building, reading comprehension and culture. Prerequisites: Students must have completed a first semester college Latin course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in LATI 1512. (LAT 1625)

**LATI 2311 LATIN III (3-3-0).** Advanced Latin grammar, reading, writing, and discussion of culture. Prerequisites: Students must have completed a second semester college Latin course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in LATI 2311. (LAT 2613)

**LATI 2312 LATIN IV (3-3-0).** Continuation of LATI 2311. Prerequisites: LATI 2311 or equivalent with a grade of C or better. (LAT 2623)

## LEGAL ASSISTANT

**LGLA 1303 LEGAL RESEARCH (3-3-0).** This course provides a working knowledge of the fundamentals of effective legal research. Topics include law library techniques, computer assisted legal research, briefs, and legal memoranda. Skills: E Prerequisites: LGLA 1351. (LEA 1053)

**LGLA 1305 LEGAL WRITING (3-3-0).** This course provides a working knowledge of the fundamentals of effective legal writing. Topics include briefs, legal memoranda, case and fact analysis, citation forms, and legal writing styles. Prerequisites: ENGL 1301 or equivalent. (TCM 1603)

**LGLA 1311 INTRODUCTION TO LAW (3-3-0).** This course provides an overview of the law and the legal system. Topics include legal concepts, procedures, terminology and current issues in law. Skills: E Prerequisites: Must be taken prior to, or contemporaneously with, LGLA 1313. (LEA 1003)

- LGLA 1313 INTRODUCTION TO PARALEGAL STUDIES (3-3-0).** This course provides an overview of the paralegal profession including ethical obligations, regulation, professional trends and issues, and the paralegalis role in assisting the delivery of legal services. Prerequisites: BACHELOR'S DEGREE, OR LGLA 1311 or one year law office experience. (LEA 1013)
- LGLA 1317 LAW OFFICE TECHNOLOGY (3-3-0).** This course introduces computer technology and its applications within the law office. Topics include the use of computer technology in the delivery of legal services with particular emphasis on the paralegalis role. Skills: E Prerequisites: LGLA 1313. (LEA 1083)
- LGLA 1341 ADMINISTRATIVE LAW (3-3-0).** This course presents fundamental concepts of administrative law and procedure in governmental agencies at all levels with emphasis on the paralegalis role in the administrative process. Topics include creation of governmental agencies, operation, rule making, and adjudication. Skills: E Prerequisites: LGLA 1351. (LEA 1073)
- LGLA 1343 BANKRUPTCY (3-3-0).** This course presents fundamental concepts of bankruptcy law and procedure with emphasis on the paralegalis role. Topics include individual and business liquidation and reorganization. Skills: E Prerequisites: LGLA 1351. (LEA 2143)
- LGLA 1346 CIVIL LITIGATION I (3-3-0).** This course presents fundamental concepts and procedures of civil litigation and evidence with emphasis on the paralegalis role. Civil Litigation I together with Civil Litigation II covers litigation from the pretrial stage to the post-trial phase. Prerequisites: LGLA 1313. (LEA 1033)
- LGLA 1347 CIVIL LITIGATION II (3-3-0).** This course presents fundamental concepts and procedures of civil litigation and civil evidence with emphasis on the paralegalis role. Civil Litigation II together with Civil Litigation I covers litigation from the pretrial state to the post trial stage. Prerequisites: LGLA 1313. (LEA 1043)
- LGLA 1349 CONSTITUTIONAL LAW (3-3-0).** This course provides an overview of the U.S. Constitution and its articles, amendments, and judicial interpretations. Topics include separation of powers, checks and balances, governmental structures and process, and individual rights in relation to government. Skills: E Prerequisites: LGLA 1351. (LEA 2163)
- LGLA 1351 CONTRACTS (3-3-0).** This course presents fundamental concepts of issue identification and contract law with emphasis on the paralegalis role. Topics include business organizations, case briefing, and formation, performance, and enforcement of contracts under the common law and the Uniform Commercial Code. Prerequisites: LGLA 1313 must be taken prior to or, contemporaneously. (LEA 1023)
- LGLA 1353 WILLS, TRUSTS AND PROBATE ADMINISTRATION (3-3-0).** This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegalis role. Offered Spring semester. Skills: E Prerequisites: LGLA 1351. (LEA 2043)
- LGLA 1355 FAMILY LAW (3-3-0).** This course presents fundamental concepts of family law with emphasis on the paralegalis role. Topics include formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship. Skills: E Prerequisites: LGLA 1351. (LEA 2023)
- LGLA 1391 SPECIAL TOPICS IN PARALEGAL/ LEGAL ASSISTANT (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. Skills: E
- LGLA 2239 CERTIFIED LEGAL ASSISTANT REVIEW (2-2-0).** This course provides a review of the mandatory and optional topics covered in the Certified Legal Assistant Examination administered by the National Association of Legal Assistants. Prerequisites: This course should only be taken the last semester of the program. (LEA 2223)
- LGLA 2303 TORTS AND PERSONAL INJURY LAW (3-3-0).** This course presents fundamental concepts of tort law with emphasis on the paralegalis role. Topics include intentional torts, negligence, and strict liability. Skills: E Prerequisites: LGLA 1351. (LEA 2073)
- LGLA 2305 INTERVIEWING AND INVESTIGATION (3-3-0).** This course is a study of principles, methods, and investigative techniques utilized to locate, gather, document, and manage information. Emphasis on developing interviewing and investigative skills to prepare the paralegal to communicate effectively while recognizing ethical problems. Skills: E Prerequisites: LGLA 1351. (LEA 2153)
- LGLA 2307 LAW OFFICE MANAGEMENT (3-3-0).** This course presents the fundamentals of law office management and organization including basic principles and structure of management, administrative and substantive systems in the law office, and law practice technology. Skills: E Prerequisites: LGLA 1351. (LEA 1083)
- LGLA 2309 REAL PROPERTY (3-3-0).** This course presents fundamental concepts of real property law with emphasis on the paralegalis role. Topics include the nature of real property, rights and duties of ownership, land use, voluntary and involuntary conveyances, and the recording of and searching for real estate documents. Offered Fall semester. Skills: E Prerequisites: LGLA 1351. (LEA 2033)

- LGLA 2313 CRIMINAL LAW AND PROCEDURE (3-3-0).** This course introduces the criminal justice system including procedures from arrest to final disposition, principles of federal and state law, and the preparation of pleadings and motions. Skills: E Prerequisites: LGLA 1351. (LEA 1063)
- LGLA 2331 ADVANCED LEGAL RESEARCH AND WRITING (3-3-0).** This course builds upon skills acquired in prior legal research and writing courses including computerized research techniques and preparation of complex legal documents such as briefs, legal office memoranda, and citation forms. Offered Spring semester. Skills: E Prerequisites: LGLA 1303, LGLA 1305. (LEA 2113)
- LGLA 2333 ADVANCED LEGAL DOCUMENT PREPARATION (3-3-0).** Preparation of legal documents based on hypothetical fact situations drawn from various areas including real estate, family law, contracts, litigation, and business organizations. Offered Fall semester. Prerequisites: LGLA 1346, LGLA 1347, LGLA 1355, & LGLA 1353. (LEA 2123)
- LGLA 2335 ADVANCED CIVIL LITIGATION (3-3-0).** This course provides opportunities to implement advanced civil litigation techniques and builds upon skills acquired in prior civil litigation courses. Skills: E Prerequisites: LGLA 1346 and LGLA 1347. (LEA 2053)
- LGLA 2337 MEDIATION (3-3-0).** This course provides an introduction to alternative dispute resolution with emphasis on mediation. Topics include differences between mediation and arbitration, the process of mediation, and dispute resolution techniques. Skills: E Prerequisites: LGLA 1346. (LEA 2153)
- LGLA 2388 INTERNSHIP/ PARALEGAL/LEGAL ASSISTANT (3-1-17).** An experience external to the college for an advanced student involving a written agreement between the College and an employing law office or legal agency. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes while employed in the legal environment at least 20 hours per week. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: E Prerequisites: Program Coordinator approval. (LEA 2013)

## MANAGEMENT

- BMGT 1301 SUPERVISION (3-3-0).** A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined. Study of the development of supervision and the important considerations in supervising people. Fundamental and special techniques and procedures of

supervision; managing people at work; supervisory management responsibilities; activities and controls. Case problems and discussions are utilized. Skills: R (MGT 1053)

- BMGT 1303 PRINCIPLES OF MANAGEMENT (3-3-0).** Management theories and analysis of basic management functions: planning, organizing, staffing, directing, and controlling for establishing and accomplishing business objectives. Case studies are utilized. Skills: R (MGT 1023)
- BMGT 1341 BUSINESS ETHICS (3-3-0).** Topics address ethical issues, the development of a moral frame of reference and the need for an awareness of social justices in management practices and business activities. A review of ethical responsibilities and relationships between organizational departments, divisions, executive management, and the public. Skills: R (BMGT 2370)
- BMGT 2309 LEADERSHIP (3-3-0).** Concepts of leadership and its relationship to management. Prepares the student with leadership and communications skills needed to inspire and influence. This course may be taken as the capstone course for the Associate of Applied Science degree in Management. Skills: R Prerequisites: 12 hours of courses from one or more of the following departments: management, marketing, finance or approval from a management department advisor. (MGT 2263)
- BMGT 2388 OJT/INTERNSHIP I/ MANAGEMENT (3-1-17).** Students will be employed at least 20 hours per week performing management duties. These duties will normally be at the supervisory management level and will apply skills and knowledge from previous courses. Concurrent enrollment in another management or marketing course is required. The student's internship objectives and project will be established by the instructor and the employer supervisor. The student is required to attend the weekly one hour seminar and discussion class. Progress and final reports are required. Skills: R Prerequisites: BUSI 1301 and BMGT 1303. (MGT 1083)
- BMGT 2389 OJT/INTERNSHIP II/ MANAGEMENT (3-1-17).** Students will be employed at least 20 hours per week performing management duties. These duties will normally be at a higher level than those performed in BMGT 2388 or in a functional area of management. Concurrent enrollment in another management or marketing course is required. The student's internship objectives and project will be established by the instructor and employer supervisor. The Student is required to attend the weekly one-hour seminar and discussion class. Progress and final reports are required. This course may be taken as the capstone course for the Associate of Applied Science degree in Management. Skills: R Prerequisites: BMGT 2388. If this course is taken as the capstone course for the AAS in Management degree an additional

nine hours of courses must be taken in one or more of the following departments: management, marketing, and finance. (MGT 2113)

- BUSG 1392 SPECIAL TOPICS IN SMALL BUSINESS (3-3-0).** A student stimulates real workplace problems through the development of a comprehensive business plan. Special emphasis will be given to the research, development and preparation of a small business plan appropriate for presentation to investors. Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Skills: R (MGT 2253)
- BUSG 2309 SMALL BUSINESS MANAGEMENT (3-3-0).** A course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues. Emphasizes and revises in detail basic elements of locating, organizing, and operating a small business. Role of business in the economy; considerations and involvement in starting and operating a business; and internal and external factors affecting small business management activities. Skills: R (MGT 2053)
- BUSG 2371 BUSINESS STATISTICS (3-3-0).** A course designed for students majoring in business. Topics include organization of measurements, determining measures of central tendency, variability, counting, probability, statistical inference, hypothesis testing (large and small samples), simple and multiple regression and correlation, non-parametric methods, and time series. Prerequisites: MATH 1324, MATH 1314, or instructor approval. (ACC 2013)
- BUSI 1301 INTRODUCTION TO BUSINESS (3-3-0).** A general survey of the entire field of business and management in the free enterprise system. Concepts of business and management functions, organizational considerations, and decision-making processes. Explores areas of specialization in the business world. Skills: R (MGT 1013)
- BUSI 2301 BUSINESS LAW I (3-3-0).** The legal and social environment of business; contracts; personal property and bailments; and sales. Skills: R (MGT 2013)
- BUSI 2302 BUSINESS LAW II (3-3-0).** Additional studies in business law including commercial paper, secured transactions, creditor's rights, and insurance; agency and employment; business organizations; real property, and estates. Skills: R (MGT 2023)
- HRPO 1305 MANAGEMENT AND LABOR RELATIONS (3-3-0).** The development and structure of the labor movement including labor legislation, collective bargaining, societal impact, labor/management relationships, and international aspects. Overview of organized labor and the

management community. Labor union development, related legislative acts, labor-management interrelationships, legal considerations, and collective bargaining procedures and considerations. Offered in Spring Semester. Skills: R (MGT 2043)

- HRPO 2301 HUMAN RESOURCE MANAGEMENT (3-3-0).** Behavioral and legal approaches to the management of human resources in organizations. Discusses the role of human resources management in relation to organizational requirements. Covers employee staffing, maximizing employee potential, organizational behavior, management-labor relations, compensation, and security. Human resources management related case problems are included. Skills: R (MGT 2033)
- HRPO 2303 EMPLOYMENT PRACTICES (3-3-0).** A study of employment issues including techniques for human resource forecasting, selection, and placement including interview techniques, pre-employment testing and other predictors. Topics include recruitment methods, the selection process, Equal Employment Opportunity (EEO), EEO recordkeeping, and Affirmative Action Plans. Skills: R (HRPO 2391)
- HRPO 2307 ORGANIZATIONAL BEHAVIOR (3-3-0).** The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts, and the integration of interdisciplinary concepts from the behavioral sciences. Fundamentals of human behavior within business organizations, organizational relationships, social considerations, and communication processes that affect motivation and human behavior in the business world. Case problems are utilized. Skills: R (MGT 1043)

## MARKETING

- BMGT 1302 PRINCIPLES OF RETAILING (3-3-0).** Introduction to the retailing environment and its relationship to consumer demographics, trends, and traditional/nontraditional retailing markets. The employment of retailing techniques and the factors that influence modern retailing. Skills: R (MKT 2023)
- BMGT 1323 PURCHASING (3-3-0).** A study of the purchasing process and the basis of sound purchasing decisions; materials management; selection and evaluation of suppliers/vendors; price, quality, and value determinants; and issues that require legal or ethical consideration. Skills: R (MKT 2053)
- BMGT 1347 RETAIL BUYING (3-3-0).** A detailed study of the organizational structure of retail buying, the internal and external sources of buying information, the fundamentals of effective purchasing, and the buyer's role in planning. Offered in Fall Semester. Skills: R (MKT 2043)

- BMGT 1348 MARKETING RESEARCH AND STRATEGIES (3-3-0).** Designed to enhance student understanding of the marketing environment and the dynamic interrelationships of the functions of marketing price, channels of distribution, promotion, and product responsibility. Provides a simulated marketing environment for experience in marketing decision-making and provides practical experiences in analyzing market cases for the students. Offered in Fall Semester. Skills: R (MKT 2083)
- BUSI 1311 PRINCIPLES OF SALESMANSHIP (3-3-0).** Principles of personal salesmanship including methods and tasks applicable to a wide variety of industries & commercial settings. Skills: R (MKT 1023)
- COMM 2327 PRINCIPLES OF ADVERTISING (3-3-0).** Fundamentals of Advertising including marketing theory and strategy, copy writing, design and selection of media. Skills: R (MKT 2013)
- FSHD 1302 INTRODUCTION TO FASHION (3-3-0).** Survey of the world of fashion businesses. Introduction to the creation and merchandising of fashion through the study of fashion vocabulary, the fashion process, fashion publications, and career opportunities. Skills: R (FAS 1103)
- FSHD 1308 FASHION TRENDS (3-3-0).** A study of the effects of eastern and western cultures on the development of fashion. Examination of the relationship of social, psychological, economic, demographic, and lifestyle trends to fashion trends. Offered in Fall. Skills: R
- FSHN 1301 TEXTILES (3-3-0).** A general study of textiles with emphasis on factors that affect the hand, appearance, and performance in clothing use. Examination of the properties of natural and man-made fibers, how yarn is formed, methods of production, and the properties of a variety of fabrics. Application of textiles used in the apparel industry. Skills: W (FAS 1133)
- FSHN 1342 VISUAL MERCHANDISING (3-3-0).** Skill development in the creation of showroom or retail store window/interior displays that sell merchandise. Study of the basic techniques of store planning, mannequin dressing, alternate form design, and display space conceptualization and implementation. Offered in Spring. Skills: R (FAS 2123)
- FSHN 1366 PRACTICUM6FASHION MERCHANDISING (3-0-20).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Skills: R Prerequisites: FSHD 1302. (FAS 1023)
- FSHN 2301 FASHION PROMOTION (3-3-0).** A survey of fashion direction, publicity, and fashion event coordination. Emphasis on fashion show production from idea to runway including theme development, stage/set design, choreography, music coordination, lighting, line-up, model fittings, rehearsal, and press kit development. Offered in Spring. Skills: R
- FSHN 2303 FASHION BUYING (3-3-0).** Fundamentals of fashion buying with instruction in planning, pricing, and purchasing retail fashion inventories. Identification of wholesale merchandise and media resources. Offered in Fall. Skills: R (FAS 2103)
- FSHN 2309 FASHION IMAGE (3-3-0).** Instruction in the techniques used to analyze the fashion image of individual clients. Emphasis on personal coloring, seasonal color harmonies, appropriate fabric textures, body proportion and silhouette, figure, facial and hair analysis, and wardrobe coordination. Study of fashion image consultant business practices and job qualifications. Offered in Spring. Skills: R (FAS 1123)
- FSHN 2388 INTERNSHIP6FASHION MERCHANDISING (3-1-15).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to a specific occupational outcome. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: R Prerequisites: 6 hours of Fashion Merchandising or other Business Courses. (FAS 2013)
- FSHN 2389 INTERNSHIP6FASHION MERCHANDISING (3-1-15).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: R Prerequisites: 9 hours of Fashion Merchandising or other Business Courses. (FAS 2023)
- HRPO 1301 CUSTOMER RELATIONS (3-3-0).** Concepts, terminology, principles, theory, and issues that are the substance of the practice of management. Skills: R
- IBUS 1354 INTERNATIONAL MARKETING (3-3-0).** Analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing, and distribution factors. Development of an international export/import marketing plan. Skills: R (MKT 2113)

- LMGT 1319 INTRODUCTION TO BUSINESS LOGISTICS (3-3-0).** A systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling.
- MRKG 1311 PRINCIPLES OF MARKETING (3-3-0).** Introduction to basic marketing functions; identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the importance of marketing research. Skills: R (MKT 1013)
- MRKG 1391 SPECIAL TOPICS IN BUSINESS MARKETING AND MARKETING MANAGEMENT (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. Topics may vary. Offered in Fall Semester. Skills: R (MKT 2103)
- MRKG 2371 CONSUMER BEHAVIOR (3-3-0).** A study of how marketing meets consumer needs. Covers consumer behavior as it affects marketing. Topics include needs, motivations, perceptions, and attitudes of consumers, and the influence of social class, culture and subculture on consumer behavior and behavior research are discussed in depth. Course addresses strategies for creating customer values and trends in customer behavior. Case studies are used extensively. Offered in Spring Semester. Skills: R (MKT 1043)
- MRKG 2375 ADVANCED ADVERTISING CAMPAIGNS (3-3-0).** An advanced managerial approach to advertising program and campaign development for both profit and non-profit organizations. Emphasis on developing an advertising strategy as a component of the total market mix. Offered in Spring Semester. Skills: R Prerequisites: COMM 2327. (MKT 2093)
- MRKG 2388 INTERNSHIP<sup>6</sup>BUSINESS MARKETING AND MARKETING MANAGEMENT (3-1-17).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Skills: R Prerequisites: 6 hours of Marketing Courses. (MKT 2223)
- PRCD 1311 PUBLIC RELATIONS (3-3-0).** Exploration of theories, techniques, and processes of public relations including means of influencing methods of building good will, analysis of media, obtaining publicity, and implementation of public relations programs. Skills: R (MKT 2073)

## MATHEMATICS

- MATH 0153 COLLEGE ALGEBRA LAB (1-0-2).** Designed for students currently registered in College Algebra, MATH 1314. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0211)
- MATH 0155 TRIGONOMETRY LAB (1-0-2).** Designed for students currently registered in Trigonometry, MATH 1316. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0211)
- MATH 0161 MATH FOR BUS & ECO LAB (1-0-2).** Designed for students currently registered in Math for Business and Economics, MATH 1324. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0231)
- MATH 0163 BUSINESS CALCULUS AND APPLICATIONS LAB I (1-0-2).** Designed for students currently registered in Business Calculus and Applications I, MATH 1425. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0241)
- MATH 0165 BUSINESS CALCULUS AND APPLICATIONS II LAB (1-0-2).** Designed for students currently registered in Business Calculus and Applications II, MATH 1476. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0241)
- MATH 0185 PRE-CALCULUS LAB (1-0-2).** Designed for students currently registered in Pre-calculus, MATH 2412. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0211)
- MATH 0187 CALCULUS I LAB (1-0-2).** Designed for students currently registered in Calculus I, MATH 2413. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0221)
- MATH 0189 CALCULUS II LAB (1-0-2).** Designed for students currently registered in Calculus II, MATH 2414. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0221)
- MATH 0193 CALCULUS III LAB (1-0-2).** Designed for students currently registered in Calculus III, MATH 2415. Individualized and group setting

provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0221)

**MATH 0197 DIFFERENTIAL EQUATIONS LAB (1-0-2).** Designed for students currently registered in Differential Equations, MATH 2420. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0251)

**MATH 0199 CALCULUS IV LAB (1-0-2).** Designed for students currently registered in Calculus IV, MTH 2254. Individualized and group setting provides additional practice and explanation. This course is not for college-level credit. Repeatable up to two credit hours. (MTH 0221)

**MATH 1314 COLLEGE ALGEBRA (3-3-0).** A course designed for students majoring in business, mathematics, science, engineering, or certain engineering-related technical fields. Content includes the rational, real, and complex number systems; the study of functions including polynomial, rational, exponential, and logarithmic functions and related equations; inequalities; and systems of linear equations and determinants. Prerequisites: MATD 0390 with a C or better or satisfactory score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. (MTH 1743)

**MATH 1316 TRIGONOMETRY (3-3-0).** A course designed for students majoring in mathematics, science, engineering, or certain engineering-related technical fields. Content includes the study of trigonometric functions and their applications, trigonometric identities and equations, vectors, and the complex number system. Prerequisites: MATH 1314 with a C or better or equivalent or recent completion of ACCis MATD 0390 with a B or better. A third option is an appropriate secondary school course (one semester of precalculus or trigonometry) and a satisfactory entrance score on ACCis Mathematics Assessment Test. A fourth option is an appropriate higher score on ACCis Mathematics Assessment Test. Prior to the 1977-78 catalog, trigonometry was numbered MTH 1643. Credit can be earned for either MATH 1316 or the older trigonometry course, but not both. (MTH 1753)

**MATH 1324 MATHEMATICS FOR BUSINESS AND ECONOMICS (3-3-0).** A course in finite mathematics for business students including sets, basic algebraic properties, linear equations and inequalities, functions and graphs, the exponential and logarithmic functions, the mathematics of finance, systems of linear equations and matrices, linear inequalities and linear programming, the simplex method, and an introduction to probability. Prerequisites: MATD 0390 with a C or better or satisfactory score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. Credit can be earned for only one of MATH 1324 or BUA 2103. (MTH 1643)

**MATH 1332 COLLEGE MATHEMATICS (3-3-0).** A course designed for non-mathematics and non-science majors. Topics may include, but are not limited to, sets, logic, number theory, geometric concepts, and an introduction to probability and statistics. Prerequisites: A satisfactory score on the ACC Mathematics Assessment Test. A second option is an appropriate secondary school course (Algebra II) and completion of any TASP-mandated mathematics remediation. (MTH 1513)

**MATH 1333 MATHEMATICS FOR MEASUREMENT (3-3-0).** A course designed for non-mathematics and non-science majors. Topics include logic, variation, functions, equivalence, congruence, right triangle geometry, and other measurement topics. Prerequisites: A passing score on the mathematics portion of the TASP test or a satisfactory score on the ACC Mathematics Assessment Test or MATD 0360 with a C or better. (MTH 1573)

**MATH 1335 MODERN MATHEMATICS I (3-3-0).** A course designed for elementary education majors and liberal arts majors emphasizing sets, number systems, and their associated operations. Topics include sets and relations, the systematic analysis of the natural numbers, integers, rational numbers, and real numbers, as well as algorithms for addition, subtraction, multiplication, and division. Effective September 2001, this course was replaced by MATH 1350. (MTH 1523)

**MATH 1336 MODERN MATHEMATICS II (3-3-0).** A second course designed for elementary education majors and liberal arts majors emphasizing areas of elementary school mathematics not included in MATH 1335. Topics include probability and statistics, geometry, measurement, and coordinate geometry. Effective September 2001, this course was replaced by MATH 1351. (MTH 1533)

**MATH 1342 ELEMENTARY STATISTICS (3-3-0).** A first course in statistics for students in business; nursing; allied health; or the social, physical, or behavioral sciences; or for any student requiring knowledge of the fundamental procedures for data organization and analysis. Topics include frequency distributions, graphing, measures of location and variation, the binomial and normal distributions, z-scores, t-test, chi-square test, F-test, hypothesis testing, analysis of variance, regression, and correlation. Prerequisites: A satisfactory score on the ACC Mathematics Assessment Test. A second option is an appropriate secondary school course (Algebra II) and completion of any TASP-mandated mathematics remediation. (MTH 1563)

**MATH 1350 MATHEMATICS FOR MIDDLE GRADE TEACHER CERTIFICATION I (3-3-0).** Concepts of sets, functions, numeration systems, number theory and properties of the natural numbers, integers, rational and real number systems with and emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grades (4-8) teacher certification. Prerequisites: College Algebra or the equivalent with a C or better.

**MATH 1351 MATHEMATICS FOR MIDDLE GRADE TEACHER CERTIFICATION II (3-3-0).** Concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real number to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. Prerequisites: MATH 1350 with a C or better.

**MATH 1425 BUSINESS CALCULUS AND APPLICATIONS I (4-4-0).** A course treating standard one-variable calculus and its applications for business students, as well as selected other business applications. Calculus topics include the derivative, methods of finding derivatives, applications of derivatives, the integral, methods of integration, applications of integration, and the calculus of the exponential and logarithmic functions. Prerequisites: MATH 1314 or MATH 1324 with a C or better or equivalent. Another option is an appropriate secondary school course (one semester of precalculus or the equivalent) and a satisfactory entrance score on the ACC Mathematics Assessment Test. MATH 1314 is the recommended preparation for students who will also take MATH 1476. (MTH 1674)

**MATH 1476 BUSINESS CALCULUS AND APPLICATIONS II (4-4-0).** A course treating multivariable calculus and its applications for business students, as well as selected other business applications. Topics include functions of several variables and their derivatives, partial differentiation, optimization problems and LaGrange multipliers, special methods of integration, differential equations, probability and calculus, Taylor polynomials and infinite series, and topics in matrix theory and linear programming. Prerequisites: MATH 1425 or MATH 2413 with a C or better or the equivalent. (MATH 1426)

**MATH 2318 LINEAR ALGEBRA AND MATRIX THEORY (3-3-0).** A study of linear equations, linear transformations, matrices, determinants, finite-dimensional vector spaces, and quadratic forms. Prerequisites: MATH 2415 with a C or better or its equivalent. (MTH 2053)

**MATH 2412 PRECALCULUS: FUNCTIONS AND GRAPHS (4-4-0).** This is a course designed to prepare students for MATH 2413 Calculus I. Content includes algebraic, logarithmic, exponential, and trigonometric functions and equations; parametric equations; and the polar coordinate system. Prerequisites: MATH 1316 with a C or better or equivalent. Another option is an appropriate secondary school course (one semester of trigonometry or precalculus or the equivalent, including trigonometry) and a satisfactory entrance score on the ACC Mathematics Assessment Test. (MTH 1764)

**MATH 2413 CALCULUS I (4-4-0).** A standard first course in calculus. Topics include inequalities; functions; limits; continuity; the derivative; differentiation of algebraic functions and trigonometric functions; Newton's method; applications of the derivative; the integral; integration of algebraic functions and the sine and cosine functions; numerical integration; and applications of the integral. Prerequisites: MATH 2412 with a C or better or equivalent. Another option is an appropriate secondary school course (one year of precalculus or the equivalent, including trigonometry, with a B or better) and a satisfactory entrance score on the ACC Mathematics Assessment Test. (MTH 1854)

**MATH 2414 CALCULUS II (4-4-0).** A standard second course in calculus. Topics include differentiation and integration of transcendental functions; techniques of integration; integrals with infinite limits of integration; integrals of discontinuous integrands; infinite series; analytical geometry; and applications. Prerequisites: MATH 2413 with a C or better or the equivalent. (MTH 1864)

**MATH 2415 CALCULUS III (4-4-0).** A standard third course in calculus. Topics include polar coordinates and polar curves; vectors and analytical geometry in three dimensions; vector-valued functions and curvature; components of acceleration; functions of several variables; limits and continuity in three-space; partial and directional derivatives; gradients, tangent planes, and extreme of functions of two variables; multiple integrals in rectangular, polar, spherical, and cylindrical coordinates; applications of multiple integrals to area, volume, moments, centroids, and surface area. Prerequisites: MATH 2414 with a C or better or its equivalent. (MTH 2154)

**MATH 2420 DIFFERENTIAL EQUATIONS (4-4-0).** A course in the standard types and solutions of linear and nonlinear ordinary differential equations, include Laplace transform techniques. Series methods (power or Fourier) will be applied to ordinary and partial linear differential equations. Systems of linear differential equations will be studied. Prerequisites: MATH 2414 with a C or better or its equivalent. (MTH 2164)

**MTH 2254 CALCULUS IV (4-4-0).** This course develops the calculus of real- and vector-valued functions of one and several variables. Topics include matrix algebra and linear maps; vector-valued functions and their analysis; the geometry of Euclidean  $n$ -space; functions of several variables and their differentiation; gradients and directional derivatives; partial derivative; arc length; vector fields, divergence, and curl; Taylor's theorem for several variables; extreme of real-valued functions in  $n$ -space; LaGrange multipliers; multiple integrals and the chain rule; improper integrals; line integrals; area of surface; surface integrals; Green's Theorem; Gauss's Theorem; Stokes's Theorem; conservative fields. Prerequisites: MATH 2415 with a C or better or its equivalent.

## MATHEMATICS - DEVELOPMENTAL

- MATD 0123 BASIC MATH SKILLS LAB (1-0-2).** Designed for students currently registered in Basic Math Skills: MATD 0130, 0230, or 0330. Individualized and group setting providing additional practice and explanation. Repeatable up to two credit hours. (DVM 0011)
- MATD 0127 ELEMENTARY ALGEBRA LAB (1-0-2).** Designed for students currently registered in Elementary Algebra, MATD 0170, 0270, 0370. Individualized and group setting providing additional practice and explanation. Repeatable up to two credit hours. (DVM 0171)
- MATD 0129 INTERMEDIATE ALGEBRA LAB (1-0-2).** Designed for students currently registered in MATD 0190, 0290, or 0390. Individualized and group setting provides additional practice and explanation. Repeatable up to two credit hours. (DVM 0191)
- MATD 0162 TASP MATH PREPARATION (1-0-2).** Designed to prepare students with minimal math deficiencies to perform effectively in college-level course work as defined by the Texas Academic Skills Program. (DVM 1051)
- MATD 0290 INTERMEDIATE ALGEBRA (2-2-0).** A course designed to develop the skills and understanding contained in the second year of secondary school algebra. Topics include the properties of the real numbers; operations on polynomials and fractions; special products and factoring; radicals and rational exponents; solutions of linear, fractional, and quadratic equations; systems of linear equations; inequalities; coordinate systems; graphing. Prerequisites: When this course is combined with MATD 0370, it has the same prerequisite as MATD 0370. Otherwise it has the same prerequisite as MATD 0390. (DVM 1192)
- MATD 0330 BASIC MATH SKILLS (3-4-0).** A course designed to develop basic arithmetic and algebra skills to prepare for courses covering secondary school algebra, the first of which is MATD 0370. Content includes operations on whole numbers, integers, fractions, decimals, ratio and proportions, percent, solving linear equations in one variable, applications, and relating simple algebra concepts to geometry. The same course is offered in a one hour (0130) and two hour (0230) format. (DVM 1103)
- MATD 0360 TOPICS IN DEVELOPMENTAL MATHEMATICS (3-4-0).** This course surveys a variety of mathematical topics needed to prepare students for the college-level courses MATH 1332, 1342, and MATH 1333. It also covers most TASP mathematics topics. Topics include the arithmetic of integers and rational numbers, evaluating expressions and formulas, calculator use, problem-solving using data interpretation and analysis, informal geometry, pattern recognition, percentages,

ratio and proportion, measurements, algebraic techniques for solving linear equations and inequalities, quadratic equations, rational equations, systems of equations, etc. Students who need to prepare for MATH 1314, MATH 1324, MATH 1316,, etc., should not take this course, but instead should take MATD 0370 and MATD 0390. The same course is offered in a one hour (0160) and two hour (0260) format. Prerequisites: A passing grade of C or better in MATD 0330 or an acceptable score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. (DVM 1163)

- MATD 0370 ELEMENTARY ALGEBRA (3-4-0).** A course designed to develop the skills and understanding contained in the first year of secondary school algebra. Topics include review of operations on real numbers, graphing linear equations, variation, solving linear and quadratic equations, solving systems of linear equations, polynomials, factoring, and applications. The same course is offered in a one hour (0170) and two hour format (0270). Prerequisites: C or better in MATD 0330, or its equivalent knowledge, or appropriate score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. (DVM 1173)
- MATD 0390 INTERMEDIATE ALGEBRA (3-4-0).** A course designed to develop the skills and understanding contained in the second year of secondary school algebra. Topics include review of properties of real numbers, functions, algebra of functions, inequalities, polynomials and factoring, rational expressions and equations, radical expressions and equations, quadratic functions and their graphs, solving quadratic equations, and exponential functions. The same course is offered in a one hour (0190) and two hour (0290) format. Prerequisites: C or better in, MATD 0370, or its equivalent knowledge, or appropriate score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. (DVM 1193)

## MEDICAL CODING

- HITT 1253 LEGAL & ETHICAL ASPECTS OF HEALTH INFORMATION (2-2-0).** Concepts of confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information. Suitable for all health care majors.
- HITT 1270 COMPUTERS IN CODING AND REIMBURSEMENT (2-0-0).** Introduction to computerized methods for the management and operation of medical coding and reimbursement systems for various types of medical facilities. Students will learn to use 3M software. Prerequisites: HITT 1305, HITT 1301, HITT 1441.

- HITT 1301 HEALTH DATA CONTENT AND STRUCTURE (3-3-0).** Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information. Instruction in delivery and organizational structure to include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens. Prerequisites: HITT 1305.
- HITT 1305 MEDICAL TERMINOLOGY (3-3-0).** An in-depth study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.
- HITT 1370 COMPUTERS IN CODING AND REIMBURSEMENT (3-2-1).** Introduction to computerized methods for the management and operation of medical coding and reimbursement systems for various types of medical facilities.
- HITT 1441 CODING AND CLASSIFICATION SYSTEMS (4-2-4).** Application of basic coding rules, principles, guidelines, and conventions. Includes 3 hours lecture and 3 hours lab. Prerequisites: HITT 1305 and MDCA 1409.
- HITT 2266 CODING PRACTICUM (2-0-14).** Practical general training and experiences in the workplace. The college, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided experiences may be paid or unpaid. This will be a non-paid experience according to the American Health Information Management Association's Council on Accreditation. Prerequisites: HITT 1305, HITT 1253, HITT 1301, and HITT 1441.
- HITT 2435 CODING AND REIMBURSEMENT METHODOLOGIES (4-2-4).** Development of advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding perspective payment systems and methods of reimbursement. Prerequisites: HITT 1301, HITT 1305, HITT 1253, HITT 1441.
- MDCA 1409 ANATOMY & PHYSIOLOGY FOR MEDICAL ASSISTANTS(4-3-3).** Emphasis on normal human anatomy and physiology of cells, tissues, organs, and systems with overview of common Pathophysiology. Prerequisite: HITT 1305.

## MEDICAL LAB TECHNOLOGY

- MLAB 1167 MEDICAL LABORATORY ASSISTANT PRACTICUM (1-0-7).** The college and the clinical site develop and document an individualized medical laboratory assistant training plan for the student which is designed to develop technical skills in specimen accessioning and processing, performance of CLIA waived testing, and interpersonal skills. The guided external experiences may be paid or unpaid.

Successful completion of this course and MLAB 1201 will result in the awarding of a Certificate of Completion as a Medical Laboratory Assistant. Insurance: \$12 Prerequisites: MLAB 1223 and MLAB 1166 or completion of a formal, structured Phlebotomy Program or 1 year full time Phlebotomy experience and MLT Program Coordinator approval. (MLT 1201)

- MLAB 1201 INTRODUCTION TO CLINICAL LABORATORY SCIENCE (2-1-4).** An introduction to clinical laboratory science, including quality control, laboratory math, safety, basic laboratory equipment, laboratory settings, accreditation and certification. Students successfully completing MLAB 1167, Clinical Laboratory Assistant Practicum, in conjunction with or within 1 year of completion of MLT 1201 will receive a certificate of completion as a Medical Laboratory Assistant. Fee: \$12 Insurance: \$2 (MLT 1202)
- MLAB 1211 URINALYSIS/BODY FLUIDS (2-1-3).** An introduction to urinalysis and body fluid analysis, including the anatomy and physiology of the kidney, and physical, chemical and microscopic examination of urine, cerebrospinal spinal fluid, and other body fluids. Fee: \$24 Insurance: \$2 Prerequisites: Admission to MLT Program or MLT Program Coordinator approval. (MLT 1602)
- MLAB 1227 COAGULATION (2-1-2).** A course in coagulation theory, procedures, and practical applications. Includes laboratory exercises which rely on commonly performed manual and semi-automated methods. Fee: \$24 Insurance: \$2 Prerequisites: Admission to MLT Program or MLT Program Coordinator approval.
- MLAB 1235 IMMUNOLOGY/SEROLOGY (2-1-3).** Introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions, and the principles of serological procedures. Fee: \$24 Insurance: \$2 Prerequisites: Admission to MLT Program or MLT Program Coordinator approval. (MLT 1302)
- MLAB 1315 HEMATOLOGY (3-2-4).** Introduction to the theory and practical application of routine and special hematology procedures, both manual and automated; red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases. Fee: \$24 Insurance: \$12 Prerequisites: Admission to MLT Program or MLT Program Coordinator approval. (MLT 1405)
- MLAB 1331 PARASITOLOGY/MYCOLOGY (3-2-3).** A study of the taxonomy, morphology, and pathogenesis of human parasites and fungi, including the practical application of laboratory procedures. Fee: \$20 Insurance: \$2 Prerequisites: Program Coordinator approval. (MLT 2603)

**MLAB 2360 CLINICAL I (3-1-8).** A method of instruction providing detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary. In a simulated clinical setting, students process clinical specimens and function in the role of medical laboratory technicians in preparation for subsequent clinical rotations. Students also practice phlebotomy skills in an actual hospital or clinical laboratory. Fee: \$24 Insurance: \$12 Prerequisites: MLAB 1211, MLAB 1315, MLAB 1227, and MLAB 2431 or MLT Program Coordinator approval. (MLT 1703)

**MLAB 2361 CLINICAL II (3-0-16).** A method of instruction providing detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary. Students are assigned to a hospital or clinical laboratory and rotate through assigned departments to meet established clinical objectives. Insurance: \$12 Prerequisites: MLAB 2360 or Program Coordinator approval. (MLT 2503)

**MLAB 2362 CLINICAL III (3-0-16).** A method of instruction providing detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary. Students are assigned to a hospital or clinical laboratory and rotate through assigned departments to meet established clinical objectives. This course is a continuation of MLAB 2361. Insurance: \$12 Prerequisites: MLAB 2361 or MLT Program Coordinator approval. (MLT 2703)

**MLAB 2401 CLINICAL CHEMISTRY (4-3-4).** An introduction to the principles and procedures of various tests performed in Clinical Chemistry. Presents the physiological basis for the test, the principle and procedure for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory technique, chemical laboratory safety, electrolytes and acid-base balance, proteins, carbohydrates, lipids, enzymes, metabolites, endocrine function, and toxicology. Fee: \$24 Insurance: \$2 Prerequisites: CHEM 1405 and Program Coordinator approval. (MLT 2404)

**MLAB 2431 IMMUNOHEMATOLOGY (4-3-3).** A study of blood antigens and antibodies. Performance of routine blood banking procedures, including blood group and Rh typing, antibody screens,

antibody identification, cross matching, elution, and absorption techniques. During this course students will gain knowledge of blood group genetics, characteristics of the blood group systems, and the principles of immunology as they relate to immunohematology. Fee: \$24 Insurance: \$12 Prerequisites: MLAB 1235 or MLT Program Coordinator approval. (MLT 1504)

**MLAB 2434 CLINICAL MICROBIOLOGY (4-3-3).** Instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, setup, identification, susceptibility testing, and reporting procedures. Fee: \$24 Insurance: \$12 Prerequisites: BIOL 2420 or BIO 1704, and MLT Program Coordinator approval. (MLT 1604)

**PLAB 1166 PHLEBOTOMY PRACTICUM (1-0-7).** An intermediate or advanced type of health professions work-based instruction that helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. The emphasis is on practical work experience for which the student has already acquired the necessary theoretical knowledge and basic skills. Direct supervision is provided by the clinical professional, generally a clinical preceptor. A health practicum may be a paid or unpaid learning experience. Insurance: \$12 Skills: P (MLAB 1166)

**PLAB 1223 PHLEBOTOMY (2-1-4).** Skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Topics include professionalism, ethics, and medical terminology. Fee: \$20 Insurance: \$2 Skills: P (MLAB 1223)

## MILITARY SCIENCE

**MLS 1612 BASIC MILITARY SCIENCE I-A (2-2-1).** Designed to increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations, and basic marksmanship. Fundamental concepts of leadership in a profession. Includes one and one-half hours per week of leadership lab and incurs no military obligation.

**MLS 1622 BASIC MILITARY SCIENCE I-B (2-2-1).** Principles of effective leading. Designed to reinforce self-confidence through participation in physically and mentally challenging exercises with upper-division ROTC students. Communication skills that improve individual performance and group interaction. Relationship or organizational ethical values to the effectiveness of a leader. Includes one and one-half hours per week of leadership lab and incurs no military obligation.

**MLS 1632 BASIC MILITARY SCIENCE II-A (2-2-1).** Ethics-based leadership skills designed to develop individual abilities and contribute to effective team-building. Focus on oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Fundamentals of ROTC's Leadership Assessment Program. Includes one and one-half hours per week of leadership lab and incurs no military obligation.

**MLS 1642 BASIC MILITARY SCIENCE II-B (2-2-1).** Introduction to individual and team aspects of military tactics in small-unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Techniques for training others as an aspect of continued leadership development. Includes one and one-half hours per week of leadership lab and incurs no military obligation.

## MUSIC

**MUAP 1101 APPLIED6STRINGS (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1117 APPLIED6WOODWINDS (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1137 APPLIED6BRASS (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1157 APPLIED6DRUMS (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1161 APPLIED6GUITAR (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1169 APPLIED6PIANO (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1173 APPLIED6SYNTHESIS (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1181 APPLIED6VOICE (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1187 APPLIED6COMPOSITION (1-1-0).** Private instruction on instruments or in voice and consists of one-half hour lesson per week. May be repeated for credit. Fee: \$90 Prerequisites: Instructor approval.

**MUAP 1201 APPLIED6STRINGS (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1217 APPLIED6WOODWIND (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1237 APPLIED6BRASS (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1257 APPLIED6DRUMS (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1261 APPLIED6GUITAR (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1269 APPLIED6PIANO (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1273 APPLIED6SYNTHESIS (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1281 APPLIED6VOICE (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUAP 1287 APPLIED6COMPOSITION (2-1-0).** Private instruction on instruments or in voice and consists of one hour lesson per week. May be repeated for credit. Fee: \$160 Prerequisites: Instructor approval.

**MUEN 1121 STAGE ENSEMBLE (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.

- MUEN 1122 JAZZ ENSEMBLE (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.
- MUEN 1123 CHAMBER ORCHESTRA (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.
- MUEN 1124 PERCUSSION ENSEMBLE (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.
- MUEN 1125 COMMUNITY COLLEGE VOCAL ENSEMBLE (1-0-4).** This class is designed for full or part-time students who desire to improve their voice ensemble performance levels. Performance required. May be repeated for credit. Prerequisites: Consent of instructor. (MUS 2901)
- MUEN 1126 COMMUNITY COLLEGE BAND (1-0-4).** This class is designed for full or part-time students who desire to improve their performance levels on band instruments, observe rehearsal methods and techniques, and learn band organizational strategies. Performance required. May be repeated for credit. Prerequisites: Consent of instructor. (MUS 2911)
- MUEN 1127 COMMUNITY COLLEGE JAZZ BAND (1-0-4).** This class is designed for full or part-time students who desire to improve their skills in jazz improvisation and performance. Performance required. May be repeated for credit. Prerequisites: Consent of instructor. (MUS 2921)
- MUEN 1132 GUITAR ENSEMBLE (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.
- MUEN 1133 BRASS ENSEMBLE (1-0-4).** A brass performance group that is open to any student who can qualify by audition. Emphasis on performance of literature for small ensembles. May be repeated for credit. Prerequisites: Consent of instructor. (MUS 2171)
- MUEN 1134 STRING ENSEMBLE (1-0-4).** A string ensemble group that is open to any student who can qualify by audition. Emphasis is on performance of literature for small ensembles. May be repeated for credit. Prerequisites: Consent of instructor. (MUS 2181)
- MUEN 1135 KEYBOARD ENSEMBLE (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.
- MUEN 1136 WOODWIND ENSEMBLE (1-0-4).** Provides training in the specific techniques necessary for ensemble performance. Emphasizes both ensemble and solo playing. Repertoire varies according to emphasis. May be repeated for maximum of four hour credits. Open to any student who can qualify by audition. Prerequisites: Instructor approval.
- MUEN 1141 VOCAL ENSEMBLE (1-0-4).** A choral ensemble that is open to any student who can qualify by audition. Will give several public performances each semester. Repertoire varies according to emphasis. Three hours of rehearsal required per week. May be repeated for a maximum of four credit hours. Prerequisites: Instructor approval.
- MUEN 1142 JAZZ CHOIR ENSEMBLE (1-0-4).** A choral ensemble that is open to any student who can qualify by audition. Will give several public performances each semester. Repertoire varies according to emphasis. Three hours of rehearsal required per week. May be repeated for a maximum of four credit hours. Prerequisites: Instructor approval.
- MUEN 1143 COLLEGE CHOIR (1-0-4).** A choral ensemble that is open to any student who can qualify by audition. Will give several public performances each semester. Repertoire varies according to emphasis. Three hours of rehearsal required per week. May be repeated for a maximum of four credit hours. Prerequisites: Instructor approval.
- MUEN 1151 CHAMBER ENSEMBLE (1-0-4).** An instrument or vocal performance group that is open to any student who can qualify by audition. Emphasis on performance of literature for small ensembles. May be repeated for Credit. Prerequisites: Consent of instructor. (MUS 2161)
- MUS 1763 MUSIC OF BRAZIL AND LATIN AMERICA (3-3-0).** A survey of the traditional and popular music of Brazil, South and Central America, Mexico, the Caribbean and Latin U.S. Includes the study of Samba, Bossa Nova, Tango, Nueva Cancion, Salsa, and more from historical, cultural, socio-political, as well as musical perspectives.

- MUS 1773 JAZZ HISTORY (3-3-0).** A foundation course for enjoyment and understanding of music through use of recorded music and song literature. Elements of music and analysis of music form and design, with emphasis on the development of jazz and its contribution to American culture. Skills: R
- MUS 1783 WORLD BEAT MUSIC (3-3-0).** A study of modern musical hybrids known as World Beat Music. Traces the musical development from ancient Africa to the current cross-cultural mixes.
- MUS 2023 MUSIC FUNDAMENTALS II (3-3-0).** Continuation of MUSI 1301 with further instruction of the elements of music, song writing, application of theory and harmonic ear training.
- MUS 2033 SIGHT READING (3-3-0).** A study of aural, visual, and vocal experiences including modulations to closely related keys, modal melodies and compound intervals.
- MUSI 1116 SIGHT-SINGING AND EAR TRAINING I (1-1-2).** Basic aural, visual, and vocal experiences in dictation and singing at sight. To be taken concurrently with Music Theory I. Skills: R Prerequisites: MUSI 1301 or Instructor approval. (MUS 1121)
- MUSI 1117 SIGHT-SINGING AND EAR TRAINING II (1-1-2).** A continuation of Sight-Singing and Ear Training I. To be taken concurrently with Music Theory II. Skills: R Prerequisites: MUSI 1116 and MUSI 1311. (MUS 1131)
- MUSI 1124 PERCUSSION ENSEMBLE (1-0-4).** A percussion ensemble that is open to any student who can qualify by audition. Will give public performances on a variety of percussion instruments. Music drawn from traditional and contemporary sources. May be repeated for credit. (MUS 2151)
- MUSI 1132 GUITAR ENSEMBLE (1-0-4).** This is a performance class designed for the purpose of sharpening the students' sight-reading skills. A wide variety of styles of music will be used, including Renaissance, Baroque, Classical; as well as the more modern areas of jazz, rock, blues, and country. There will be lectures and tips on the unique difficulties of note reading on the guitar. (MUS 2121)
- MUSI 1141 MAJOR VOCAL ENSEMBLE (1-0-4).** A choral ensemble that is open to any student who can qualify by audition. Will give several public performances each semester. Repertoire varies according to emphasis (jazz, gospel, concert, etc.). Three hours of rehearsal required per week. May be repeated for a maximum of four credit hours. Prerequisites: Instructor approval. MUEN 1141, MUEN 1142, MUEN 1143. (MUS 2101)
- MUSI 1181 PIANO CLASS I (1-1-2).** Group instruction in the fundamentals of keyboard technique for beginning piano students. Skills: R (MUS 1701)
- MUSI 1182 PIANO CLASS II (1-1-2).** Group instruction in the study of harmony, transposition, accompaniment styles, improvisation, sight reading, keyboard technique, and major and minor scales. Skills: R Prerequisites: MUSI 1181. (MUS 1711)
- MUSI 1183 VOICE CLASS I (1-1-2).** A study of voice, emphasizing the principles of breathing, voice production, tone quality, enunciation, and interpretation. Skills: R (MUS 1501)
- MUSI 1184 VOICE CLASS II (1-1-2).** A continuation of Voice Class I including a review of the fundamentals of vocal technique with an emphasis on intermediate repertoire and performance. Prerequisites: MUSI 1183. (MUS 1511)
- MUSI 1188 PERCUSSION CLASS (1-1-2).** Group instruction on percussion instruments. Includes playing techniques, notation, tone production, aural and written skills as applied to keyboard percussion, drums and hand drums. Open to all students. (MUS 1401)
- MUSI 1192 GUITAR CLASS (1-1-2).** Class instruction in the fundamentals of guitar technique for guitar students. Course objectives include development of accompaniment style, scales, fingerpicking, chord construction, music reading, melody playing, and solo guitar techniques. Generally, students are expected to provide their own guitars. Skills: R (MUS 1601)
- MUSI 1193 ADVANCED GUITAR (1-1-2).** Class instruction in advanced guitar technique, including solo guitar techniques.
- MUSI 1301 MUSIC FUNDAMENTALS (3-3-0).** An introduction to the elements of music, including study of the staff, clefs, key signatures, scales, time signatures, notation, meter and rhythm, major and minor chords, song writing techniques, application of theory at the keyboard, and rhythmic, melodic, and harmonic ear training. Skills: R (MUS 2013)
- MUSI 1306 MUSIC APPRECIATION (3-3-0).** A foundation course for enjoyment and understanding of music through use of recorded music and song literature. Elements of music and analysis of music form and design and its relation to other subjects and activities. Skills: R (MUS 1753)
- MUSI 1308 MUSIC LITERATURE I (3-3-0).** A survey of principal forms, styles, and periods through the study of representative composers and works. Emphasis is on the music from Antiquity through the Baroque. Skills: R (MUS 2213)
- MUSI 1309 MUSIC LITERATURE II (3-3-0).** A continuation of Music Literature I. Emphasis is on the music of the Classical, Romantic, and Modern periods. (MUS 2223)
- MUSI 1311 MUSIC THEORY I (3-3-0).** A review of the fundamentals of music; part writing and figured bass exercises, melody harmonizations, dominant seventh chords, and non-harmonic tones. To be

taken concurrently with Sight-Singing and Ear Training I. Skills: R Prerequisites: MUSI 1301 or Instructor approval. (MUS 1413)

**MUSI 1312 MUSIC THEORY II (3-3-0).** A study of diatonic seventh chords, modulation to closely related keys, secondary dominants and other chromatically altered chords. To be taken concurrently with Sight-Singing and Ear Training II. Skills: R Prerequisites: MUSI 1116 and MUSI 1311. (MUS 1423)

**MUSI 2116 SIGHT-SINGING AND EAR TRAINING III (1-1-2).** A continuation of aural, visual, and vocal experiences including modulations to closely related keys, modal melodies and compound intervals. Advanced harmonic, melodic, and rhythmic dictation exercises. To be taken concurrently with Music Theory III. Prerequisites: MUSI 1117 and MUSI 1312. (MUS 2131)

**MUSI 2118 SIGHT-SINGING AND EAR TRAINING IV (1-1-2).** A continuation of Sight-Singing and Ear Training III including the study of unusual and mixed meters, remote modulation, altered chords, 9th, 11th, and 13th chords. To be taken concurrently with Music Theory IV. Prerequisites: MUSI 2116 and MUSI 2311. (MUS 2141)

**MUSI 2181 PIANO CLASS III (1-1-2).** A continuation of all keyboard studies in Piano Class II with emphasis on performance of all major and minor scales and literature from various style periods. Also includes arpeggio studies. Prerequisites: MUSI 1182. (MUS 2701)

**MUSI 2182 PIANO CLASS IV (1-1-2).** A continuation of Piano Class III with an emphasis on advanced harmonization and appropriate technical skills. Prerequisites: MUSI 2181. (MUS 2711)

**MUSI 2311 MUSIC THEORY III (3-3-0).** A study of advanced diatonic and chromatic harmony as an extension of Music Theory I and II. The emphasis will be placed upon analysis and composition of music. To be taken concurrently with Sight-Singing and Ear Training III. Skills: R Prerequisites: MUSI 1312 and MUSI 1117. (MUS 2413)

**MUSI 2312 MUSIC THEORY IV (3-3-0).** A study of the structure of music, the principal forms, harmonic structures and advanced compositional techniques with an emphasis on 20th century music. To be taken concurrently with Sight-Singing and Ear Training IV. Prerequisites: MUSI 2311 and MUSI 2116. (MUS 2423)

## NURSING

**RNSG 1105 NURSING SKILLS I (1-0-4).** Study of the concepts and principles essential for demonstrating competence in the performance of nursing procedures. Topics include knowledge, judgment, skills, and professional values within a legal/ethical

framework. Fee: \$15 Insurance: \$2 Prerequisites: PSYC 2301; MATH 1332 or MATH 1314 or MATH 1342; BIO 1714 or BIOL 2401; and BIO 1704 or BIOL 2420. Program Coordinator approval.

### RNSG 1140 NURSING SKILLS FOR ARTICULATING STUDENTS (1-0-4).

Validation of current skills and procedures in a variety of settings; application of a systematic problem solving process and critical thinking skills; focus on the expansion of the scientific knowledge and principles underlying nursing skills and procedures; and competency in knowledge, judgment, skills, and professional values within a legal/ethical framework. Fee: \$10 Insurance: \$12 Prerequisites: Admission into the associate degree mobility track or administrative approval.

### RNSG 1170 NURSING PROCESS FOR ARTICULATING STUDENTS (1-1-0).

Exploration of the nursing process as a problem-solving methodology used by associate degree nurses to provide safe, individualized nursing care. Focuses on application of each step of the process to a variety of clinical experiences. Prerequisites: Admission into the associate degree mobility track or administrative approval.

### RNSG 1192 SPECIAL TOPIC IN NURSING: CARE OF THE CLIENT WITH COMPLEX HEALTH CARE NEEDS (1-1-0).

Application of a systematic problem-solving process and critical-thinking skills to provide nursing care to diverse clients/families across the life span with complex health care needs in health maintenance and health restoration. Opportunities to collaborate with members of the multidisciplinary health care team. Topics include the role of the nurse as client advocate and coordinator of care and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisites: Instructor approval.

### RNSG 1260 FOUNDATIONS CLINICAL (2-0-8).

Application of the theories, concepts and knowledge base presented in RNSG 1513 Foundations for Nursing Practice at a specific clinical site or sites. Insurance: \$12 Prerequisites: Admission to the Associate Degree Nursing Program, Minimum grade of iCî in BIO 1714\*, BIO 1704\*, MATH 1332\*, PSYC 2301. Corequisites: RNSG 1513, BIO 1724\*, HPRS 2300. (\*or equivalent)

### RNSG 1262 CHILDBEARING/CHILDREARING FAMILY CLINICAL (2-0-8).

Application of the theories, concepts and knowledge base presented in RNSG 1412 Nursing Care of the Childbearing/Childrearing Family at a specific site or sites. Insurance: \$12 Prerequisites: RNSG 1347, RNSG 1261, PSYC 2314, SPCH 1311\* (\*or equivalent). Corequisite: RNSG 1412, ENGL 1301.

- RNSG 1263 NURSING PRACTICE I CLINICAL (2-0-8).** Application of the theories, concepts and knowledge base presented in RNSG 1517 Concepts of Nursing Practice I for Articulating Students at a specific clinical site or sites. Insurance: \$12 Prerequisites: BIO 1714\*, BIO 1704\*, MATH 1332\*, PSYC 2314, BIO 1724\*, HPRS 2300, PSYC 2308, SPCH 1311\*. (\*or equivalent) Corequisite: RNSG 1140, 1170, and 1517.
- RNSG 1347 CONCEPTS OF CLINICAL DECISION-MAKING (3-3-0).** Integration of previous knowledge and skills into the continued development of the associate degree nurse as provider of care, coordinator of care, and member of a profession emphasizing clinical decision-making, knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisites: RNSG 1431 & RNSG 1160. Corequisite: RNSG 1261.
- RNSG 1362 CLINICAL DECISION MAKING 1 & 2 CLINICAL (3-0-12).** A basic, intermediate, or advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Application of the theories, concepts and knowledge base presented in RNSG 1431 and RNSG 1347 at specific clinical site or sites. Corequisites: RNSG 1431 and RNSG 1347. Insurance: \$12 Prerequisites: RNSG 1513 and RNSG 1260. Instructor Approval.
- RNSG 1412 NURSING CARE OF THE CHILDBEARING/CHILDREARING FAMILY (4-4-0).** Study of the concepts related to the provision of nursing care for childbearing and childrearing families; application of systematic problem-solving processes and critical thinking skills, including a focus on the childbearing family during preconception, prenatal, antipartum, neonatal, and postpartum periods and the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework, pediatric settings; and utilize a systematic problem-solving approach and critical thinking skills when providing nursing care for the childbearing and childrearing family. Prerequisites: RNSG 1347 & RNSG 1261. Corequisite: RNSG 1262 and ENGL 1301.
- RNSG 1431 PRINCIPLES OF CLINICAL DECISION-MAKING (4-3-3).** Examination of selected principles related to the development of the associate degree nurse as a provider of care, coordinator of care, and member of a profession emphasizing clinical decision making, knowledge, judgment, skills, and professional values within a legal/ethical framework. Insurance: \$2 Prerequisites: RNSG 1513 & RNSG 1260. Corequisite: RNSG 1160 & PSYC 2314.
- RNSG 1463 NURSING PRACTICE II CLINICAL FOR ARTICULATING STUDENTS (4-0-16).** Application of the theories, concepts and knowledge base presented in RNSG 1542 in a specific clinical site or sites. Fee: \$24 Insurance: \$12 Prerequisites: RNSG 1263 and RNSG 1517. Corequisite: RNSG 1542.
- RNSG 1513 FOUNDATIONS FOR NURSING PRACTICE (5-4-4).** Introduction to the role of the associate degree nurse as provider of care, coordinator of care, and member of the profession. Topics include knowledge, judgment, skills and professional values within a legal/ethical framework. Insurance: \$2 Prerequisites: Admission to the Associate Degree Nursing Program, minimum grade of iC1 in BIO 1714\*, BIO 1704\*, MATH 1332\*, PSYC 2301, RNSG 1105. Corequisites: RNSG 1260, BIO 1724\*, HPRS 2300. (\* or equivalent)
- RNSG 1517 CONCEPTS OF NURSING PRACTICE I FOR ARTICULATING STUDENTS (5-5-1).** Provides the articulating student the opportunity to examine the role of the associate degree nurse; application of a systematic problem solving process and critical thinking skills which includes a focus on the adult population in selected settings; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. Fee: \$10 Insurance: \$2 Prerequisites: BIO 1714\*, BIO 1704\*, MATH 1332\*, PSYC 2301, BIO 1724\*, HPRS 2300, PSYC 2314, SPCH 1311\* (\* or equivalent). Corequisite: RNSG 1140, RNSG 1170, RNSG 1263.
- RNSG 1542 CONCEPTS OF NURSING PRACTICE II FOR ARTICULATING STUDENTS (5-5-1).** Provides the articulating student the opportunity to examine the roles of the associate degree nurse and apply systematic problem solving processes and critical thinking skills; focuses on the utilization of leadership and management skills in the provision of care to small groups of adult clients and their families in selected settings and competency in knowledge, judgment, skills, and professional values within a legal/ethical framework. Insurance: \$2 Prerequisites: RNSG 1517 and RNSG 1263. Corequisite: RNSG 1363.
- RNSG 2160 MENTAL HEALTH CLINICAL (1-0-4).** Application of the theories, concepts and knowledge base presented in RNSG 2213 Mental Health Nursing at a specified clinical site or sites. Fee: \$10 Insurance: \$12 Prerequisites: RNSG 1431 & RNSG 1261. Corequisite: RNSG 2213.
- RNSG 2161 MANAGEMENT CLINICAL (1-0-4).** Application of the theories, concepts and knowledge base presented in RNSG 2221 Management of Client Care at a specific clinical site or sites. Insurance: \$12 Prerequisites: RNSG 2441 and RNSG 2361. Corequisite RNSG 2221.

- RNSG 2162 CRITICAL CARE NURSING CLINICAL (1-0-4).** Application of the theories, concepts and knowledge base presented in RNSG 2190 Special Topics: Care of the Client with Complex Health Care Needs at specific clinical site or sites. Fee: \$10 Insurance: \$12 Prerequisites: Instructor approval. (AHS 2313)
- RNSG 2213 MENTAL HEALTH NURSING (2-2-0).** Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. Uses therapeutic communication; utilizes critical thinking skills and a systematic problem-solving process as a framework for providing care to clients and families experiencing mental health problems; and explains the roles of the associate degree nurse in caring for clients and families experiencing mental health problems. Prerequisites: RNSG 1347 & RNSG 1261. Corequisite: RNSG 2160.
- RNSG 2221 MANAGEMENT OF CLIENT CARE (2-2-0).** Exploration of leadership and management principles applicable to the role of the nurse as a provider of care, coordinator of care, and member of a profession. Includes application of knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisites: RNSG 2441 and RNSG 2361. Corequisite: RNSG 2161.
- RNSG 2260 CLINICAL PRECEPTORSHIP (2-0-8).** Provides the nursing student with the opportunity to enhance clinical skills in a selected practice area under the supervision of an instructor and a preceptor. Additionally, course seminars will enable the student to explore a wide variety of contemporary health care issues. Insurance: \$12 Prerequisites: Instructor approval. (AHS 2604)
- RNSG 2261 CLIENT CARE MANAGEMENT (2-0-8).** Provides the nursing student with the opportunity to enhance client care management skills in the medical-surgical setting under direct supervision of an instructor. Focuses on prioritization of nursing care, task organization, time management and leadership/management styles. Insurance: \$12 Prerequisites: Instructor approval. (AHS 2313)
- RNSG 2263 NURSING PRACTICE III CLINICAL FOR ARTICULATING STUDENTS (2-0-8).** Application of the theories, concepts and knowledge base presented in RNSG 2402 Concepts of Nursing Practice III for Articulating Students at a specific clinical site or sites. Insurance: \$12 Prerequisites: RNSG 1542 and RNSG 1363. Corequisite: RNSG 2402.
- RNSG 2361 CLINICAL DECISION-MAKING III CLINICAL (3-0-12).** Application of the theories, concepts and knowledge base presented in RNSG 2441 Advanced Concepts of Clinical Decision Making at a specific clinical site or sites. Insurance: \$12 Prerequisites: RNSG 1412, RNSG 1262, RNSG 2213, RNSG 2160, ENGL 1301. Corequisite: RNSG 2441.

- RNSG 2402 CONCEPTS OF NURSING PRACTICE III FOR ARTICULATING STUDENTS (4-4-1).** Provides the articulating student the opportunity to synthesize the roles of the associate degree nurse; application of a systematic problem solving process and critical thinking skills; focuses on the care of patients throughout the life span with continued emphasis on leadership and management skills in the provision of care to small groups of adult clients and their families in multiple settings; and competency in knowledge, judgment, skills, and professional values within a legal/ethical framework. Fee: \$10 Insurance: \$2 Prerequisites: RNSG 1542 and 1363. Corequisite: RNSG 2263.
- RNSG 2441 ADVANCED CONCEPTS OF CLINICAL DECISION MAKING (4-4-0).** Application of advanced concepts and skills for development of the associate degree nurse's roles in complex client/nursing situations. Focus given to knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisites: RNSG 1412, RNSG 1262, RNSG 2213, RNSG 2160, ENGL 1301. Corequisite: RNSG 2361.

## OCCUPATIONAL THERAPY ASSISTANT

- OTHA 1166 OCCUPATIONAL THERAPY PRACTICUM (1-0-9).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Offered in Fall Semester. Insurance: \$12 Prerequisites: OTHA 2315. (OTA 2102)
- OTHA 1305 PRINCIPLES OF OCCUPATIONAL THERAPY (3-2-4).** Introduction to occupational therapy including the historical development and philosophy. Emphasis on the roles of the occupational therapy assistant. Topics include occupation in daily life; education and functions; occupational therapy personnel; current health care environment; and moral, legal, and ethical issues. Offered in Fall Semester. Fee: \$15 Insurance: \$2 Prerequisites: Admission to program. (OTA 1304)
- OTHA 1315 THERAPEUTIC MEDIA I IN OCCUPATIONAL THERAPY (3-2-3).** Introduction to basic skills in various activities and tasks used as therapeutic intervention in occupational therapy. Emphasis on activity analysis; how to adapt and teach therapeutically; and how to supply, equip, and maintain a safe work environment. Offered in Spring Semester. Fee: \$12 Insurance: \$2 Prerequisites: OTHA 1305. (OTA 1405)
- OTHA 1319 THERAPEUTIC MODALITIES I IN OCCUPATIONAL THERAPY (3-2-3).**

Instruction in concepts and techniques leading to proficiency in skills and activities used as treatment modalities in occupational therapy. Emphasis on the occupational therapy process within the context of the occupational performance model. Offered in Spring Semester. Fee: \$12 Insurance: \$2 Prerequisites: OTHA 1305. (OTA 1405)

**OTHA 1341 LIFE SKILLS PERFORMANCE OF CHILDHOOD IN OCCUPATIONAL THERAPY (3-2-4).**

Study of the physical, psychosocial, and cognitive occupational performance of children (newborns to adolescents) with emphasis on characteristics of purposeful activities. Includes frames of reference, assessment/evaluation tools and techniques, and intervention strategies specific to this population. Fee: \$12 Insurance: \$2

**OTHA 1579 HUMAN STRUCTURE AND FUNCTION IN OCCUPATIONAL THERAPY (5-3-6).**

Study of the biomechanics of human motion. Emphasis on the musculoskeletal system including skeletal structure, muscles and nerves, and biomechanical assessment procedures. Offered in Fall Semester. Fee: \$24 Insurance: \$2 Prerequisites: Admission to program. (OTA 1315)

**OTHA 2204 ADVANCED PATHOPHYSIOLOGY (2-2-0).**

Advanced study of neuroanatomy and neurophysiology as it relates to neurological conditions commonly treated in occupational therapy. Emphasis on neuro-based occupational therapy intervention techniques. Offered in Summer Semester. Prerequisites: OTHA 2301. (OTA 1502)

**OTHA 2301 PATHOPHYSIOLOGY IN OCCUPATIONAL THERAPY (3-3-0).**

Study of the pathology and general health management of diseases and injuries across the lifespan encountered in occupational therapy treatment settings. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries. Offered in Spring Semester. Prerequisites: OTHA 1509. (OTA 1403)

**OTHA 2302 THERAPEUTIC MEDIA II IN OCCUPATIONAL THERAPY (3-2-3).**

Continuation of Therapeutic Media I. Emphasis on advanced techniques and applications to specific occupational therapy practice areas. Offered in Summer Semester. Fee: \$12 Insurance: \$2 Prerequisites: OTHA 1315. (OTA 1505)

**OTHA 2305 THERAPEUTIC MODALITIES II IN OCCUPATIONAL THERAPY (3-2-4).**

Continuation of Therapeutic Modalities I. Emphasis on current rehabilitative modalities. Offered in Fall Semester. Fee: \$12 Insurance: \$2 Prerequisites: OTHA 1319. (OTA 2106)

**OTHA 2309 MENTAL HEALTH IN OCCUPATIONAL THERAPY (3-2-4).**

Study of the promotion of mental health through occupational therapy. Emphasis on theory and intervention strategies to enhance psychosocial function. Offered in Spring

Semester. Fee: \$12 Insurance: \$2 Prerequisites: OTHA 2311. (OTA 2205)

**OTHA 2311 ABNORMAL PSYCHOLOGY IN OCCUPATIONAL THERAPY (3-3-0).**

Fundamental principles and techniques of psychological diagnosis with emphasis on mental health issues including theories, etiology, and treatment intervention. Offered in Fall Semester. Prerequisites: OTHA 2302. (OTA 2103)

**OTHA 2331 PHYSICAL FUNCTION IN OCCUPATIONAL THERAPY (3-2-3).**

Study of the promotion of physical function through occupational therapy assessment/evaluation, intervention, and patient/client education. Emphasis on developmental continuum using the occupational performance approach and theory and application of rehabilitation techniques. Offered in Fall Semester. Fee: \$12 Insurance: \$2 Prerequisites: OTHA 2302. (OTA 2106)

**OTHA 2335 HEALTH CARE MANAGEMENT IN OCCUPATIONAL THERAPY (3-3-0).**

Explores the role of the occupational therapy assistant in health care delivery. Emphasis on documentation, occupational therapy standards and ethics, health care team role delineation and management and reimbursement in the health care system. Prerequisites: OTHA 2360.

**OTHA 2488 INTERNSHIP I - OCCUPATIONAL THERAPY ASSISTANT (4-0-20).**

Practical general training and experience in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. Involves a written agreement between the educational institution and a business. Mentored and supervised by a workplace employee, the student achieves objectives that are established by the workplace and the college. The guided external experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary. Insurance: \$12 Prerequisites: OTHA 1166.

**OTHA 2489 INTERNSHIP II - OCCUPATIONAL THERAPY ASSISTANT (4-0-20).**

Practical general training and experience in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical courses of study. Involves a written agreement between the educational institution and a business. Mentored and supervised by a workplace employee, the student achieves objectives that are established by the workplace and the college. The guided external experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary. Insurance: \$12 Prerequisites: OTHA 2488. (OTA 2460)

## OFFICE ADMINISTRATION

- ITSC 2331 INTEGRATED SOFTWARE APPLICATIONS III (3-2-2).** Designed for advanced users with emphasis on a wide range of productivity tasks including complex assignments that require advanced formatting and functionality. The course will require advanced proficiency with word processing, spreadsheets, database, and presentation media software to plan, create and design solutions using integrated software. Fee: \$12 Prerequisites: Competency in Word, Excel, Access, and PowerPoint. Ability to key 50 wpm. (OST 2013)
- ITSW 1310 PRESENTATION MEDIA SOFTWARE: POWERPOINT (3-2-2).** Instruction in the utilization of presentation software to produce multimedia presentations for course work, professional purposes, and personal use. Graphics, text, sound, animation and/or video may be used in presentation development. This course covers the required skill sets on the Microsoft Office User Specialist (MOUS) core and expert exams. Fee: \$12 Prerequisites: Introduction to a computer application course or equivalent and 30 wpm. (OST 2072)
- POFI 1371 ACCESS (3-2-2).** A course which provides instruction and business applications for designing, updating, and managing a database using Microsoft Access. Instruction on creating reports and forms and integrating applications is also included. This course covers the required skill sets on the Microsoft Office User Specialist (MOUS) core and expert exams. Fee: \$12 Prerequisites: Introduction to computer application course or equivalent and 30 wpm. (POFI 1271)
- POFI 1449 SPREADSHEETS: EXCEL (4-3-2).** Skill development in the use of Excel. Topics include worksheet creation and manipulation functions, templates, macro programming database functions, data-table features, and graphics. This course covers the required skill sets on the Microsoft Office User Specialist (MOUS) core and expert exams. Fee: \$12 Prerequisites: Introduction to a computer application course or equivalent and ability to key 30 wpm. (OST 1023)
- POFL 1359 LEGAL TRANSCRIPTION (3-2-2).** Skill development in comprehensive vocabulary, listening, organizing, and transcribing client-quality documents used in a legal office. Prerequisites: Ability to key minimum 50 wpm, word processing skills, and grammar skills. (OST 2043)
- POFM 1302 COMPUTERS IN HEALTH CARE (3-2-2).** Introduction to a computerized method for the management and operation of health care information systems for various types of medical facilities. Offered in Fall Semester only. Fee: \$12 Prerequisites: Basic keyboarding and computer skills. (OST 1012)
- POFM 1309 MEDICAL OFFICE PROCEDURES (3-2-2).** Introduction to basic medical office skills including telephone techniques, filing and indexing, mail handling, appointment scheduling, travel arrangements, correspondence, and business transactions. Emphasis on human relations and customer service skills. Offered in Fall Semester only. Fee: \$12 Prerequisites: Basic keyboarding skills and a computer applications course or equivalent. (OST 1014)
- POFM 1364 PRACTICUM (OR FIELD EXPERIENCE) MEDICAL ADMINISTRATIVE ASSISTANT (3-0-21).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. This course may be repeated if topics and learning outcomes vary. Prerequisites: Successful completion of at least 15 credit hours in this discipline with a B average. (OST 2074)
- POFT 1127 INTRODUCTION TO KEYBOARDING (1-0-3).** Skill development in keyboarding with emphasis on alphabet, number, and symbol keys by touch. Skills can be applied to computers, typewriters, and other equipment with keyboards. Emphasis on acceptable speed and accuracy. May be repeated with instructor approval. (OST 1001)
- POFT 1231 BUSINESS MACHINE APPLICATIONS: DATA ENTRY (2-1-2).** Skill development in the operation of machines used in a business environment. Emphasis on the development of skills in using computer keypad, electronic calculators and other office machines such as fax, telephone equipment, and reprographics. Coursework consists of skill development in ten-keypad on the computer and data entry applications. Internet project will be assigned to explore multi-task business equipment. Prerequisites: Ability to key 30 wpm.
- POFT 1302 BUSINESS COMMUNICATIONS I (3-3-0).** Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. Access to business communications web site and on-line study guide helps student develop their English skills with additional emphasis on spelling and vocabulary words. Prerequisites: Reading from ACC Assessment or TASP. (OST 1033)
- POFT 1309 ADMINISTRATIVE OFFICE PROCEDURES I (3-2-2).** Study of current office procedures including telephone skills, time management, travel and meeting arrangements, mail processing, and other duties and responsibilities in an office environment. Prerequisites: Reading from ACC Assessment or TASP and basic keyboarding skills. (OST 1083)

- POFT 1321 BUSINESS MATH (3-3-0).** Instruction in the fundamentals of business mathematics including analytical and problem-solving skills for critical thinking in business applications. Prerequisites: Students should be able to successfully complete MATD 0330 or assessment equivalent.
- POFT 1329 KEYBOARDING AND DOCUMENT FORMATTING: MS WORD® I (3-2-3).** Skill development in the operation of the computer keyboard by touch by applying proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic business documents. Fee: \$12 Prerequisites: Reading from ACC Assessment or TASP and 30 w.p.m. on a 3-minute timed writing. (OST 1013)
- POFT 1449 ADMINISTRATIVE OFFICE PROCEDURES II (4-3-2).** Advanced office application with special emphasis on decision making, goal setting, management theories, and critical thinking. Use of corporate intranet and office simulation is included to develop your knowledge of internet, corporations, and integrated software applications. Prerequisites: POFT 1309. Competency in Internet, Word, PowerPoint, Excel, and Access required. 50 wpm. (OST 1103)
- POFT 2203 SPEED AND ACCURACY BUILDING (2-1-3).** Review, correct, improve, and/or perfect touch keyboarding techniques for the purpose of increasing speed and improving accuracy. Prerequisites: The ability to key 50 wpm. (OST 2001)
- POFT 2301 DOCUMENT FORMATTING AND SKILLBUILDING: MS WORD® II (3-2-2).** A continuation of keyboarding skills in document formatting, speed, and accuracy. Emphasis on proofreading, editing, and following instructions, and keying documents from various copy. This course covers the required skill sets on the Microsoft Office User Specialist (MOUS) core and expert exams. Fee: \$12 Prerequisites: Reading on ACC Assessment or TASP, 35 wpm and familiarity of Word® XP. (OST 1113)
- POFT 2312 BUSINESS COMMUNICATIONS II (3-2-2).** Skill development in practical applications which emphasize the improvement of writing skills necessary for effective business communications. Fee: \$12 Prerequisites: POFT 1302 or equivalent. (OST 1043)
- POFT 2321 MACHINE TRANSCRIPTION I (3-2-2).** Skill development in mailable business document production using computers and dictation equipment. Skill refinement in grammar and punctuation with emphasis on proofreading and formatting. Fee: \$12 Prerequisites: Minimum 50 wpm, word processing skills, and grammar skills. (OST 2043)
- POFT 2331 ADMINISTRATIVE SYSTEMS: OFFICE MANAGEMENT (3-2-2).** Experience in

project management and office procedures utilizing integration of previously learned skills. Emphasis is placed on management functions, decision making by analyzing cases, and business communication by using PowerPoint in individual and team presentations. Fee: \$12 Prerequisites: Computer application software proficiency and basic office procedures competency. (OST 2053)

- POFT 2386 INTERNSHIP-ADMINISTRATIVE ASSISTANT/SECRETARIAL SCIENCE, GENERAL (3-0-15).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. Prerequisites: Successful completion of at least 15 credit hours in this discipline with a B average. (OST 2074)

## PERSONAL FITNESS TRAINER

- FITT 1313 EXERCISE SCIENCE (3-3-0).** A survey of scientific principles, methodologies, and research as applied to exercise and physical fitness. Emphasis on physiological responses and adaptations to exercise. Topics include basic elements of kinesiology, biomechanics, motor learning, and the physical fitness industry. Offered in Fall Semester. Prerequisites or corequisite: BIO 1714 or BIOL 2401. (FIT 1113)
- FITT 1343 PERFORMANCE ENHANCEMENT FOR ATHLETICS (3-2-2).** A study of the scientific principles and methodologies to enhance athletic performance. Emphasis on the concepts of periodization of training as it relates to preseason, competitive season, and off-season goals. Topics include evaluation and assessment protocols, exercise techniques, and safety. Offered in Spring Semester. Insurance: \$4 Prerequisites or corequisite: FITT 2409. Corequisite: FITT 2231. (FIT 2312)
- FITT 1401 FITNESS AND EXERCISE TESTING (4-3-3).** A study of the techniques for conducting physical fitness assessments including tests of cardiorespiratory fitness, muscular strength and endurance, joint flexibility, body composition, and pulmonary capacity. Topics include an introduction to electrocardiography and equipment use and maintenance. Emphasis on safety guidelines and precautions. Insurance: \$4 (FIT 1104)
- FITT 2231 GROUP EXERCISE INSTRUCTION (2-1-3).** A study of guided and sequential experiences for developing aerobic based group exercise leadership skills. Opportunities provided for students to practice these skills under a professional mentor in a group setting. Offered in Spring Semester. Insurance: \$4 Prerequisites or corequisite: FITT 2409. Corequisite: FITT 1343. (FIT 2302)

- FITT 2280 PERSONAL FITNESS TRAINER COOPERATIVE (2-1-7).** An intermediate course with lecture and work-based instruction that helps students gain practical experience in the fitness industry, enhance skills and integrate knowledge. Indirect supervision is provided by the work supervisor and lecture is provided by the college faculty. This is a paid learning experience. Insurance: \$4 Prerequisites: FITT 1401 and FITT 1313.
- FITT 2301 LIFESTYLE CHANGE FOR WELLNESS (3-3-0).** A study of the components of weight control, smoking cessation, stress management, and other current trends. Topics include techniques in behavior modification, motivation, teaching, and counseling. Offered in Fall Semester. (FIT 2203)
- FITT 2333 FITNESS INDUSTRY OPERATIONS AND TECHNOLOGY (3-3-0).** A survey of the practical aspects of the physical fitness industry. Emphasis on equipment cost analysis, program marketing, legal issues, policy formation, budgetary planning, computer software applications, and current industry trends. Offered in Spring Semester.
- FITT 2364 FITNESS TECHNOLOGY PRACTICUM (3-0-21).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. This course may be repeated if topics and learning outcomes vary. This is a capstone course. Insurance: \$4 Prerequisites: FITT 1343 and FITT 2231. (FIT 2404)
- FITT 2409 THEORY OF EXERCISE PROGRAM DESIGN AND INSTRUCTION (4-3-3).** The study of health related components of physical fitness including cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. Topics include the theoretical basis underlying physical fitness; instructional techniques for fitness development; and methods for leading an exercise session, including design, instruction, and evaluation. Offered in Spring Semester. Site Fee: \$20. Insurance: \$4 Prerequisites: FITT 1313. Prerequisite or corequisite: BIO 2714 or BIOL 2402. (FIT 2204)

## PHARMACY TECHNICIAN

- PHRA 1167 PRACTICUM (OR FIELD EXPERIENCE) PHARMACY TECHNICIAN/ASSISTANT: I (1-0-8).** Practical general training and experiences in the workplace. The college and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the

student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Students are assigned to a community pharmacy for eight hours each week for 16 weeks to meet established objectives by performing pharmacy technician duties under the supervision of the on site pharmacist. Offered in Spring and Summer Semesters. Insurance: \$12 Prerequisites: PHRA 1413. (PHR 1301)

- PHRA 1209 PHARMACEUTICAL MATHEMATICS I (2-1-2).** Pharmaceutical mathematics including reading, interpreting, and solving calculation problems encountered in the preparation and distribution of drugs. Conversion of measurements within the apothecary, avoirdupois, and metric systems with emphasis on the metric system of weight and volume. Topics include ratio and proportion, percentage, dilution and concentration, milliequivalent, units, intravenous flow rates, and solving dosage problems. Offered in Fall and Spring Semesters. Prerequisites: Program approval. (PHR 1212)
- PHRA 1301 INTRODUCTION TO PHARMACY (3-3-0).** Examination of the qualifications, operational guidelines, and job duties of a pharmacy technician. Topics include definitions of a pharmacy environment, the profile of a pharmacy technician, legal and ethical guidelines, job skills and duties, verbal and written communication skills, professional resources, safety techniques, and supply and inventory techniques. Offered in Fall and Spring Semesters. (PHR 1203)
- PHRA 1345 INTRAVENOUS ADMIXTURE AND STERILE COMPOUNDING (3-2-2).** Mastery of skills in compounding sterile products. Introduction to sterile products, hand washing techniques, pharmaceutical calculations, references, safety techniques, aseptic techniques in parenteral compounding, proper use of equipment (autoinjectors, pumps), preparation of sterile products (intravenous, irrigation, ophthalmic, total parenteral nutrition, and chemotherapy drugs), and safe handling of antineoplastic drugs. Offered in Fall and Summer Semesters. Fee: \$24 Insurance: \$12 Prerequisites: Program approval. (PHR 2102)
- PHRA 1413 COMMUNITY PHARMACY PRACTICE (4-3-3).** Mastery of skills necessary to interpret, prepare, label, and maintain records of physicians' medication orders and prescriptions in a community pharmacy. Designed to train individuals in the administration of supply, inventory, and data entry. Topics include customer service and advisement, count and pour techniques, prescription calculations, drug selection and preparation, over-the-counter drugs, record keeping, stock level adjustment, data input and editing, and legal parameters. Offered in Fall and Spring Semesters. Fee: \$24 Insurance: \$2 Prerequisites: Program approval. (PHR 1214)

**PHRA 1441 PHARMACY DRUG THERAPY AND TREATMENT (4-4-1).** Study of therapeutic agents, their classification, properties, actions, and effects on the human body and their role in the management of disease. provides detailed information regarding drug dosages, side effects, interactions, toxicities, and incompatibilities. Offered in Spring and Summer Semesters. Fee: \$8 Prerequisites: Program approval. (PHR 1215)

**PHRA 1449 INSTITUTIONAL PHARMACY PRACTICE (4-3-3).** Exploration of the unique role and practice of pharmacy technicians in an institutional pharmacy with emphasis on daily pharmacy operation. Topics include hospital pharmacy organization, work flow and personnel, medical and pharmaceutical terminology, safety techniques, data entry, packaging and labeling operations, extemporaneous compounding, inpatient drug distribution systems, unit dose cart fills, quality assurance, drug storage, and inventory control. Offered in Fall and Spring Semesters. Fee: \$24 Insurance: \$2 Prerequisites: Program approval. (PHR 2004)

**PHRA 2167 PRACTICUM (OR FIELD EXPERIENCE)6PHARMACY TECHNICIAN/ASSISTANT II (1-0-8).** Practical general training and experiences in the workplace. the college and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Students are assigned to a hospital or other health systems pharmacy for eight hours each week for 16 weeks and to meet established objectives by performing pharmacy technician duties under the supervision of the on site pharmacist. Offered in Summer and Fall Semesters. Insurance: \$12 Prerequisites: PHRA 1449 (or corequisite). (PHR 2202)

## PHILOSOPHY

**PHIL 1301 INTRODUCTION TO PHILOSOPHY (3-3-0).** Students will be introduced to various significant philosophical issues and thinkers and to the practice of philosophical analysis. Skills: E (PHL 1613)

**PHIL 2303 LOGIC (3-3-0).** Students will be introduced to the rules of argument, inductive and deductive reasoning, the recognition of informal and formal fallacies, and the application of logical thinking in work and social situations. Skills: G (PHL 1633)

**PHIL 2306 ETHICS (3-3-0).** Students will be introduced to the principles of morality through a critical examination of various ethical theories and their application to contemporary moral problems. Skills: E (PHL 1623)

**PHIL 2307 INTRODUCTION TO SOCIAL AND POLITICAL PHILOSOPHY (3-3-0).** Students will be introduced to a critical examination of fundamental social and political concepts, e.g., justice, rights, and political obligation. Skills: E

**PHIL 2316 HISTORY OF PHILOSOPHY I (3-3-0).** Students will be introduced to the history of Western Philosophy from the pre-Socratics through the early medieval era with emphasis on Plato and Aristotle. Skills: E Prerequisites: PHIL 1301.

**PHIL 2317 HISTORY OF PHILOSOPHY II (3-3-0).** Students will be introduced to the history of early modern Western Philosophy focusing on the attempt to understand the source, nature, and limits of human knowledge as pursued by the rationalists, the empiricists, and Kant. Skills: E Prerequisites: PHIL 1301.

**PHIL 2321 PHILOSOPHY OF RELIGION (3-3-0).** Students will be introduced to the philosophical analysis of the nature of religion and religious experience with an emphasis on such themes as rationality and religious belief, the existence and attributes of God, and the problem of evil. Skills: E (PHL 1643)

## PHOTOGRAPHY

**PHTC 1302 DARKROOM TECHNIQUES (3-1-6).** Instruction in photographic processing and printing using a variety of specialized techniques. Emphasis on health, safety, and environmental issues. Student will work on both color and black and white process and printing techniques. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: Must be taken concurrently with a camera class. Department approval required if taken as a stand alone class.

**PHTC 1306 FASHION PHOTOGRAPHY (3-1-6).** An exploration of fashion in terms of trends and techniques included in studio and location work. Emphasis on model direction and lighting control. May be repeated for credit. Offered in the Summer semester. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1445 or PHTC 1453 or Department approval.

**PHTC 1311 FUNDAMENTALS OF PHOTOGRAPHY (3-2-4).** An introduction to film exposure and development, basic enlarging, composition, darkroom technique, flash usage, and use of exposure meters and filters for black and white. Study and practice of lighting forms, posing, ratios, and exposure determination in the studio. Student may be required to use some outside commercial lab services. Students must furnish acceptable adjustable 35mm camera unless course is a requirement of another major. Course usually transfers to other colleges. Fee: \$24 Insurance: \$3 (PHO 1073)

- PHTC 1313 HISTORY OF PHOTOGRAPHY (3-2-4).** A historical survey of the technical and aesthetic development of photography. Topics include the beginnings of the medium, inventors, development of photographic equipment, styles of the creative masters, aesthetic themes, and the social impact of photography. Offered in the spring semester.
- PHTC 1321 PHOTOGRAPHIC RETOUCHING I (3-1-6).** Instruction in the use of a variety of retouching tools and equipment techniques to enhance prints and negatives. Topics include restoration and coloration. Use of dye, pencil, knife, and other materials. May be repeated at a higher level for credit. Students should have corrected visual acuity of 20-15 converging, accurate color perception, good eye/hand coordination, and manual dexterity. Repeatable. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1311 or demonstrated good darkroom skills.
- PHTC 1325 PHOTOGRAPHIC SCIENCE I (3-1-8).** An examination of the principles and theories governing photography. Emphasis on analysis of problems involving optics, light, chemistry, and math as they pertain to field practices. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1441 and department approval.
- PHTC 1328 PHOTOGRAPHIC STUDIO MANAGEMENT (3-2-4).** Examination of photographic management, pricing, market analysis, promotion, networking, job acquisition, photographic equipment analysis, and photo lab selection. Offered in the Fall semester. Fee: \$24 Prerequisites: PHTC 1445 or PHTC 1453 or department approval.
- PHTC 1343 EXPRESSIVE PHOTOGRAPHY (3-1-6).** A study of formal, professional, and individual uses of photography by applying photographic technology to personalized needs. Emphasis on creative visual thinking and problem solving and the exploration of personal vision. May be repeated for credit. Must be taken concurrently with PHTC 1302 or PHTC 2341 or PHTC 1441. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 2401 or Department approval.
- PHTC 1347 LANDSCAPE PHOTOGRAPHY (3-1-8).** Skill development in the inspection of the landscape visually and photographically utilizing various camera formats. Topics include exploration of historic, geographical, and cultural locations, and review of landscape photographers. May be repeated for credit. Must be taken concurrently with PHTC 1302 or PHTC 2341 or PHTC 1441. Offered in the Spring semester. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 2401 or Department approval.
- PHTC 1351 PHOTOJOURNALISM I (3-2-4).** Presentation of photographic techniques used by photojournalist in newspapers, magazines, and trade publications including news, feature, sports, editorial portraits, and photo essays. Includes a study of layout design and the freelance market. Must be taken concurrently with PHTC 1302 or PHTC 1441 or PHTC 2341. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 2401 or Department approval.
- PHTC 1441 COLOR PHOTOGRAPHY I: DARKROOM (4-2-6).** Examination of color theory as it applies to photography. Emphasis on color concepts and the intricacies of seeing and photographing in color. Continuing the study of black and white process and printing started in Fundamentals PHTC 1311. Supports PHTC 2401 and MUST be taken concurrently. Requires visual acuity adequate for focusing enlargers and print retouching using magnifiers, accurate color perception, and good eye/hand coordination. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1311 or Department approval. Department approval is also required if taken as a stand alone class. (PHO 1034)
- PHTC 1445 ILLUSTRATIVE PHOTOGRAPHY I (4-2-6).** Instruction in the technical aspects involved in commercial photography. Topics include lighting equipment, techniques of production photography, reproduction principles, illustrative techniques, and advertising. Student will use 35mm, medium and large formats at advanced levels. Must be taken with PHTC 1302 or PHTC 1441 or PHTC 2341 concurrently. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1449 and PHTC 2401 or Department approval.
- PHTC 1449 PHOTO DIGITAL IMAGING I (4-2-6).** Instruction in the computer as an electronic darkroom. Topics include color and gray scale images and image conversion and presentation. Introduction to both Adobe Photoshop for photographic retouching, copy, and restoration. Student must have basic computer knowledge and an understanding of file management. Fee: \$24 Prerequisites: PHTC 1311 or Department approval. (PHTC 1349)
- PHTC 1453 PORTRAITURE I (4-2-6).** A study of the photographic principles applied to portrait lighting, posing, printing, and subject rapport. Students will use medium format and digital cameras along with electronic flash and tungsten lights to photograph individuals in both studio and on location. Work will be done both in and outside of class. Must be taken concurrently with PHTC 1302, PHTC 2341, or PHTC 1441. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1449 and PHTC 2401 or Department approval.
- PHTC 2331 ARCHITECTURAL PHOTOGRAPHY (3-1-8).** Study of the equipment, processes, and procedures necessary for the photography of building exteriors and interiors, dusk/night and night architectural landscapes, and construction progress. Students will use all formats with emphasis on large format cameras. Must be taken concurrently with PHTC 1302, PHTC 2341, or PHTC 1441. May be repeated for credit. Offered in the summer semester. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 2445 or Department approval. (PHO 2053)

- PHTC 2341 COLOR PHOTOGRAPHY II: DARKROOM (3-1-8).** Skill development in advanced color printing or slide production. Emphasis on use of specialized color techniques and applications. Introduction to special materials and procedures. Must be taken concurrently with advanced level camera courses or with Department approval. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1341 or Department approval. Department approval is also required if taken as a stand alone class. (PHO 1044)
- PHTC 2343 COMMERCIAL PHOTOGRAPHY (3-2-4).** A culmination experience for the evaluation of the student's photographic competencies. Includes association with a professional photographic organization, skills in resume creation, review of portfolio, professional self-presentation, comprehensive testing, and seminars in areas of photographic interest. May be used for laboratory support for other advanced courses. Offered in the summer semester. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: 21 hrs. in Advanced Photo courses or Department approval. (PHO 2073)
- PHTC 2351 PHOTOJOURNALISM II (3-1-8).** A continuation of Photojournalism I with emphasis on corporate and annual report photography. Students will use both 35mm and medium format cameras along with location electronic flash to supplement existing light. Must be taken concurrently with PHTC 1441, PHTC 2341, or PHTC 2343. Student may use an outside lab in place of PHTC 1441. May be repeated for credit. Offered in the Summer semester. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1453 or Department approval.
- PHTC 2378 CLOSE UP AND MACRO PHOTOGRAPHY (3-1-8).** This course provides necessary skills required in industrial, scientific, commercial, and other areas of professional photography. It encompasses the study of the equipment, science, technology, and techniques for the many procedures required in accomplishing the various kinds of close up and macro photography. May be repeated for credit. Offered in the Fall Semester. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 2401 and department approval. (PHO 2084)
- PHTC 2401 INTERMEDIATE PHOTOGRAPHY (4-2-6).** Study of advanced exposure and printing techniques, archival printing, toning, and printing for maximum print quality. Introduction to a variety of camera formats including 35mm, medium and large format. Introduction to professional, product, portrait, landscape, photojournalism and copy work. Student will work both in the studio and on location. PHTC 1302 or PHTC 1441 or PHTC 2341 MUST be taken concurrently. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1311 or Department approval. (PHO 1014)
- PHTC 2433 PHOTOGRAPHIC SCIENCE II (4-2-6).** Skill development in highly technical photographic areas. Topics include photomicrography and gross specimen photography, macrophotography, transillumination, infrared imaging, sensitometry, densitometry, quality control, reproduction techniques, duping and optics. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1325 or Department approval.
- PHTC 2445 ILLUSTRATIVE PHOTOGRAPHY II (4-2-6).** A continuation of the study of commercial photographic principles with an emphasis on enhancing technical and creative quality. Student will use 35mm, medium and large format cameras to produce images for use in periodical and catalog advertising. Must be taken with PHTC 1302 or PHTC 1441 or PHTC 2341 concurrently. May be repeated for credit. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1445 and PHTC 1449 or Department approval.
- PHTC 2449 PHOTO DIGITAL IMAGING II (4-2-6).** Continued skill development in the use of the computer for retouching, copying, photographic restoration, color correction, data importation, composite imaging, and background dropout and replacement. May be repeated at a higher level for credit. Fee: \$24 Prerequisites: PHTC 1449 or Department approval. (PHTC 2349)
- PHTC 2453 PORTRAITURE II (4-2-6).** A continuation of the study of principles of effective portraiture with specific emphasis on unique presentation and environmental and location studies. The addition of small group photography and discussions on wedding and portrait studio operations. May be repeated for credit. Student may use an outside photo lab for prints and processing or must take PHTC 1441 or PHTC 2341. Fee: \$24 Insurance: \$3 Prerequisites: PHTC 1453 and PHTC 1449 or Department approval.
- PHTC 2473 PHOTOGRAPHIC RETOUCHING II (4-2-6).** Instruction in the use of a variety of retouching tools and equipment techniques to enhance prints and negatives. Topics include restoration and coloration. Use of dye, pencil, knife, and other materials. May be repeated at a higher level for credit. Students should have corrected visual acuity of 20-15 converging, accurate color perception, good eye/hand coordination, and manual dexterity. May be repeated for credit. Course is a continuation of PHTC 1321. Fee: \$24 Prerequisites: PHTC 1311, PHTC 1321 or demonstrated good darkroom skills. (PHTC 2373)

## PHYSICAL FITNESS TECHNOLOGY

(See Personal Fitness Trainer)

PHYSICAL SCIENCE  
(See Environmental Science and  
Technology)

PHYSICAL THERAPIST  
ASSISTANT

**PTHA 1266 PRACTICUM6PTA (2-0-14).** Practical general training and experiences in the workplace. The college and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Offered in Fall Semester. Fee: \$18 Insurance: \$12 Prerequisites: BIO 1714, PTHA 2205, and PTHA 1431. (PTA 2113)

**PTHA 1267 PRACTICUM6PTA (2-0-16).** Practical general training and experiences in the workplace. The college and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Offered in Spring Semester. Fee: \$18 Insurance: \$12 Prerequisites: BIO 1714 and PTHA 1266. (PTA 2214)

**PTHA 1291 SPECIAL TOPICS IN PTA: CURRENT ISSUES IN PTA (2-2-0).** Topics address recently identified current events, skills, knowledges, and/or attitudes and behavior pertinent to the technology or occupation and relevant to the professional development of the student. This course provides the student with an opportunity to make the transition from student to clinician and practice the responsibility of continuing professional development. Offered in Summer Semester. Prerequisites: PTHA 1267. (PTA 2301)

**PTHA 1321 CLINICAL PATHOPHYSIOLOGY (3-3-0).** Study of the pathogenesis, prognosis, and therapeutic management of diseases/conditions commonly encountered in physical therapy. Offered in Spring Semester. Prerequisites: Admission to PTA Program. (PTA 1403)

**PTHA 1409 INTRODUCTION TO PHYSICAL THERAPY (4-3-4).** Introduction to the profession of physical therapy including the exploration of the historical and current scope of physical therapy and lab procedures basic to patient handling and functional skills. Offered in Fall Semester. Fee: \$15 Insurance: \$12 Prerequisites: Admission to Program. (PTA 1304)

**PTHA 1431 PHYSICAL AGENTS (4-3-4).** Study of the biophysical principles, assessment, and application of therapeutic physical agents with specific emphasis on indications, contraindications, medical

efficacy, and physiological effects. Offered in Summer Semester. Fee: \$24 Insurance: \$12 Prerequisites: PTHA 1409. (PTA 1405)

**PTHA 1513 FUNCTIONAL ANATOMY (4-3-6).** Study of human anatomy and its application to the motion of the musculoskeletal system as it relates to normal activities and dysfunctions. Integration of skills related to the kinesiological assessment of the human body. Offered in Fall Semester. Fee: \$24 Insurance: \$12 Prerequisites: BIO 1714 and admission to program. (PTA 1315)

**PTHA 2205 CLINICAL NEUROLOGY (2-2-0).** Study of neuroanatomy and neurophysiology as it relates to commonly encountered neurological conditions. Offered in Summer Semester. Prerequisites: PTHA 1321. (PTA 1502)

**PTHA 2301 ASSESSMENT SKILLS (3-1-4).** Study of assessment techniques used in physical therapy to prepare the physical therapy assistant to assist physical therapy management. Offered in Spring Semester. Fee: \$18 Insurance: \$2 Prerequisites: BIO 1714, PTHA 1409, and PTHA 1513.

**PTHA 2367 PRACTICUM6PTA (3-0-21).** Practical general training and experiences in the workplace. The college and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Offered in Summer Semester. Fee: \$18 Insurance: \$12 Prerequisites: PTHA 1267 and BIO 1724. (PTA 2316)

**PTHA 2409 THERAPEUTIC EXERCISE (4-3-4).** Critical examination of concepts and application of techniques related to therapeutic exercise and functional training. Offered in Spring Semester. Fee: \$18 Insurance: \$12 Prerequisites: BIO 1714, PTHA 1409, and PTHA 1513. (PTA 1504)

**PTHA 2431 MANAGEMENT OF NEUROLOGICAL DISORDERS (4-3-4).** Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders. Offered in Spring Semester. Fee: \$18 Insurance: \$12 Prerequisites: PTHA 2205. (PTA 2204)

**PTHA 2435 REHABILITATION TECHNIQUES (4-3-4).** Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected long-term pathologies. Offered in Fall Semester. Fee: \$18 Insurance: \$12 Prerequisites: BIO 1714, PTHA 2205, and PTHA 1431. (PTA 2104)

## PHYSICS

- PHY 0141 MATHEMATICS FOR PHYSICS (1-0-2).** Content to parallel the mathematics needed in General College Physics, PHYS 1401: scientific notation, methods of solving physics problems, simple trigonometric functions (sin, cos, tan), simultaneous equations, etc. This course is not for college-level credit. Repeatable up to two credit hours.
- PHY 1653 ELEMENTARY PHYSICS METHODS (3-3-0).** Intended for engineering, computer science, chemistry, and physics majors with strong mathematics background. Coverage includes mechanics, thermodynamics, vibrations and waves, electricity and magnetism, and optics. This course serves as a prerequisite for the calculus-based PHYS 2425/2426 sequence. Prerequisites: MATH 1316 or equivalent.
- PHYS 1401 GENERAL COLLEGE PHYSICS I (4-3-3).** Study of principles and applications of concepts in mechanics, energy, heat, wave motion, and sound. PHYS 1401/1402 is the standard algebra-based physics sequence and may, in addition, serve as a prerequisite for the calculus-based PHYS 2425/2426 sequence for students who have not taken high school physics. Fee: \$20 Insurance: \$2 Prerequisites: MATD 0390 or equivalent.
- PHYS 1402 GENERAL COLLEGE PHYSICS II (4-3-3).** Study of principles and applications of concepts in electricity and magnetism, geometric and physical optics, and modern physics. This is the second half of the algebra-based PHYS 1401/1402 sequence. Fee: \$20 Insurance: \$2 Prerequisites: Same as for PHYS 1401 and, in addition, credit for PHYS 1401.
- PHYS 1405 CONCEPTUAL PHYSICS I (4-3-3).** Conceptual survey of topics in physics, including the fundamentals of motion, forces, energy and momentum. Intended for liberal arts and other non-science majors, but science majors with weak physics background may wish to use this as an introduction to physics principles. Fee: \$20 Insurance: \$2 Skills: B
- PHYS 1407 CONCEPTUAL PHYSICS II (4-3-3).** Conceptual survey of topics in physics, including the fundamentals of optics, electricity, magnetism and modern physics. Intended for liberal arts and other non-science majors, but science majors with weak physics background may wish to use this as an introduction to physics principles. Fee: \$20 Insurance: \$2 Skills: B
- PHYS 2425 ENGINEERING PHYSICS I (4-3-3).** Calculus-based study of motion, forces, work, energy, momentum and angular momentum, vibrations and waves, and heat. Intended for majors in engineering, physics, chemistry, and mathematics. Fee: \$20 Insurance: \$2 Prerequisites: 1) Credit in MATH 2413 or equivalent, 2) concurrent enrollment or credit in MATH 2414 or its equivalent, 3) one year of high school physics or PHY 1653 or both PHYS 1401 and 1402.

- PHYS 2426 ENGINEERING PHYSICS II (4-3-3).** Calculus-based study of electricity and magnetism, and geometric and physical optics, and modern physics. This is the second half of the calculus-based PHYS 2425/2426 sequence. Fee: \$20 Insurance: \$2 Prerequisites: 1) PHYS 2425 or equivalent AND 2) credit in MATH 2414.
- SCIT 1418 APPLIED PHYSICS I (4-3-3).** An introduction to physics for students who have limited backgrounds in science and mathematics. Topics include motion, solid mechanics and fluid mechanics, properties of matter, heat, and thermodynamics. Fee: \$20 Insurance: \$2 Skills: M Prerequisites: MATD 0370 or equivalent. (PHY 1634)

## PSYCHOLOGY

- PSY 2663 RESEARCH METHODS IN PSYCHOLOGY (3-3-0).** This course provides an overview of the case study, survey, observational, correlational, quasi-experimental, and experimental research methods and designs. Emphasis is given to the experimental, quasi-experimental, and correlational designs as well as to methods of collecting, analyzing, and interpreting psychological and sociological data. Other topics include validity, reliability, sampling, evaluation of research, writing research proposals and reports, ethics, etc. Students read research articles from professional journals and are introduced to more advanced statistical procedures such as MANOVA-F test, post-hoc measures, planned comparisons, multiple correlation, and multiple regression. Credit may **not** be earned for both this course and SOC 2653. Prerequisites: PSYC 2317 **or** SOC 2743 **or** equivalent. Prerequisite courses should have been completed with a grade of C or better.
- PSY 2673 SELECTED TOPICS IN PSYCHOLOGY (3-3-0).** An elective course designed to deal with specific topics in psychology. These topics may include (1) Applied psychology: Field Study (2) Abnormal Psychology, and (3) Cognitive Psychology. Skills: E
- PSY 2673 APPLIED PSYCHOLOGY: FIELD STUDY (3-3-0).** This is an introductory course in Applied Psychology involving field experience. It is designed to acquaint students with the various types of careers in Psychology and Mental Health. Students will be required to attend seminar sessions and complete 50 clock hours of field work. Transportation, insurance, and other expenses are provided by the student. Skills: E Prerequisites: PSYC 2301.
- PSY 2673 ABNORMAL PSYCHOLOGY (3-3-0).** This is an introductory course in Abnormal Psychology. It is designed to acquaint the students with the various theoretical perspectives which explain maladjustment and abnormality. Skills: E Prerequisites: PSYC 2301.

- PSY 2673 COGNITIVE PSYCHOLOGY (3-3-0).** This course is designed to introduce the field of cognitive psychology, its theoretical contributions, and practical applications. Various theoretical perspectives in cognitive psychology are compared to other approaches in psychology. Includes topics such as perception and pattern recognition, representation and organization of knowledge, problem-solving and decision-making, learning strategies, and cognitive development. Skills: E  
Prerequisites: PSYC 2301.
- PSYC 2301 INTRODUCTION TO PSYCHOLOGY (3-3-0).** Survey of introductory topics such as learning, memory, sensation and perception, personality, life-span development, physiological basis of behavior, stress and health, psychological disorders, social psychology, and research methods. Additional topics such as language development, states of consciousness, and psychotherapy may also be included as determined by the instructor. The Honors course provides a more in-depth introduction to the science and profession of psychology with emphasis on developing oral and written communication skills as they relate to the analysis and discussion of research and controversial issues in psychology. Skills: E (PSY 1613)
- PSYC 2306 HUMAN SEXUALITY (3-3-0).** This course explores various aspects of human sexual behavior, including the biology of sex, female and male sexuality, sex roles, the psychology of sex differences, and sexually transmitted diseases. Skills: E (PSY 1633)
- PSYC 2309 CHILD GROWTH AND DEVELOPMENT THROUGH ADOLESCENCE (3-3-0).** An intensive study of child growth, development, and learning processes from conception through adolescence. Theories and research methods related to biological, cognitive, emotional, and social development will be studied. The focus will be on the application of these theories and research findings into real-life settings and broader social contexts. Skills: E Prerequisites: PSYC 2301. (PSY 1643)
- PSYC 2314 HUMAN GROWTH AND DEVELOPMENT (3-3-0).** A survey of the physical, cognitive, emotional, and social factors in human development from conception to death. This course is similar to PSYC 2309 but is more comprehensive and less intensive. Skills: E  
Prerequisites: PSYC 2301 (waived for Health Science students). (PSYC 2308)
- PSYC 2315 PSYCHOLOGY OF ADJUSTMENT (3-3-0).** An intensive study of the humanistic, behavioral, cognitive, and psychodynamic principles involved in psychological coping with human conflict or problems. Includes personal improvement topics such as stress management, intimacy, and communication skills. Skills: E (PSY 1623)
- PSYC 2316 PERSONALITY (3-3-0).** A survey of psychodynamic, humanistic, cognitive, trait, and behavioral personality theories, and research methods. This course includes special topics such as personality testing, anxiety, self-control, and defense mechanisms. Prerequisites: PSYC 2301. (PSY 2633)
- PSYC 2317 STATISTICAL METHODS FOR THE BEHAVIORAL SCIENCES (3-3-0).** Designed for social and behavioral science students, this course covers measurement scales, graphing, measures of central tendency and variability, transformed scores, correlation and regression, normal distribution, sampling distributions, hypothesis testing, t- and z-tests, introduction to ANOVA-F test, and certain nonparametric statistics. Emphasis is on the conceptual understanding of statistics within the context of research and the interpretation of statistical results. Relevant research topics are included. Calculations are required. Credit may **not** be earned for both this course and SOC 2743. Skills: X  
Prerequisites: PSYC 2301 **or** SOCI 1301 **or** equivalent, and MATH 1332 **or** MATH 1314 **or** equivalent. (PSY 2643)
- PSYC 2319 SOCIAL PSYCHOLOGY (3-3-0).** A survey of the theories, research, and methods of social psychology including the topics of self, conflict, aggression, power, group dynamics, and decision making. Credit may **not** be earned for both this course and SOCI 2326. Prerequisites: PSYC 2301 **or** SOCI 1301. (PSY 2613)
- PSYC 2389 RESEARCH INTERNSHIP IN THE BEHAVIORAL SCIENCES (3-1-5).** The purpose of this course is to provide an opportunity for qualified students to obtain firsthand, supervised research experience in the behavioral sciences. Students will be placed in different settings at ACC or organizations in the community to assist professionals in the behavioral sciences with various research activities. Students may assist researchers by providing the necessary literature review for the design of the study, collecting, organizing, and analyzing data, as well as contributing to the research report. Students will spend an average of five hours per week at the internship site. Transportation, insurance, and other expenses will be provided by the student. Prerequisites: PSYC 2317 and PSY 2663 (or concurrent enrollment in PSY 2663).

## QUALITY ASSURANCE

- QCTC 1303 QUALITY CONTROL (3-3-0).** Information on quality control principles and applications. Designed to introduce the student to the quality control profession. Prerequisites: QCTC 1343. (QUA 2024)
- QCTC 1305 TEAMING (3-3-0).** A study in group dynamics, synergy, team building, consensus decision making, active listening skills, win/win resolution, confrontation skills, creativity, and

brainstorming. Examination of team presentation skills, overall team communication, and resolving personality conflicts. (QUA 1053)

- QCTC 1341 STATISTICAL PROCESS CONTROL (3-3-0).** Components of statistics including techniques of collection, presentation, analysis and interpretation of numerical data as applied to statistical control. Stresses application of correlation methods, analysis of variance, dispersion, sampling quality control, reliability, mathematical models, and programming. Prerequisites: QCTC 1343 or instructor approval. (QUA 1033)
- QCTC 1343 QUALITY ASSURANCE (3-3-0).** Information on quality assurance principles and applications; designed to introduce the student to the quality assurance profession. Skills: G (QUA 1023)
- QCTC 1401 TOTAL QUALITY MANAGEMENT (4-3-3).** The study of integrating work processes using team participation through employee empowerment and teamwork emphasizing the philosophy of customer services and satisfaction. Prerequisites: QCTC 1343 or instructor approval. (QUA 1093)
- QCTC 1446 TESTING AND INSPECTION SYSTEMS (4-4-3).** A study of testing and inspection systems including pertinent specifications, inspection tools, gauges, instruments, and mechanisms used in illustration the need for maintaining quality to established standards. Prerequisites: QCTC 1341 or instructor approval. (QUA 1014)
- QCTC 1448 METROLOGY (4-4-3).** A study of the terminology, methodology, and practice of measurement systems and equipment in the calibration and use of basic measuring tools. Prerequisites: QCTC 1303. (QUA 2083)
- QCTC 1491 SPECIAL TOPICS IN QUALITY CONTROL TECHNOLOGY/TECHNICIAN (4-4-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. (QUA 2154)
- QCTC 2331 STANDARDS (3-3-0).** A study of the philosophy and theory of standards, appropriate standards organizations, and systems integration relating to the application of standards criteria in society. Prerequisites: QCTC 1343. (QUA 2073)

## RADIO-TELEVISION-FILM

- COMM 1335 INTRODUCTION TO RADIO AND TELEVISION (3-3-0).** A survey of the principles and trends involved in radio and television broadcasting, cable, and the other electronic media, including programming, regulation, business practices, and international telecommunications. Activities in analyzing various types of radio and television programs. Skills: E (RTF 1633)

### **COMM 1336 TELEVISION PRODUCTION I (3-1-4).**

A study of basic television production as it applies to live studio programming. Beginning instruction is offered in areas of studio camera operation, audio for television, and television directing, with an emphasis on underlying principles of video technology. Fee: \$24 Prerequisites: COMM 1335. (RTF 1713)

### **COMM 1337 TELEVISION PRODUCTION II (3-1-4).**

An advanced study of television production from the studio and field production perspective, with emphasis on producing and directing a variety of programs. Student will be required to provide scripts for programs to be produced in class. Experience in video editing will be gained. Fee: \$24 Prerequisites: COMM 1335 and COMM 1336. (RTF 1723)

- COMM 2325 AUDIO PRODUCTION (3-2-2).** A basic course dealing with the fundamentals of audio recording production for radio, television, and film. Includes production of public service announcements, commercials, radio news, and dramatic spots. Fee: \$12 Prerequisites: COMM 1335. (RTF 2723)

- COMM 2331 TV AND RADIO ANNOUNCING (3-3-0).** A study of the principles of developing effective voice presentation for television and radio. The course includes analysis of announcing and newscasting practices. Current methods in the television and radio industry are covered. Skills are developed through extensive use of audio and video-tape. Skills: E (RTF 1643)

- COMM 2339 WRITING FOR RADIO, TELEVISION, FILM (3-3-0).** This course will instruct the student in basic script formats, terminology, and writing techniques for radio, television, cable, and video. Writing for news broadcast, promotional announcements, and spot announcements and documentary, dramatic, and experimental television will be covered. Students will learn to communicate using the verbal elements of radio and both the verbal and visual elements of television. Prerequisites: ENGL 1301. (RTF 2713)

- DRAM 2367 FILM HISTORY (3-3-2).** A chronological and world-wide survey of the history of the film, plus study of progress in film technology, changing audiences, and the socio-cultural impact of film. (RTF 1623)

- RTF 1733 WORKSHOP (3-0-6).** Fundamentals of television special projects, location productions, and pre- and post-production work. Students may work on special projects or intern at area media facilities. Repeatable up to six credit hours. Prerequisites: COMM 1335.

- RTF 2113 NARRATIVE STRATEGIES (3-2-1).** An introduction to narrative structures and strategies of film and television. This course specifically examines patterns and distinctions in storytelling methods and styles represented in both media. Class screenings of films and videos. Skills: E Prerequisites: ENGL 1301.

**RTF 2213 TELEVISION NEWS (3-2-4).** Analysis of news reporting styles and program content; preparation of news programs for the electronic media with an emphasis on the special requirements of writing news stories for television. History, theory, and practices of television/radio news presented on local and national network levels. Prerequisites: ENGL 1301, COMM 1335, and COMM 1336.

**RTVB 1364 PRACTICUM (OR FIELD EXPERIENCE)6RADIO AND TELEVISION BROADCASTING (3-0-21).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. This course may be repeated if topics and learning outcomes vary. Prerequisites: COMM 1335.

**RTVB 2347 MANAGEMENT AND OPERATION OF ELECTRONIC MEDIA (3-3-0).** Examination of the operation of production companies, broadcast stations, and cable companies from the management and business perspectives. Topics include departments in the organizations as they relate to work tasks and contributions made to the economic success of the business operation, programming and promotion strategies which enhance audience response, budgets, and marketing. Prerequisites: COMM 1335.

## RADIOLOGY

**CTMT 2232 PRINCIPLES OF COMPUTERIZED TOMOGRAPHY (2-2-0).** An introduction to the concepts and physical principles employed in computed tomography imaging techniques. Interaction between x-rays and matter and concepts of radiation detectors and digital imaging are emphasized. Current knowledge and theory of the biologic effects of x-rays are explored with an emphasis on how they relate to data acquisition, control issues and factors involved in purchasing decisions. This course is designed to study the basic physics and instrumentation involved in computerized tomography. Data acquisition and image manipulation will be discussed. Offered in Fall Semester. Prerequisites: American Registry of Radiologic Technologists certification and Program Coordinator approval.

**CTMT 2273 COMPUTERIZED TOMOGRAPHY PROCEDURES AND SPECIAL STUDIES (2-2-0).** This course is designed to study the scanning protocols for the routine examinations performed in all major body parts. Special studies such as biopsies, aspirations, radiation therapy planning and 3-D examinations are discussed and demonstrated. Offered in Spring Semester. Prerequisites: RADR 2272 or Program Coordinator approval.

**CTMT 2460 CLINICAL-COMPUTED TOMOGRAPHY TECHNOLOGY/TECHNICIAN: TECHNICAL-MEDICAL RAD TECH-CT 1 (4-0-21).** A basic, intermediate, or advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Students are assigned to various medical imaging departments in affiliated clinical agencies where they participate in observation and performance of computerized tomography procedures under direct supervision. Insurance: \$12 Prerequisites: Admission to program or Program Coordinator approval. (RADR 2465)

**CTMT 2461 CLINICAL - COMPUTED TOMOGRAPHY TECHNOLOGY/TECHNICIAN: TECHNICAL-MEDICAL RAD TECH CT 2 (4-0-24).** A basic, intermediate, or advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Students continue to perform CT examinations under indirect supervision and assist with and perform special studies such as biopsies, aspirations, radiation therapy planning and 3-D reconstruction. Insurance: \$12 Prerequisites: CTMT 2460 or Program Coordinator approval. (RADR 2467)

**CVIR 1270 CARDIAC INTERVENTIONAL PROCEDURES (2-0-2).** Students review cardiac anatomy and learn the principles of cardiac catheterization. Cardiac specific instrumentation with regard to catheters, guidewires, needles, arterial/venous access, pacemakers, and various other ancillary equipment is taught. Cineangiography, panning, and positioning criteria, hemodynamic data, angioplasty, pressure measurements, and various vasodilator techniques are discussed and demonstrated. Prerequisites: CVIR 1271, CVIR 1364, CVIR 1370 or Program Coordinator approval. (CVIR 1290)

**CVIR 1271 PRINCIPLES OF INTERVENTIONAL RADIOLOGY I (2-2-0).** The basic principles of instrumentation in vascular and visceral interventional radiology is taught. The selection, operation, and function of imaging equipment such as serial film changers, electromechanical injectors, and specialized equipment is discussed and demonstrated. Ancillary equipment such as catheters, guidewires, needles, and other equipment as well as procedure tray set-ups are demonstrated. Interventional pharmacangiography for procedures

such as embolization and thrombolysis is discussed. Prerequisites: Admission to program, A.R.R.T. Registry Certification. (CVIR 1291)

**CVIR 1272 PRINCIPLES OF INTERVENTIONAL RADIOLOGY II (2-2-0).** Anatomy and pathology pertinent to the head, neck, central nervous system, and other viscera are discussed and demonstrated. Instrumentation and pharacoangiography pertinent to interventional procedures is discussed: embolization, thrombolysis, vasodilation, stent placement, and vasoconstriction. Patient and personnel radiation protection is demonstrated and practiced. Prerequisites: CVIR 1271, CVIR 1364, CVIR 1370 or Program Coordinator approval.

**CVIR 1364 PRACTICUM INTERVENTIONAL RADIOLOGY I (3-0-24).** Students are assigned to cardiac catheterization and special procedures suites in area hospitals. Students participate in procedures under direct supervision and are expected to prepare the room for the exam as well as the patient. Monitoring of patient is required as well as documenting procedure protocol. Student is required to write a research paper based on actual procedures completed on patients. Insurance: \$12 Prerequisites: Admission to program, A.R.R.T. Registry Certification and approval by the Program Coordinator.

**CVIR 1365 PRACTICUM INTERVENTIONAL RADIOLOGY II (3-0-24).** This course is a continuation of CVIR 1364 and the capstone course for the program. Emphasis is placed on proficiency of students in the performance of procedures in the cardiac catheterization and special procedures suites in area hospitals. Students are required to perform procedures under limited supervision. Insurance: \$12 Prerequisites: CVIR 1271, CVIR 1364, CVIR 1370 or Program Coordinator approval.

**CVIR 1370 PATIENT CARE CARDIOVASCULAR AND INTERVENTIONAL RADIOLOGY (3-3-0).** This course introduces the students to the medical legal aspects of cardiovascular interventional radiology: assault, battery, negligence, malpractice and the various forms of patient consent. Pre and post procedural assessment and protocol is discussed with reference to laboratory tests and medication guidelines. The fundamental differences of various contrast media, possible reactions and treatment including emergency medications as well as conscious sedation are addressed. The principles of surgical asepsis, radiation protection and safety procedures are addressed. The basic principles of advanced cardiac life support, EKG monitoring, and basic electrophysiology of the heart and cardiac pharmacology are discussed and demonstrated. Prerequisites: Admission to Program, A.R.R.T. Registry Certification and approval by Program Coordinator. (CVIR 1390)

**MRIT 2230 PRINCIPLES OF MAGNETIC RESONANCE IMAGING I (2-2-0).** General principles for learning to operate a magnetic

resonance imager. Focuses on building a sound understanding of the underlying scientific theory and practice leading to magnetic resonance imaging. Designed to introduce the concepts and scientific principles employed in magnetic resonance imaging techniques. Principles of magnetism and interactions of living matter within magnetic fields are emphasized. This course is designed to provide an introduction to magnetic resonance imaging equipment and basic physics. Equipment components and image production and manipulation will be addressed. Offered in Fall Semester. Prerequisites: American Registry of Radiologic Technologists certification and Program Coordinator approval.

**MRIT 2276 MAGNETIC RESONANCE PHYSICS AND PROCEDURES (2-2-0).** This course is designed to study the data acquisition process and expound upon specific pulse sequences. Imaging protocols of the major body regions will be described and special studies such as Magnetic Resonance Angiography will be discussed and demonstrated. Offered in Spring Semester. Prerequisites: American Registry of Radiologic Technologists certification and Program Coordinator approval.

**MRIT 2460 CLINICAL - MAGNETIC RESONANCE IMAGING TECHNOLOGY/TECHNICIAN: MEDICAL RAD MRI I (4-0-21).** A basic, intermediate, or advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Students are assigned to affiliated medical imaging departments where they observe and participate in the performance of basic MRI imaging procedures under direct supervision. Insurance: \$12 Prerequisites: CTMT 2460 or Program Coordinator approval. (RADR 2463)

**MRIT 2461 CLINICAL-MAGNETIC RESONANCE IMAGING TECHNOLOGY/TECHNICIAN (4-0-24).** A basic, intermediate, or advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Students continue to perform MRI standard and special studies such as MRI angiography under indirect supervision. Offered in Spring semester. Insurance: \$12 Prerequisites: CTMT 2460 or Program Coordinator approval. (MRIT 1460)

**RADR 1213 PRINCIPLES OF RADIOGRAPHIC IMAGING I (2-2-0).** This course will analyze

radiographic image qualities and the effects of exposure variables upon these qualities. Offered in Fall Semester. Insurance: \$12 Prerequisites: Admission to Program or Program Coordinator approval. (DMR 1022)

- RADR 1309 INTRODUCTION TO RADIOGRAPHY AND PATIENT CARE (3-3-0).** This course includes the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, and an orientation to the program and to the health care system. Patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology are also included. Offered in Fall Semester. Insurance: \$12 Prerequisites: Admission to program or Program Coordinator approval. (DMR 1013)
- RADR 1317 RADIOGRAPHIC ANATOMY & PHYSIOLOGY I (3-3-0).** This course develops the students ability to relate basic human anatomy and physiology to the image. The localization and identification of human anatomy on the radiographic image is emphasized. Skills: P Prerequisites: Admission to program or Program Coordinator approval.
- RADR 1360 CLINICAL/MEDICAL RADIOLOGIC TECHNOLOGY I (3-0-16).** A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Spring Semester. Insurance: \$12 Prerequisites: Program Coordinator approval. (DMR 1303)
- RADR 1361 CLINICAL/MEDICAL RADIOLOGIC TECHNOLOGY II (3-0-14).** A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Summer Semester. Insurance: \$12 Prerequisites: RADR 1360 or Program Coordinator approval. (DMR 1403)
- RADR 1411 BASIC RADIOGRAPHIC PROCEDURES (4-3-3).** This course includes an introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic

anatomy and related pathology. Offered in Fall Semester. Fee: \$24 Insurance: \$12 Prerequisites: Admission to Program or Program Coordinator approval. (DMR 1014)

- RADR 2205 PRINCIPLES OF RADIOGRAPHIC IMAGING II (2-2-0).** A continuation of the study of radiographic imaging technique formulation, image quality assurance, and the synthesis of all variables in image production. Offered in Spring Semester. Prerequisites: RADR 1213 or Program Coordinator approval. (DMR 1322)
- RADR 2209 RADIOGRAPHIC IMAGING EQUIPMENT (2-2-0).** A study of the equipment and physics of x-ray production, basic x-ray circuits, and the relationship of equipment components to the imaging process. Offered in Spring Semester. Insurance: \$12 Prerequisites: RADR 1213 or Program Coordinator approval. (DMR 1222)
- RADR 2213 RADIATION BIOLOGY AND PROTECTION (2-2-0).** A study of the effects of radiation exposure on biological systems, typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure. Offered in Summer Semester. Prerequisites: Program Coordinator Approval. (DMR 2014)
- RADR 2217 RADIOGRAPHIC PATHOLOGY (2-2-0).** An overview of the disease process and common diseases and their appearance on medical images. The student will classify types of diseases, explain the pathogenesis of common diseases and identify the appearance of common diseases on medical images. Offered in Fall Semester. Prerequisites: Program Coordinator approval.
- RADR 2233 ADVANCED MEDICAL IMAGING (2-2-0).** An introduction to the use of computers in medical imaging and a survey of specialized imaging modalities. Offered in Spring Semester. Prerequisites: RADR 2431 or Program Coordinator approval. (DMR 2113)
- RADR 2240 SECTIONAL ANATOMY FOR MEDICAL IMAGES (2-2-0).** In-depth coverage of anatomic relationships that are present under various sectional orientations as depicted by computed tomography or magnetic resonance imaging. This course is designed to introduce the Radiologic Technology student to the study of anatomy in cross section. Images representing normal and abnormal anatomy from Computerized Tomography and Magnetic Resonance Imaging are discussed and demonstrated. Offered in Summer Semester. Prerequisites: RADR 2431 or Program Coordinator approval.
- RADR 2271 SECTIONAL ANATOMY AND PATIENT CARE (2-2-0).** This course is designed to introduce the student to the anatomy of the human body in cross section as required for Computerized Tomography and Magnetic Resonance Imaging.

Demonstration and evaluation of sectional anatomy images as provided by Computerized Tomography and Magnetic Resonance Imaging will be provided. Offered in Fall Semester. Prerequisites: American Registry of Radiologic Technologists Certification and Program Coordinator approval.

**RADR 2274 ADVANCED TECHNICAL PRINCIPLES (2-2-0).** This course will introduce advanced methods of radiographic quality assurance techniques and radiographic exposure systems. Quality assurance will include evaluation of contrast, density, distortion, recorded details, and equipment function. Offered in Fall Semester. Insurance: \$12 Prerequisites: RADR 2209 or Program Coordinator approval. (DMR 2014)

**RADR 2335 RADIOLOGIC TECHNOLOGY SEMINAR (3-3-0).** This is a capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning. Offered in Summer Semester. Prerequisites: RADR 2233 or Program Coordinator approval. (DMR 2203)

**RADR 2362 CLINICAL/MEDICAL RADIOLOGIC TECHNOLOGY V (3-1-15).** A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Summer Semester. Insurance: \$12 Prerequisites: RADR 2461 or Program Coordinator approval. (DMR 2204)

**RADR 2431 ADVANCED RADIOGRAPHIC PROCEDURES (4-3-3).** An advanced course including the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of advanced anatomy and related pathology. Offered in Spring Semester. Fee: \$24 Insurance: \$12 Prerequisites: RADR 1411 or Program Coordinator approval. (DMR 1224)

**RADR 2460 CLINICAL/MEDICAL RADIOLOGIC TECHNOLOGY III (4-0-24).** A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Fall Semester. Insurance: \$12 Prerequisites: RADR 1361 or Program Coordinator approval. (DMR 2015)

**RADR 2461 CLINICAL/MEDICAL RADIOLOGIC TECHNOLOGY IV (4-0-24).** A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Offered in Spring Semester. Insurance: \$12 Prerequisites: RADR 2460 or Program Coordinator approval. (DMR 2105)

## READING - DEVELOPMENTAL

**DEVR 0031 FUNDAMENTALS OF READING LAB (1-0-2).** Designed for students currently registered in DEVR 0303, Fundamentals of Reading, to promote greater reading improvement. Individualized and group setting providing additional practice and explanation to supplement DEVR 0303. Repeatable up to three credit hours. (DVR 0031)

**DEVR 0131 READING SKILLS I LAB (1-0-2).** Designed for students currently registered in DEVR 1303, Reading Skills I, to promote greater reading improvement. Individualized and group setting providing additional practice and explanation to supplement DEVR 1303. Repeatable up to three credit hours. (DVR 0131)

**DEVR 0231 READING SKILLS II LAB (1-0-2).** Designed for students currently registered in DEVR 1313, Reading Skills II, to promote greater reading improvement. Individualized and group setting providing additional practice and explanation. Repeatable up to three-credit hours. (DVR 0231)

**DEVR 0301 FUNDAMENTALS OF READING (1-1-0).** Designed to improve vocabulary and ability to understand written material. Course work will be individualized to meet student needs.

**DEVR 0302 FUNDAMENTALS OF READING (2-2-0).** Designed to improve vocabulary and ability to understand written material. Course work will be individualized to meet student needs.

**DEVR 0303 FUNDAMENTALS OF READING (3-3-2).** Designed to improve vocabulary and ability to understand written material. Course work will be individualized to meet student needs. Required lab work will supplement class instruction. To exit the course, students must achieve at least seventh-grade reading level. Preparatory for Reading Skills, DEVR 1303. Repeatable up to nine credit hours. A modified course is offered in a one hour (0301) and two hour (0302) format. (DVR 0303)

**DEVR 0333 FUNDAMENTALS OF VOCABULARY (3-0-0).** Designed to build the level of basic written and spoken vocabulary. Emphasis on strategies that

help students determine the meaning of unfamiliar words by using phonic analysis, contextual analysis and structural analysis. The course is designed for students who score below 50 on Compass Reading Test; below 38 on CPT Reading Test; or below 32 on Asset Reading Test. A modified course is offered in a one hour (0331) and two hour (0332) format. (DVR 0333)

- DEVR 1301 READING SKILLS I (1-1-0).** Basic reading skills necessary for success in vocational, two-year, and transfer programs. Improvement of comprehension skills, vocabulary development, and rate of reading. Prerequisites: Grade of C or better in DEVR 0303 or one of the following scores: Compass Reading Test of 50-67; CPT Reading Test of 39-57; or Asset Reading Test 33-36. (DVR 1301)
- DEVR 1302 READING SKILLS I (2-2-0).** Basic reading skills necessary for success in vocational, two-year, and transfer programs. Improvement of comprehension skills, vocabulary development, and rate of reading. Prerequisites: Grade of C or better in DEVR 0303 or one of the following scores: Compass Reading Test of 50-67; CPT Reading Test of 39-57; or Asset Reading Test 33-36. (DVR 1302)
- DEVR 1303 READING SKILLS I (3-3-1).** Basic reading skills necessary for success in vocational, two-year, and transfer programs. Improvement of comprehension skills, vocabulary development, and rate of reading. Required lab work will supplement class instruction. Repeatable up to nine-credit hours. A modified course is offered in a one hour (DEVR 1301) and two hour (DEVR 1302) format. Prerequisites: Grade of C or better in DEVR 0303 or one of the following scores: Compass Reading Test of 50-67; CPT Reading Test of 39-57; or Asset Reading Test 33-36. (DVR 1303)
- DEVR 1303 READING SKILLS I PAIRED WITH WRITING SKILLS I (3-3-1).** Designed to take advantage of the interrelationships between reading and writing. Paired courses must be taken concurrently. Improvement of comprehension skills, vocabulary development and rate of reading combined with a review of grammar, sentence structure, punctuation, spelling, and words often confused. Introduction to writing paragraphs and essays. Required lab work will supplement class instruction. Prerequisites: Prerequisite: Grade of C or better in DEVR 0303 and DEVR 0403 or one of the following scores in reading and writing: COMPASS Reading Test 50-67 and Writing Test 38-58; CPT Reading Test of 39-57 and Writing Test 63-72; ASSET Reading Test 33-36 and Writing Test 35-38. (DVR 1303)
- DEVR 1311 READING SKILLS II (1-1-0).** Emphasis on increased proficiency of comprehension skills, vocabulary development, and rate of reading. Ninth grade reading level required. DEVR 1311 repeatable up to two credit hours. Prerequisites: Grade of C or better in DEVR 1303 or one of the following scores: Compass Reading Test of 68-80; CPT Reading Test 58-77; or Asset Reading Test 37-40. (DVR 1311)
- DEVR 1312 READING SKILLS II (2-2-0).** Emphasis on increased proficiency of comprehension skills, vocabulary development, and rate of reading. Ninth grade reading level required. DEVR 1312 repeatable up to four credit hours. Prerequisites: Grade of C or better in DEVR 1303 or one of the following scores: Compass Reading Test of 68-80; CPT Reading Test 58-77; or Asset Reading Test 37-40. (DVR 1312)
- DEVR 1313 READING SKILLS II (3-3-0).** Emphasis on increased proficiency of comprehension skills, vocabulary development, and rate of reading. Ninth grade reading level required. DEVR 1311 repeatable up to two credit hours; DEVR 1312 repeatable up to four credit hours; DEVR 1313 repeatable up to six credit hours. Required lab work will supplement class instruction. A modified course is offered in a one hour (1311) and two hour (1312) format. Prerequisites: Grade of C or better in DEVR 1303 or one of the following scores: Compass Reading Test of 68-80; CPT Reading Test 58-77; or Asset Reading Test 37-40. (DVR 1313)
- DEVR 1313 READING SKILLS II PAIRED WITH PSYCHOLOGY6PSYC 2301 (3-3-0).** Reading Skills II supports Introduction to Psychology. Paired courses must be taken concurrently. Student earns college credit and satisfies TASP requirement. Emphasizes increased proficiency of comprehension skills, vocabulary development, and rate of reading. Prerequisites: Grade of C or better in DEVR 1303 or one of the following scores: COMPASS Reading Test of 72-80; CPT Reading Test of 64-77; ASSET Reading Test of 38-40. (DVR 1313)
- DEVR 1313 READING SKILLS II PAIRED WITH U.S. HISTORY 16HIST 1301 (3-3-0).** Reading Skills II supports Introduction to U.S. History. Paired courses must be taken concurrently. Student earns college credit and satisfies TASP requirement. Emphasizes increased proficiency of comprehension skills, vocabulary development, and rate of reading. Prerequisites: Grade of C or better in DEVR 1303 or one of the following scores: COMPASS Reading Test of 72-80; CPT Reading Test of 64-77; ASSET Reading Test of 38-40. (DVR 1313)
- DEVR 1313 READING SKILLS II PAIRED WITH GOVERNMENT6GOVT 2305 (3-3-0).** Reading Skills II supports U.S. Government. Paired courses must be taken concurrently. Student earns college credit and satisfies TASP requirement. Emphasizes increased proficiency of comprehension skills, vocabulary development, and rate of reading. Prerequisites: Grade of C or better in DEVR 1303 or one of the following scores: COMPASS Reading Test of 72-80; CPT Reading Test of 64-77; ASSET Reading Test of 38-40. (DVR 1313)
- DEVR 1323 ADVANCED COLLEGE READING (3-3-0).** Emphasis on becoming an efficient reader. Improvement of reading techniques involving vocabulary, comprehension, critical analysis, speed, and flexibility. Repeatable up to six-credit hours. College-credit course, may be transferable. A modified course is offered in one-hour (DEVR

1321) and two-hour (DEVR 1322) format.  
Prerequisites: Grade of C or better in DEVR 1313 or one of the following scores: Compass Reading Test 81 or above; CPT Reading Test 78 or above; or Asset Reading Test 41 or above. (DVR 1323)

**DEVR 1333 VOCABULARY I (3-3-0).** Designed to improve the level of general vocabulary knowledge. Emphasis on words and word elements frequently occurring in academic settings and various approaches to word study. Seventh or eighth grade reading level required. Repeatable up to six credit hours. A modified course is offered in a one hour (1331) and two hour (1332) format. Prerequisites: Grade of C or better in DEVR 0333 or DEVR 0303 or one of the following scores: Compass Reading Test of 50-67; Reading CPT of 39-57; Asset Reading of 33-36; Nelson-Denny Reading Total of 46-57. (DVR 1333)

**DEVR 1343 VOCABULARY II (3-3-0).** Designed to increase proficiency in understanding and correctly using words and word elements generally encountered in academic settings with various approaches to word study. Repeatable up to six credit hours. A modified course is offered in a one hour (1341) and two hour (1342) format. Prerequisites: Grade of C or better in DEVR 1333 or DEVR 1303 or one of the following scores: Compass Reading Test of 68-80; Reading CPT of 58-77; Asset Reading of 37-40; Nelson-Denny Reading Test Total of 58-79. (DVR 1343)

**DEVR 1353 ADVANCED COLLEGE VOCABULARY (3-3-0).** Designed to increase proficiency in understanding and correctly using words and word elements generally encountered in post-secondary academic settings. Emphasis on words derived from Greek and Latin. Also suitable for students preparing to take graduate school admissions examinations. A modified course is offered in a one-hour (1351) and a two-hour (1352) format. Prerequisites: Grade of C or better in DEVR 1343 or DEVR 1313 or one of the following scores: Compass Reading Test 81 or above; CPT Reading Test 78 or above; or Asset Reading 41 or above; Nelson-Denny Reading total of 80 or above. (DVR 1353)

**DEVR 1503 SPELLING SKILLS (3-3-0).** A review of sound/letter relationships as they relate to spelling. Review of spelling generalizations. A modified course is offered in a one hour (1501) and two hour (1502) format.

## REAL ESTATE

**RELE 1201 PRINCIPLES OF REAL ESTATE PRACTICES (2-2-0).** An overview of licensing as a real estate broker and salesperson, ethics of practice, titles to and conveyancing of real estate, legal descriptions, law of agency, deeds, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations, closing procedures, and real

estate mathematics. Also includes federal, state and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Skills: R

**RELE 1203 REAL ESTATE APPRAISAL (2-2-0).** A study of the central purposes and functions of an appraisal, social and economic determinant of value, appraisal case studies, cost, market data, and income approaches to value estimates, final correlations, and reporting. Skills: R

**RELE 1211 REAL ESTATE CONTRACTS (2-2-0).** A review of real estate contracts required by Section 6A (3) of the Real Estate License Act with emphasis on general contract law requirements. Also covers the purpose, history, and working process of the Broker-Lawyer Committee. Includes preparation of real estate contract forms with emphasis on the most commonly used forms. Skills: R

**RELE 1215 PROPERTY MANAGEMENT (2-2-0).** A study of the role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act. Skills: R

**RELE 1225 REAL ESTATE MATHEMATICS (2-2-0).** Mathematical logic and basic arithmetic skills including percentages, interest, time-valued money, depreciation, amortization, proration, and estimation of closing statement. Skills: R

**RELE 1303 REAL ESTATE APPRAISAL (3-3-0).** A study of the central purposes and functions of an appraisal, social and economic determinant of value, appraisal case studies, cost, market data, and income approaches to value estimates, final correlations, and reporting. Offered in Fall. Skills: R Prerequisites: RELE 1301 or equivalent. (REA 2013)

**RELE 1307 REAL ESTATE INVESTMENT (3-3-0).** Financing, evaluation, and management of real estate investment. Emphasis on real estate investment characteristics, techniques of investment analysis, time-valued money, discounted investment criteria, leverage, and applications to property tax implications of owning real estate. Offered in Fall. Skills: R Prerequisites: RELE 1301 or equivalent. (REA 2043)

**RELE 1309 REAL ESTATE LAW (3-3-0).** Provides a study of legal concepts of real estate, land description, real property rights, estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures, and evidence of title. Skills: R (REA 1043)

**RELE 1311 REAL ESTATE CONTRACTS (3-3-0).** A review of real estate contracts required by Section 6A (3) of the Real Estate License Act with emphasis on general contract law requirements. Also covers the purpose, history, and working process of the Broker-Lawyer Committee. Includes preparation of real estate contract forms with emphasis on the most commonly used forms. Skills: R (REA 2143)

- RELE 1315 PROPERTY MANAGEMENT (3-3-0).** A study of the role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act. Offered in Summer. Skills: R Prerequisites: RELE 1301 or 1201. (REA 2033)
- RELE 1319 REAL ESTATE FINANCE (3-3-0).** An overview of the U.S. monetary system, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative instruments, laws affecting mortgage lending, and the State Housing Agency. Offered in Fall. Skills: R (REA 1033)
- RELE 1321 REAL ESTATE MARKETING (3-3-0).** A study of real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiating and closing financing; and the deceptive trade practice act, consumer protection act, and commercial code. Offered in Fall. Skills: R (REA 1023)
- RELE 1325 REAL ESTATE MATHEMATICS (3-3-0).** Mathematical logic and basic arithmetic skills including percentages, interest, time-valued money, depreciation, amortization, proration, and estimation of closing statement. Offered in Spring. Skills: R (REA 1053)
- RELE 1327 REAL ESTATE COMMERCIAL APPRAISAL (3-3-0).** Principles and techniques used in the valuation of commercial property. Topics include purposes and function of an appraisal, social and economic forces affecting value, appraisal case studies, cost, and income approaches to value. Offered in Spring. Skills: R Prerequisites: RELE 1301 or equivalent. (REA 2023)
- RELE 1331 FARM AND RANCH REAL ESTATE (3-3-0).** This course focuses on land value, land use, federal subsidies, environmental compliance issues, soil conservation, and highest and best use of land. Offered in Spring. Skills: R (REA 2113)
- RELE 1333 REAL ESTATE DEVELOPMENT (3-3-0).** A how to approach to determine the market and economic feasibility of real estate development. Offered in Fall. Skills: R Prerequisites: RELE 1301 or equivalent. (REA 2073)
- RELE 1391 SPECIAL TOPICS IN REAL ESTATE: ADVANCED INSPECTION (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. Skills: R Prerequisites: RELE 1301 or equivalent. (REA 2093)
- RELE 1406 REAL ESTATE PRINCIPLES (4-4-0).** Overview of real estate broker and salesman license; ethical practice; titles and conveyance of real estate; legal descriptions; law of agency, deeds; encumbrances and liens, personal and real property; contracts; appraisal; finance and regulations; closing procedures; real estate mathematics; and federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment.
- RELE 2201 LAW OF AGENCY (2-2-0).** A study of law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying representation procedures, the disclosure of agency, and related subjects. Skills: R
- RELE 2205 REAL ESTATE INSPECTIONS (2-2-0).** A study of the different types of building systems and materials used in the design and construction of real property. Covers residential construction and commercial building systems and materials. Includes different structural building systems with emphasis on wood-related products, concrete and concrete masonry, brick, stone, and steel units. The Texas Real Estate Commission Promulgated Property Condition Addendum will be addressed along with inspector and client agreements, tools, and procedures, and electro-mechanical systems. Skills: R
- RELE 2209 PRINCIPLES OF REAL ESTATE II (2-2-0).** An overview of licensing as a real estate broker and salesman; ethics of practice; titles to and conveyancing of real estate; legal descriptions; law of agency; deeds; encumbrances and liens; distinctions between personal and real property; contracts; appraisal; finance and regulations; closing procedures; real estate mathematics; and federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Skills: R
- RELE 2301 LAW OF AGENCY (3-3-0).** A study of law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying representation procedures, the disclosure of agency, and related subjects. Skills: R (REA 2153)
- RELE 2305 REAL ESTATE INSPECTIONS I (3-3-0).** A study of the different types of building systems and materials used in the design and construction of real property. Covers residential construction and commercial building systems and materials. Includes different structural building systems with emphasis on wood-related products, concrete and concrete masonry, brick, stone, and steel units. The Texas Real Estate Commission Promulgated Property Condition Addendum will be addressed along with inspector and client agreements, tools and procedures, and electro-mechanical system. Offered in Spring.

**RELE 2331 REAL ESTATE BROKERAGE (3-3-0).** A study of law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria. Offered in Summer. Skills: R Prerequisites: RELE 1301 or equivalent. (REA 2053)

**RELE 2367 REAL ESTATE PRACTICUM (FIELD EXPERIENCE) (3-0-20).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualize plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Skills: R Prerequisites: RELE 1301 and 6 additional hours of Real Estate courses. (REA 2133)

## RELIGION

**PHIL 1304 WORLD RELIGIONS (3-3-0).** A study of religious consciousness and the major religions of the world including Hinduism, Buddhism, Taoism, Confucianism, Zoroastrianism, Judaism, Christianity, and Islam. Skills: R (RLG 1623)

## RUSSIAN

**RUSS 1200 RUSSIAN CONVERSATION (2-3-0).** The primary objective of the course is to develop the student's competency in communicating through the spoken medium. Class time will be spent in simple conversation and discussion of material read outside of class. Emphasis on idiomatic expressions used in daily speech, pronunciation, and vocabulary building. Prerequisites: RUSS 1511 or equivalent, or instructor approval. (RUS 1642)

**RUSS 1511 RUSSIAN I (5-5-0).** Study of fundamentals of Russian: conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. No prerequisite. Skills: E (RUS 1615)

**RUSS 1512 RUSSIAN II (5-5-0).** Continuation of RUSS 1511 with more advanced conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. Prerequisites: Students must have completed a first semester college Russian course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in RUSS 1512. (RUS 1625)

**RUSS 2311 RUSSIAN III (3-3-0).** Advanced Russian grammar, directed composition, conversation, and discussion of culture based on readings. Class conducted largely in Russian. Prerequisites: Students must have completed a second semester college Russian course of at least four semester

hours with a grade of C or better, or have equivalent credit by examination to enroll in RUSS 2311. (RUS 2613)

**RUSS 2312 RUSSIAN IV (3-3-0).** Continuation of RUSS 2311. Prerequisites: RUSS 2311 with a grade of C or better, or equivalent. (RUS 2623)

## SOCIOLOGY

**SOC 2653 RESEARCH METHODS IN SOCIOLOGY (3-3-0).** This course provides an overview of the case study, survey, observational, correlation, quasi-experimental, and experimental research methods and designs. Emphasis is given to the experimental, quasi-experimental, and correlational designs as well as to methods of collecting, analyzing, and interpreting sociological and psychological data. Other topics include validity, reliability, sampling, evaluation of research, writing research proposals and reports, ethics, etc. Students read research articles from professional journals and are introduced to more advanced statistical procedures such as MANOVA-F test, post-hoc measures, planned comparisons, multiple correlation, and multiple regression. Credit may not be earned for both this course and PSY 2663. Skills: X Prerequisites: SOC 2743 or PSYC 2317 or equivalent. Prerequisite courses should have been completed with a grade of C or better.

**SOC 2683 CURRENT ISSUES IN SOCIOLOGY (3-3-0).** An in-depth study of specific contemporary topics in sociology such as sex roles, wealth and poverty, political sociology, sociology of sports, and sociology of religion. Skills: E

**SOC 2683 CURRENT ISSUES: SEX ROLES (3-3-0).** This course examines the biological, psychological, and sociological meanings of being male or female in the U.S. Its purpose is to help students develop a better understanding of the complexity and diversity of gendered experiences in terms of race, social class, sexual orientation, age and cultural differences. Skills: E

**SOC 2683 CURRENT ISSUES: WEALTH AND POVERTY (3-3-0).** This course looks at the way in which wealth, power and prestige are allocated in the U.S. The topics of social inequality, life chances and life-styles are discussed across class lines from upper-income levels to poverty. Skills: E

**SOC 2683 CURRENT ISSUES: POLITICAL SOCIOLOGY (3-3-0).** This course surveys a variety of theoretical approaches to the analysis of the state as a social institution, in both historical and contemporary context. The topics of political elites, ideology, power, political parties, and political systems, among others will be included. Skills: E

**SOC 2683 CURRENT ISSUES: SOCIOLOGY OF SPORTS (3-3-0).** This course looks at the theories and research associated with the broad areas of recreational and leisure activities. The topics of

- aggression, competition, childhood participation, sports organizations, the participation of women and minorities, popular perceptions of sports, professional and amateur sports, among others will be included. Historical development as well as contemporary events will be emphasized. Skills: E
- SOC 2683 CURRENT ISSUES: SOCIOLOGY OF RELIGION (3-3-0).** This course looks at the relationship between religion and social structure, including various theoretical approaches to the study of religion. Also discussed will be the topics of comparative religion, civil religion, religious organization and structure, religious expression, among others. Historical and contemporary analysis will be emphasized. Skills: E
- SOC 2743 SOCIAL STATISTICS (3-3-0).** Designed for social and behavioral science students, this course covers measurement scales, graphing, measures of central tendency and variability, transformed scores, correlation and regression, normal distribution, sampling distributions, hypothesis testing, t and z tests, introduction to ANOVA-F test, and certain nonparametric statistics. Emphasis is on the conceptual understanding of statistics within the context of research and the interpretation of statistical results. Relevant research topics are included. Calculations are required. Credit may **not** be earned for both this course and PSY 2643. Skills: X Prerequisites: SOCI 1301 or PSYC 2301 or equivalent, and MATH 1332 or MATH 1314 or equivalent.
- SOC 2753 SOCIAL SERVICES: FIELD EXPERIENCE (3-3-0).** Supervised practical experiences designed to help students explore their interest and capabilities for careers in the various helping professions. Minimum of fifty (50) clock hours in the semester in a social service placement with journal entries submitted every two weeks. Prerequisites: SOCW 2361.
- SOCI 1301 INTRODUCTION TO SOCIOLOGY (3-3-0).** Introduction to theoretical perspectives and research pertaining to society and to the relationship between society and the individual. Covers the basic elements of society, such as culture, social structure, social groups, social class, race, gender, social institutions, social processes, and social change. For the Honors course, there will be an in-depth examination of these topics and the underlying theories, with emphasis on developing oral and written communication skills. Skills: E (SOC 1613)
- SOCI 1306 CONTEMPORARY SOCIAL PROBLEMS (3-3-0).** An inquiry into select groups of current social problems with specific reference to their origin, development, and their suggested solutions. Skills: E (SOC 1623)
- SOCI 2301 MARRIAGE AND THE FAMILY (3-3-0).** A study of the problems pertaining to and affecting the family unit. Skills: E (SOC 2613)
- SOCI 2319 AMERICAN MINORITIES (3-3-0).** A survey course that covers the cultural heritage of the major American minorities within a sociological framework. In addition, the problems of adaptation to the majority cultural framework are considered in relation to the specific sociological needs of each minority. Skills: E (SOC 2633)
- SOCI 2326 SOCIAL PSYCHOLOGY (3-3-0).** A survey of the basic theories and research methods in social psychology; the interaction between the individual and society; the process of acquiring a self concept; socialization processes; personal and social adjustment; interaction within the group. Credit may not be earned for this course and PSY 2613. Prerequisites: SOCI 1301 or PSYC 2301. (SOC 2713)
- SOCI 2336 CRIMINOLOGY (3-3-0).** Current theories and empirical research pertaining to crime and criminal behavior. Its causes, methods of prevention, systems of punishment and rehabilitation. Skills: E (SOC 2673)
- SOCI 2389 RESEARCH INTERNSHIP IN THE SOCIAL SCIENCES (3-1-5).** The purpose of this course is to provide an opportunity for qualified students to obtain firsthand, supervised research experience in the social sciences. Students will be placed in different settings at ACC or organizations in the community to assist professionals in the social sciences with various research activities. Students may assist researchers by providing the necessary literature review for the design of the study, collecting, organizing, and analyzing data, as well as contributing to the research report. Students will spend an average of five hours per week at the internship site. Transportation, insurance, and other expenses will be provided by the student. Prerequisites: SOC 2743 and SOC 2653 (or concurrent enrollment in SOC 2653).
- SOCW 2361 INTRODUCTION TO SOCIAL WORK (3-3-0).** Development of the philosophy and practice of social work in the United States. A survey of the fields and techniques of social work with attention given to requirements for graduate training in the field of social work. Skills: E (SOC 2643)
- SOCW 2362 SOCIAL WELFARE AS A SOCIAL INSTITUTION (3-3-0).** An introduction to the study of social work and the underlying philosophy and ethics of social work. Also looks at special populations and how the social welfare institution has responded to their needs. Prerequisites: SOCW 2361. (SOC 2663)

## SONOGRAPHY

- DMSO 1172 TECHNIQUES OF MEDICAL SONOGRAPHY (1-0-3).** An introduction to scanning techniques, scan protocols and procedures within the laboratory setting utilizing live scanning and/or simulator experience. Emphasis is placed on recognition of normal sonographic patterns in the upper abdomen, gravid and non-gravid uterus, and superficial structures. Prerequisites: Admission to the program. Fee: \$24
- DMSO 1302 BASIC ACOUSTICAL PHYSICS (3-3-0).** This course is a study of basic acoustical physics and acoustical waves in human tissue. Emphasis is on ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission, and resolution of sound beams. Prerequisites: Admission to program. (DMS 2023)
- DMSO 1342 INTERMEDIATE ACOUSTICAL PHYSICS (3-3-0).** This course is a continuation of the study of acoustical physics. Topics include interaction of ultrasound with tissues, the mechanics of ultrasound production and display, various transducer designs and construction, quality assurance, bioeffects, image artifacts, and methods of Doppler flow analysis. Prerequisites: DMSO 1302. (DMS 2133)
- DMSO 1441 ULTRASOUND I (4-3-2).** Basic sonographic cross-sectional anatomy as it relates to the abdomen and pelvis. Normal anatomy and physiology of the abdominal/pelvic cavities as related to scanning techniques, transducer selection, and scanning protocols are taught. Fee: \$24 Insurance: \$12 Prerequisites: Admission to Program. (DMS 2024)
- DMSO 1561 MEDICAL SONOGRAPHY CLINICAL I (5-0-20).** Students are assigned to various sonography departments in affiliated clinical agencies for 24 hours per week where they participate in departmental activities and are taught the application of scanning methods/techniques of the upper abdomen, pelvis, and superficial structures under direct supervision. Fee: \$24 Insurance: \$12 Prerequisites: DMSO 1441, DMSO 1272, DMSO 1302. (DMS 2135)
- DMSO 2342 ULTRASOUND III (3-3-1).** This course emphasizes normal and abnormal maternal/fetal development as it relates to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Fee: \$24 Prerequisites: DMSO 2441, DMSO 1342, DMSO 1561. (DMS 2233)
- DMSO 2343 ADVANCED ACOUSTICAL PHYSICS (3-3-0).** An advanced course emphasizing the use of ultrasound instruments including modes of operation, operation control options, techniques for recording static and dynamic images, and advances in transducer design. Review of previously covered material is included. Prerequisites: DMSO 2351. (DMS 2213)
- DMSO 2345 ADVANCED SONOGRAPHY PRACTICES (3-3-0).** This course emphasizes advanced sonographic procedures and special topics. Review of previously covered material is included. Vascular methodology, case studies, and film critiques are discussed. Prerequisites: DMSO 2342, DMSO 2351, DMSO 2462. (DMS 2303)
- DMSO 2351 DOPPLER PHYSICS (3-3-0).** This course emphasizes Doppler principles, color and Doppler vascular principles relating to arterial and venous imaging and testing. Prerequisites: DMSO 1342. (DMS 2313)
- DMSO 2441 ULTRASOUND II (4-3-2).** This course emphasizes pathologies and disease states of the abdomen and pelvis as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Endocavitary sonographic anatomy and procedures including pregnancy may be discussed. Fee: \$24 Insurance: \$12 Prerequisites: DMSO 1441, DMSO 1302, DMSO 1272. (DMS 2134)
- DMSO 2462 MEDICAL SONOGRAPHY CLINICAL II (4-0-16).** Students are assigned to various sonography departments in affiliated clinical agencies for 24 hours per week during the 11 week summer semester. Focus is on advanced imaging techniques for the upper abdomen, pelvis, superficial structures, endovaginal, and second/third trimester OB studies. Insurance: \$12 Prerequisites: DMSO 2442, DMSO 1342, DMSO 1561. (DMS 2224)
- DMSO 2563 MEDICAL SONOGRAPHY CLINICAL III (5-0-28).** This course is a continuation of DMSO 2462 with emphasis on developing and enhancing advanced clinical and scanning skills for sonographic examinations of the abdomen, pelvis, gravid uterus, fetus, and superficial structures with clinical exposure to vascular sonography. Students are assigned to various sonography departments in affiliated clinical agencies for 30 hours per week. Fee: \$24 Insurance: \$12 Prerequisites: DMSO 2342, DMSO 2351, DMSO 2462. (DMS 2306)
- DSAE 1100 INTRODUCTION TO DIAGNOSTIC IMAGING (1-1-0).** An introduction to medical imaging modalities including, but not limited to: radiography, sonography, nuclear medicine technology, computed axial tomography, and mammography. Instruction in the indications for diagnostic imaging studies, the methods of performing and interpreting the studies, the correlation of multiple studies, and the appropriate patient preparations. Additional topics include body mechanics, safe environment of care, medical ethics, imaging department functions, and professional qualities. Prerequisites: Admission to Program.
- DSAE 1203 INTRODUCTION TO ECHOCARDIOGRAPHY TECHNIQUES (2-0-4).** An introduction to scanning techniques and procedures with hands-on experience in a lab

setting. Emphasis is placed on the sonographic explanation of the normal adult heart. Fee: \$24 Insurance: \$12 Prerequisites: Admission to the program.

- DSAE 1315 PRINCIPLES OF ADULT ECHOCARDIOGRAPHY (4-3-2).** An introduction to cardiovascular anatomy and physiology, including hemodynamics and spatial relationships of the normal adult heart. Topics include anatomical correlation of 2-D, M-Mode, and Doppler sonographic imaging. Scanning techniques are correlated and taught in the laboratory sessions. Fee: \$24 Insurance: \$12 Prerequisites: Admission to the program. (DCSO 1471)
- DSAE 1561 CLINICAL ECHOCARDIOGRAPHY I (5-0-20).** A basic, intermediate, or advanced type of health professions work-based instruction that helps the student synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Fee: \$24 Insurance: \$12 Prerequisites: DSAE 1203, DSAE 1315, DMSO 1302.
- DSAE 2335 ADVANCED ECHOCARDIOGRAPHY (3-3-1).** Instruction in advanced echocardiographic procedures. Topics include stress echo, related diagnostic imaging, related noninvasive cardiac testing, and surgical repairs of the heart. Fee: \$24 (DCSO 2375)
- DSAE 2337 ECHOCARDIOGRAPHIC EVALUATION OF PATHOLOGY II (3-3-1).** A continuation of Echocardiographic Evaluation of Pathology I with emphasis on cardiac disease. Topics include adult and pediatric congenital heart disease. A discussion of quantitative measurements and application of 2-D, M-Mode, and Doppler. Recognition of the sonographic appearances of cardiac disease is stressed. Fee: \$24 Prerequisites: DSAE 2404, DSAE 1561, DMSO 1342. (DCSO 2374)
- DSAE 2404 ECHOCARDIOGRAPHIC EVALUATION OF PATHOLOGY I (4-3-4).** An emphasis on adult acquired cardiac pathologies. Topics include cardiovascular pathophysiology, quantitative measurements, and the application of 2-D, M-Mode, and Doppler. Recognition of the sonographic appearances of cardiovascular disease is stressed. Fee: \$24 Prerequisites: DSAE 1315, DSAE 1203, DMSO 1302. (DCSO 1473)
- DSAE 2462 CLINICAL ECHOCARDIOGRAPHY II (4-0-16).** A basic, intermediate, or advanced type of health professions work-based instruction that helps the student synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is

simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Fee: \$24 Insurance: \$12 Prerequisites: DSAE 1561, DSAE 2404, DMSO 1342.

- DSAE 2563 CLINICAL ECHOCARDIOGRAPHY III (5-0-28).** A basic, intermediate, or advanced type of health professions work-based instruction that helps the student synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Fee: \$24 Insurance: \$12 Prerequisites: DSAE 2462, DSAE 2337, DMSO 2351.
- DSVT 1103 INTRODUCTION TO VASCULAR TECHNOLOGY (1-0-3).** An introduction to basic noninvasive vascular theories and components. Emphasis on basic skills and knowledge, such as image orientation, transducer handling, and identification of anatomic structures, as seen on standard vascular ultrasound views and waveforms. Fee: \$24 Prerequisites: DMSO 2462, DSAE 2462, DMSO 2351

## SPACE SCIENCE

- SPS 1603 INTRODUCTION TO SPACE SCIENCE (3-3-0).** An introduction to the basic physical, chemical and biological principles relevant to the design, construction, launch, maintenance and retrieval of both manned and unmanned space craft. Special emphasis is placed on describing the space environment and its unique effects on the operation of satellites, space shuttles, space stations and colonies in space.

## SPANISH

- SPAN 0041 SPANISH I LAB (1-0-2).** An elective lab course for students desiring improvement of listening, writing, reading, or speaking skills in Spanish I, a course in which they are enrolled. Content to come from text, workbook, and tapes required in the Spanish course and any additional materials provided by lab instructor. Skills: E (SPN 0041)
- SPAN 0041 SPANISH II AND III LAB (1-0-2).** An elective lab course for students desiring improvement of listening, writing, reading, or speaking skills in Spanish II or III, a course in which they are enrolled. Content to come from text, workbook, and tapes required in the Spanish course and any additional materials provided by lab instructor. Skills: E (SPN 0041)

**SPAN 1200 SPANISH CONVERSATION (2-3-0).** The primary objective of the course is to develop the student's competency in communicating through the spoken medium. Class time will be spent in simple conversation and discussion of material read outside of class. Emphasis on idiomatic expressions used in daily speech, pronunciation, and vocabulary building. Prerequisites: SPAN 1511 or equivalent, or instructor approval. (SPN 1642)

**SPAN 1300 SPANISH CONVERSATION FOR LAW ENFORCEMENT PERSONNEL (3-3-0).** The primary objective of the course is to develop the student's competency in communicating through the spoken medium. Class time will be spent in conversation and discussion of material related to law enforcement situations. Emphasis on idiomatic expressions used in daily speech, pronunciation, and basic grammar concepts as well as vocabulary specific to law enforcement personnel.

**SPAN 1511 SPANISH I (5-5-0).** Study of fundamentals of Spanish: conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. It is highly recommended that students with no previous experience with a foreign language also enroll in a Spanish I lab course. No prerequisites. Skills: E (SPN 1615)

**SPAN 1511 SPANISH I FOR NATIVE SPEAKERS (5-5-0).** Introductory course for students who possess a spoken knowledge of Southwestern U.S. Spanish and who wish to develop competency in reading and writing standard Spanish. Through readings and compositions, the student will be introduced to the conventions of standard Spanish grammar and spelling. Skills: E (SPN 1615)

**SPAN 1511 SPANISH I FOR LAW ENFORCEMENT PERSONNEL (5-5-0).** Study of fundamentals of Spanish: conversation, basic writing, listening and reading comprehension, vocabulary building, grammar and culture. It is highly recommended that students with no previous experience with a foreign language also enroll in a Spanish I lab course.

**SPAN 1512 SPANISH II (5-5-0).** Continuation of SPAN 1511 with more advanced conversation, basic writing, listening and reading comprehension, vocabulary building, grammar, and culture. Prerequisites: Students must have completed a first semester college Spanish course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in SPAN 1512. (SPN 1625)

**SPAN 1512 SPANISH II FOR NATIVE SPEAKERS (5-5-0).** Continuation of SPAN 1511 for Native Speakers. Through readings and compositions, the students will continue to develop competency in reading and writing standard Spanish. Prerequisites: SPAN 1511 or equivalent. (SPN 1625)

**SPAN 2311 SPANISH III (3-3-0).** Advanced Spanish grammar, directed composition, conversation, and discussion of culture based on readings. Class

conducted largely in Spanish. Prerequisites: Students must have completed a second semester college Spanish course of at least four semester hours with a grade of C or better, or have equivalent credit by examination to enroll in SPAN 2311. (SPN 2613)

**SPAN 2312 SPANISH IV (3-3-0).** Continuation of SPAN 2311. Prerequisites: SPAN 2311 with a grade of C or better, or equivalent. (SPN 2623)

**SPAN 2389 SPANISH IV WITH CREATIVE WRITING-POETRY (3-3-0).** Students will learn translation techniques for their own work, translate their poems, and translate the work of others. Performance opportunity available. Co-requisite with ENGL 2307. Prerequisites: ENGL 2307 (or the equivalent) and instructor approval and SPAN 2311 with a grade of C or better or equivalent. (SPN 2633)

## SPEECH

**SPCH 1311 INTRODUCTION TO SPEECH COMMUNICATION (3-3-0).** Theories and practice of speech communication behavior in interpersonal, small group, and public communication situations. The course introduces skills that students can use to communicate more effectively in their everyday lives. Skills: E (SPE 1603)

**SPCH 1315 FUNDAMENTALS OF PUBLIC SPEAKING (3-3-0).** A study of the basic principles and techniques for the research, composition, organization and delivery of speeches for various purposes. The course concentrates on practical experience in developing speaking and listening abilities. Skills: E (SPE 1613)

**SPCH 1318 INTERPERSONAL COMMUNICATION (3-3-0).** Theories and practice in verbal and nonverbal communication with a focus on interpersonal relationships. Emphasis on improving interpersonal skills and helping students increase their communication competence in everyday social exchanges. Skills: E (SPE 1623)

**SPCH 1321 BUSINESS AND PROFESSIONAL SPEAKING (3-3-0).** Theories and practice of speech communication as applied to business and professional situations. The course concentrates on building speaking and delivery skills, as well as critical thinking and analytical skills that focus on how to organize a presentation. Skills: E

**SPCH 1342 VOICE AND DICTION (3-3-0).** Physiology and mechanics of effective voice production with practice in articulation, pronunciation, and enunciation. Emphasis on vocal production in speech making situations while helping students speak more comfortably, efficiently, and effectively. Study of the International Phonetic Alphabet to identify and eliminate individual articulation problems. Skills: E

**SPCH 2333 SMALL GROUP COMMUNICATION (3-3-0).** Analysis of small group communication. Experience participating in small group situations. Interaction, leadership, conformity, feedback, and other concepts viewed in theoretical and practical contexts. The goal is to improve communication competence in small group settings. Skills: E (SPE 1633)

**SPCH 2335 ARGUMENTATION AND DEBATE (3-3-0).** Principles of argumentation and skills of debate, including reasoning, evidence, refutation, and briefing. Skills: E (SPE 2623)

**SPCH 2341 ORAL INTERPRETATION OF LITERATURE (3-3-0).** A study of the techniques of effective oral reading. Includes oral presentation of a variety of literary forms. Skills: E (SPE 1643)

## STUDY SKILLS - DEVELOPMENTAL

**DSSK 0013 BASIC STUDY SKILLS (3-3-0).** Designed to help students develop skills and habits needed for success in college. Covers goal setting; time management; note-taking; following directions; reading, organizing, and summarizing information for study purposes; interpreting graphs; test taking; and using the library. A modified course is offered in a one hour (DSSK 0011) and two hour (DSSK 0012) format. (SSK 0013)

**DSSK 1013 COLLEGE STUDY SKILLS (3-3-0).** An advanced course in learning strategies. Covers principles of learning strategies. Covers academic tasks such as problem-solving; note-taking; following directions; reading, organizing, and summarizing information for study purposes; interpreting graphs; test taking; and using the library. The same course is offered in a one hour (DSSK 0011) and two hour (DSSK 0012) format. Prerequisites: Grade of C or better in DEVR 1313 or one of the following scores: Compass Reading Test 81 or above; CPT Reading Test 78 or above; or Asset Reading Test 41 or above. (SSK 1013)

## SURGICAL TECHNOLOGY

**SRGT 1160 BEGINNING CLINICAL (1-0-4).** A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Insurance: \$12 Prerequisites: BIO 1714; HPRS 1206; BIO 1704; Admission into the Surgical Technology program. Corequisite: SRGT 1409.

**SRGT 1270 INTRAOPERATIVE CIRCULATING CLINICAL (2-0-11).** The purpose of this class is to provide the student opportunities to apply theory, interpersonal and technical skills introduced in SRGT 1470 to practice in the perioperative arena. Entry level competencies in direct patient care include patient preparation, creation and maintenance

of the sterile field, and provision of a safe environment will be developed. Through application of the nursing process, students will implement plans of care for patients during the perioperative period. Insurance: \$12 Prerequisites: Registered Nurse, Graduate Nurse or completed first year of nursing school.

**SRGT 1391 SPECIAL TOPICS IN SURGICAL TECHNOLOGY: ORTHOPEDIC SPECIALTY (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. (SRG 2533)

**SRGT 1391 SPECIAL TOPICS IN SURGICAL TECHNOLOGY: VASCULAR SURGERY SPECIALTY (3-3-0).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. (SRG 2543)

**SRGT 1405 INTRODUCTION TO SURGICAL TECHNOLOGY (4-4-1).** Orientation to surgical technology theory, surgical pharmacology and anesthesia, and patient care concepts. Fee: \$24 Insurance: \$2 Prerequisites: BIO 1714, BIO 1704, and HPRS 1206 and admission into the Surgical Technology program. Corequisite: SRGT 1409.

**SRGT 1409 FUNDAMENTALS OF ASEPTIC TECHNIQUE (4-3-4).** In-depth coverage of aseptic technique principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field. Fee: \$20 Insurance: \$2 Prerequisites: HPRS 1206, BIO 1704, and BIO 1714 and admission into the Surgical Technology program. Corequisite: SRGT 1405.

**SRGT 1441 SURGICAL PROCEDURES I (4-4-0).** Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Prerequisites: SRGT 1405 and SRGT 1409. Corequisite: SRGT 1660. (SRG 2406)

**SRGT 1442 SURGICAL PROCEDURES II (4-4-0).** Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the thoracic, peripheral vascular, plastic/reconstructive, EENT, cardiac, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Prerequisites: SRGT 1441 and SRGT 1660. Corequisite: SRGT 2660. (SRG 2506)

**SRGT 1470 CIRCULATING (4-3-4).** This course is designed to introduce the student to the perioperative arena. Aseptic technique, surgical procedures, surgical preps and positioning, surgical

instrumentation and the role and responsibility of the surgical team is emphasized. Clinical laboratory practice allows students to practice skills learned. Fee: \$10 Insurance: \$12 Prerequisites: Registered Nurse, Graduate Nurse or completed first year of nursing school.

**SRGT 1660 INTERMEDIATE CLINICAL (6-0-21).**

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Insurance: \$12 Prerequisites: SRGT 1405 and SRGT 1409. Corequisite: SRGT 1441. (SRG 2405)

**SRGT 2660 ADVANCED CLINICAL (6-0-29).**

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Insurance: \$12 Prerequisites: SRGT 1441 and SRGT 1660. Corequisite: SRGT 1442. (SRG 2505)

## TECHNICAL COMMUNICATIONS

**BUSI 1304 BUSINESS REPORT WRITING AND CORRESPONDENCE (3-3-0).**

Theory and applications for technical reports and correspondence in business. Investigation into contemporary methods of creating and delivering business reports, proposals, and technical correspondence. Emphasis on computer-aided document creation and dissemination using tools such as Microsoft PowerPoint and Word, Adobe Acrobat, and Macromedia Dreamweaver. Prerequisites: ENGL 2311 or program approval, basic computer familiarity (such as use of a browser and word-processing program), typing skills, and strong writing skills are expected. (TCM 1623)

**ENGL 2311 TECHNICAL & BUSINESS WRITING (3-3-0).**

Principles, techniques, and skills needed to conduct scientific, technical, or business writing. Instruction in the writing of reports, letters, and other exercises applicable to a wide range of disciplines and careers. Emphasis on clarity, conciseness, and accuracy of expression. Research techniques, information design, effective use of graphics, and preparation and presentation of oral reports will be covered. Skills: E Prerequisites: ENGL 1301. (ENGL 1311)

**ETWR 1372 GRAMMAR/STYLE (3-3-0).**

A study of the principles of an effective professional or technical style, stressing clarity, exactness, and readability. Topics include a review of grammar and punctuation, an introduction to copy editing, and editing and revision skills. Prerequisites: ENGL 1301. (TCM 1613)

**ETWR 1391 SPECIAL TOPICS IN ENGLISH TECHNICAL AND BUSINESS WRITING (3-3-0).**

Topics address recently identified current events, skills, knowledges, and/or attitudes and

behaviors pertinent to the technology or occupation and relevant to the professional development of the student, including portfolio development.

Prerequisites: Must have completed core courses in Technical Communication program and have program approval. May be taken a second time for credit when topics vary. (TCM 2713)

**ETWR 2364 PRACTICUM (OR FIELD EXPERIENCE)6ENGLISH TECHNICAL & BUSINESS WRITING (3-1-20).**

Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. This course may be repeated if topics and learning outcomes vary. Prerequisites: Must have completed core courses in Technical Communication and have program approval. (TCM 2733)

**ETWR 2371 EDITING AND LAYOUT:**

**TECHNICAL EDITING (3-3-0).** Editing and layout processes, with emphasis on accuracy and fairness, including the principles and techniques of design. Designed to give students a working understanding of the role of the technical editor as collaborator and decision maker in the entire publication process. Topics include online editing, revising, hypertext, graphics, visual design, and project estimating. Prerequisites: Working knowledge of at least one word processing system, ENGL 1301, and ENGL 2311, or program approval. (TCM 2633)

**ETWR 2372 PRINT DOCUMENTATION (3-3-0).**

Workshop-style course in which students create book-length documents using modern electronic publishing software such as Adobe FrameMaker, Photoshop, Acrobat, and Quadralay WebWorks. Emphasis on teamwork, collaboration, and the project cycle in addition to organization, format, and style of printed technical documents. Prerequisites: ENGL 2311 or program approval, basic computer familiarity (such as use of a word-processing program), typing skills, and strong writing skills are expected. (TCM 2623)

**ETWR 2373 ONLINE DOCUMENTATION (3-3-0).**

Workshop-style course in which students create online helps using RoboHELP and web pages using Dreamweaver as well as other current online information development tools. Presents documentation trends such as structured authoring, single-sourcing, and XML as well as authoring tools such as FrontPage and XMetal and provides resources for further study. Prerequisites: ENGL 2311 or program approval, basic computer familiarity (such as use of a browser and word-processing program), typing skills, and strong writing skills are expected. (TCM 2613)

## TRAVEL AND TOURISM

**HAMG 2230 CONVENTION AND GROUP MANAGEMENT AND SERVICES (2-2-0).** A course in the scope of the various segments of the convention market. Exploration of individual needs and the methods and techniques to provide better service to conventions and groups.

**TRVM 1300 INTRODUCTION TO TRAVEL AND TOURISM (3-3-0).** An overview of the travel industry. Emphasis on travel careers and the impact on society. Student will gain an understanding of qualifications needed for a successful career in the travel and tourism industry. (TRV 1003)

**TRVM 1306 TRAVEL AUTOMATION I (3-2-1).** An introduction to computer training using one of the major computer reservation systems for the travel industry.

**TRVM 1325 EXPOSITION AND TRADE SHOW MANAGEMENT (3-3-0).** A broad based introduction to the principles and skills required for the management of expositions. Examination of the fundamental business philosophy of expositions and their position in the marketplace. An overview of the major issues in exposition management including needs assessment, budget strategies, site selection, floor plan development, contractor relationships, sales and marketing, and related management issues.

**TRVM 1327 HOSPITALITY AND SPECIAL EVENTS (3-3-0).** Focus on planning and managing special events in the meeting planning arena. An overview of the entire sequence of events, from conceptual stage of the first meeting through completion of the event. Emphasis on technical planning skills including site selection, negotiating with suppliers, devising meeting specifications, preparing a budget, and working with facility staff to manage a successful event.

**TRVM 1345 TRAVEL AND TOURISM SALES AND MARKETING TECHNIQUES (3-3-0).** A study of marketing, sales techniques, promotions and advertising theories as applied to the travel and tourism industry. Coverage of the marketing mix in travel, market segmentation, market planning, and the use of advertising and other communication techniques. Emphasis on buyer motivation, telephone sales techniques, profitable travel counseling, and the use of promotional material in selling travel. (TRV 1033)

**TRVM 1391 SPECIAL TOPICS IN TRAVEL & TOURISM6INTERNET TRAVEL SPECIALIST (3-2-2).** This is a web-based training course designed to build familiarity and skills to quickly gather internet travel information and be able to disseminate it to clients. The course covers the World Wide Web, electronic communication functions and business/marketing strategies. All material is Travel Industry relevant.

**TRVM 1391 SPECIAL TOPICS IN TRAVEL AND TOURISM6DESTINATION SPECIALIZATION - CARIBBEAN (3-3-0).** An in-depth study of a select group of new and emerging travel destinations in the Caribbean. Skill development in customized and specialized travel applications for personal travel destinations, cruises, foreign tour groups, and/or convention and meeting planning groups including itinerary planning and sales strategies.

**TRVM 2301 INTRODUCTION TO CONVENTION/ MEETING MANAGEMENT (3-3-0).** Overview of the meetings and convention industry and the various aspects and skills involved in planning and managing meetings and conventions. Emphasis on types of meetings, meeting markets, industry suppliers, budget and program planning, site selection and contract negotiations, registration and housing, food and beverage requirements, function and meeting room setup, and audiovisual requirements.

**TRVM 2305 TRAVEL INDUSTRY MANAGEMENT (3-3-0).** The preparation for mid-management positions in the travel and tourism industry. Topics include business organization, Airline Reporting Corporation requirements and regulations, bookkeeping requirements, equipment decisions and airline computer system affiliation, as well as staff development and employee relations, experiential team building applications, and the interviewing process.

**TRVM 2331 CONVENTION AND EXPOSITION LAW AND ETHICS (3-3-0).** Application of general legal principles and statutory requirements to meetings, conventions, and trade shows. Emphasis on ethical considerations to problems faced by meeting planners, hotels, and convention centers in the negotiations and implementation of agreements for meetings and similar events. Prerequisites: TRVM 2301.

**TRVM 2333 APPLIED CONVENTION/MEETING MANAGEMENT (3-3-0).** Discussion of meeting planning with emphasis on the key areas of meeting management. Topics include needs assessment, identifying meeting objectives, program development, facility selection, negotiations, contracts, meeting and function space setup, promotion and publicity, budgeting, evaluation, and legal issues. Prerequisites: TRVM 2301.

**TRVM 2335 TRAVEL AUTOMATION II (3-2-1).** A continuation of the study of airline computer reservation systems. Emphasis on reserving cars and hotels, using queues, creating passenger profiles, interpreting air fares, rules, and routing, and explaining these to passengers. Prerequisites: TRVM 1306.

**TRVM 2345 ADVANCED TOPICS IN TOURISM (3-3-2).** Provides the student with an in-depth look into the aspects of concierge, destination management companies, incentives meeting and travel planning,

attractions management, special event, festival planning, and eco-tourism. Included are field trips, guest speakers, and case studies. Prerequisites: TRVM 1300 AND TRVM 1306.

**TRVM 2366 PRACTICUM OR FIELD EXPERIENCEóTRAVEL AND TOURISM (3-1-15).** Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the studentsí general and technical course of study. The guided external experiences may be for pay or no pay. This course may be repeated if topics and learning outcomes vary. Prerequisites: Department approval required.

## VISUAL COMMUNICATION DESIGN

**ARTC 1301 BASIC ANIMATION (3-2-4).** Examination of concepts, characters, and storyboards for basic animation production. Emphasis on creating movement and expression utilizing traditional or electronically generated image sequences. An introduction to traditional animation; course includes design, storyboarding, stop-motion and character animation. Gives students a working knowledge of animation techniques necessary to design animated sequences. Fee: \$24 Prerequisites: ARTC 1309 or Program Coordinator approval. (CAT 2033)

**ARTC 1305 BASIC GRAPHIC DESIGN (ELEMENTARY DESIGN) (3-2-4).** A study of two-dimensional (2-D) design with emphasis on the visual communication design process. Topics include basic terminology and graphic design principles. Introduction to the fundamentals of design that lead to the discovery and comprehension of the visual language. Form, balance, structure, rhythm, and harmony are studied in black and white and in color. Various media are used. Foundation laid for advanced courses in design. Fee: \$24 (CAT 1023)

**ARTC 1309 BASIC ILLUSTRATION (BASIC DRAWING) (3-2-4).** Introduction to drawing techniques, skills, and concepts using various black and white media. Emphasis on perspective construction of the human figure and principles of shading as they pertain to the illustration industry. Emphasizes natural and technical drawing, and working in both the studio and the outdoor environment. Foundation laid for advanced courses in illustration. Fee: \$24 (CAT 1013)

**ARTC 1313 COMPUTER PRODUCTION ART I (3-2-4).** An introduction to the fundamentals of using the computer as a primary production tool. Topics include an overview of industry standard software for page layout and design, drawing and image manipulation, and various methods of reproduction for print and electronic delivery. An introduction to QuarkXPressó, Illustratoró, PhotoShopó, and

other tools and skills used to prepare electronic pre-press art for print reproduction with a goal of economy, neatness and faithfulness to the designerís layout or written instructions. Material covered will include graphic terminology, and evolution of the printed piece from concept to final printed project. Fee: \$24 (CAT 1083)

**ARTC 1317 DESIGN COMMUNICATION I (GRAPHIC DESIGN I) (3-2-4).** Study of design development relating to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images and other design elements, and developing computer skills in industry standard computer programs. Study of design development pertaining to color theories, publications, and advertising. Projects will emphasize relating form to content through selection, creation and integration of typographic, photographic, illustrative and design elements. Building on computer skills by executing all concepts using QuarkXPressó, Illustratoró and PhotoShopó. Fee: \$24 Prerequisites: ARTC 1305, ARTC 1313, and ARTC 2317. (CAT 1153)

**ARTC 1321 ILLUSTRATION TECHNIQUES (3-2-4).** A study of illustration techniques in various media. Emphasis on creative interpretation and disciplined draftsmanship for visual communication of ideas. Study of drawing in various contemporary media, from still life, nature, photographs, and the imagination. Emphasizes creative interpretation, memory of observation, and disciplined draftsmanship. Continuation of the study of perspective through the development of perception of appearance and form. Lays groundwork for Advanced Illustration Classes. Fee: \$24 Prerequisites: ARTC 1309 or Program Coordinator approval. (CAT 2013)

**ARTC 1325 INTRODUCTION TO COMPUTER GRAPHICSóPRINT (3-2-4).** A survey of computer design concepts, terminology, processes, and procedures. Topics include computer graphics hardware, electronic images, electronic publishing, vector-based graphics, and interactive multimedia. Fee: \$24

**ARTC 1327 TYPOGRAPHY (3-2-4).** A study of letterforms and typographic concepts as elements of graphic communication. Emphasis on developing a current, practical typographic knowledge based on industry standards. Basic study of hand lettering (calligraphy). The primary letterforms are studied, utilizing various sizes and styles of pens. Emphasis is placed on composing with letters and their applications in cards, posters, books, and other visual presentations. Foundation laid for future study in Typographic Design. Fee: \$24 (CAT 1033)

**ARTC 1341 3-D ANIMATION I (3-2-4).** Instruction in three-dimensional (3-D) modeling and rendering techniques including lighting, staging, camera, and special effects. Emphasis on 3-D modeling building

blocks using primitives to create simple or complex objects. This course introduces and explores three-dimensional animation techniques as used by the multimedia industry today. Story boarding, appropriate stage setting, motion, and production of final renders will be taught. Animated effects such as metamorphosis, explosions, metaballs, and Boolean operations will be demonstrated. Discussions on virtual reality, landscape generators, and necessary hardware for industry compatibility are addressed. Fee: \$24 Prerequisites: ARTC 1345. (CAT 2133)

- ARTC 1345 3-D MODELING AND RENDERING (3-2-4).** A studio course in the theory and technique of three-dimensional (3-D) modeling utilizing appropriate software. Topics include the creation and modification of 3-D geometric shapes; and variety of rendering techniques; and use of camera light sources, texture, and surface mapping. This course will concentrate on three-dimensional software for modeling objects and the use of appropriate rendering techniques. Students will learn about the building blocks of three-dimensional modeling using primitive shapes, vertices, edges, surfaces, and polygonal editors to create more complex objects. A variety of rendering techniques using cameras, lighting sources, textures, surface-mapping and algorithmic rendering esoteric will be explored to produce photo-realistic images. Fee: \$24 (CAT 2113)
- ARTC 1353 COMPUTER ILLUSTRATION (3-2-4).** Exploration of computer programs with applications to illustration and photo manipulation and file management for reproduction. Emphasis on concept development in print and digital delivery. Fee: \$24 Prerequisites: ARTC 1309, ARTC 1321, ARTC 2305.
- ARTC 1391 SPECIAL TOPICS IN GRAPHIC DESIGN, COMMUNICATION ART, AND ILLUSTRATOR® DIGITAL PAINTING AND IMAGING II (3-2-4).** Advanced principles of digital design and electronic painting. Attention to practical and advanced artistic techniques for the graphic, web and digital artist, using tools in both vector and bitmapped based programs. Fee: \$24 Prerequisites: ARTC 2305.
- ARTC 2305 DIGITAL PAINTING AND IMAGING (PHOTOSHOP TECHNIQUES) (3-2-4).** General principles of digital image processing and electronic painting. Emphasis on bitmapped- or raster-based image marking and the creative aspects of electronic illustration for commercial and fine art applications. A solid introduction to Adobe Photoshop® with specific attention to practical and artistic techniques including photo-realistic collage, lighting and shadow effects, predictable and controlled use of filters, a proficiency with layers, channels, and palettes, utilizing actions, selection and masking, type effects, and exchange and export of file formats. Fee: \$24 (CAT 2083)

- ARTC 2311 HISTORY OF COMMUNICATION GRAPHICS (3-3-0).** Survey of the evolution of graphic arts as it relates to the history of art. Topics include formal, stylistic, social, political, economic, and historical aspects. Emphasis on the art movement, schools of thought, individuals, and technology as they interrelate with graphic arts. Survey course of the history of commercial art, starting with the visual communication found in the cave paintings through the creation of the letter form and its expansion due to the Gutenberg Press to the present state of commercial art and its impact on world history as it reaches the masses through various media. This course allows students to better understand the context within which graphic artists work. Fee: \$24 (CAT 1043)
- ARTC 2313 COMPUTER PRODUCTION ART II (3-2-4).** Studio art utilizing layout procedures from thumbnails and roughs to final comprehensive and printing. Emphasis on the effective use of a variety of stylistic approaches to visual communication and the development of effective work habits and studio skills. Advanced projects using computer programs QuarkXPress®, Illustrator® and PhotoShop® with an emphasis on preparing electronic pre-press art for print reproduction, 4-color separation, special effects, stages of the production process, printing economy, and comprehensive application of printing papers. Fee: \$24 Prerequisites: ARTC 1313. (CAT 1093)
- ARTC 2315 MURAL PAINTING (3-2-4).** A comprehensive study of wall graphics including purpose, concept, and design of a mural and its appropriateness to the function of the site. Emphasis on the materials and techniques for preparation of wall surfaces, creation of artwork to scale, and final execution of designs on architectural structures. Fee: \$24 Insurance: \$3 Prerequisites: ARTC 1309, ARTC 1305. (CAT 2063)
- ARTC 2317 TYPOGRAPHIC DESIGN (3-2-4).** Exploration of problems in typographic design including computer generated letterforms as elements of design. Topics include theory and techniques of traditional, contemporary, and experimental typography for advertising and editorial usage. Basic study of the visual form, recognition of type styles and type anatomy that relate to graphic design and communication. Projects will involve the manipulation of type, use of type accessories and choice of type styles most suited to the page layout. Concept production using QuarkXPress®, Illustrator® and PhotoShop®. Fee: \$24 Prerequisites: ARTC 1305, ARTC 1313. (CAT 2023)
- ARTC 2331 ILLUSTRATION CONCEPTS (3-2-4).** Advanced study of different painting media such as digital and traditional tools. Emphasis on conceptualization and composition as they relate to real world assignments. Advance study for exploring the different illustration media and their application in general composition or related visual

communication media such as magazines, books, jacket covers, etc. Emphasis on experimentation and development of solution to visual problems. Fee: \$24 Prerequisites: ARTC 1309, ARTC 1321. (CAT 2043)

- ARTC 2335 PORTFOLIO DEVELOPMENT FOR GRAPHIC DESIGN (3-2-4).** Preparation of a portfolio comprised of completed graphic design class projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study. Fee: \$24 Skills: O Prerequisites: ARTC 2347 and Program Coordinator approval. (ARTC 1391)
- ARTC 2341 3-D ANIMATION II (3-2-4).** Skill development in three-dimensional modeling and rendering techniques using lighting, staging, and special effects for digital output. Emphasis on the production of three-dimensional (3-D) animation as final digital outputting using modeling, rendering, animation, and outputting software. Fee: \$24 Prerequisites: ARTC 1341, ARTC 1345.
- ARTC 2347 DESIGN COMMUNICATION II (GRAPHIC DESIGN II) (3-2-4).** An advanced study of design, development, and art direction. Emphasis on form and content through the selection, creation, and integration of typographic, photographic, illustrative, and design elements pertaining to color theories, publications, outdoor advertising, and package design. Projects will emphasize relating form to content through selection, creation and integration of typographic, photographic, illustrative, and design elements. Concept production using QuarkXPress®, Illustrator® and PhotoShop®. Fee: \$24 Prerequisites: ARTC 1313, ARTC 2313, ARTC 1317, ARTC 2317. (CAT 2053)
- ARTV 1301 ANIMATION 2D (3-2-4).** Skill development in the use of software to develop storyboards and two-dimensional animation including creating, importing, and sequencing media elements to create multimedia presentation. Emphasis on conceptualization, creativity, and visual aesthetics. A course which takes the student through various aspects of animation using a variety of two-dimensional software. Developing concepts, story boarding, and production of several two-dimensional animations will be accomplished. Students will be introduced to and utilize software for creating special effects and use of plug-in filters. Fee: \$24 Prerequisites: ARTC 1301. (CAT 2123)
- IMED 1211 STORYBOARD (2-1-3).** Introduction to the technique of storyboarding including organizing a project's content and arranging it in a visual format. Fee: \$24 Prerequisites: ARTC 1309.
- IMED 1301 INTRODUCTION TO MULTIMEDIA (3-2-4).** A survey of the theories, elements, and hardware/software components of multimedia. Topics include digital image editing, digital sound and video editing, animation, web page development, and interactive presentations.

Emphasis on conceptualizing and producing effective multimedia presentations. Content emphasis will be on introducing the student to the various facets of conceptualizing an effective multimedia presentation, as well as introducing the different software packages available for use. Fee: \$24 (CAT 1373)

- IMED 1305 MULTIMEDIA AUTHORING I (3-2-4).** Instruction in multimedia development with an icon based development tool. Topics include interactivity, branching, navigation, and interface/information design using industry standard authoring software. This course teaches the student how to author multimedia work. Authoring entails the process of defining what media is to be included in the presentation, how the work will be presented, assembling the pieces, and then scripting the presentation. Scripting includes the use of interactivity, navigable controls, combining sound and animation with precise control, and adding text and other digital media from a variety of software that enhances the overall presentations. This course continues after the 2D Interface Design class and provides an in-depth overview of Macromedia Director and the use of Lingo® the intelligent authoring language used in many animation studios today. Fee: \$24 Prerequisites: IMED 1301, ARTC 2305, IMED 1341. (CAT 2383)
- IMED 1316 WEB PAGE DESIGN I (3-2-4).** Instruction in Internet web page design and related graphic design issues including mark-up languages, web sites, Internet access software, and interactive topics and long-term Web design issues will be addressed. An overview of Interactivity and related topics will be discussed. Fee: \$24 Prerequisites: ARTC 2305. (CAT 2383)
- IMED 1341 2-D INTERFACE DESIGN (3-2-4).** Skill development in the interface design process including selecting interfaces that are meaningful to users and relative to a project's content and delivery system. Emphasis on aesthetic issues such as iconography, screen composition, colors, and typography. This course introduces students to concepts and techniques for creating graphics for interactive multimedia user interfaces. Fee: \$24 Prerequisites: ARTC 2305. (CAT 2103)
- IMED 1345 INTERACTIVE MULTIMEDIA I (3-2-4).** Exploration of the use of graphics and sound to create time-based interactive multimedia animations using industry standard authoring software. A solid introduction to techniques of the vector-based motion graphics authoring software. Emphasis on practical skills and knowledge in the creation of interactive new-media projects. Students will also gain an understanding of low bandwidth techniques, streaming media, and audio technologies as they study topics in interactive graphics, animation, training applications, presentations, web based applications, and web site design. Fee: \$24

- IMED 1351 DIGITAL VIDEO (3-2-4).** Skill development in producing and editing video and sound for multimedia productions. Emphasis on the capture, editing, and outputting of video using a desktop digital video workstation. This course will take students through the collecting of raw video and audio footage, image and text compositing it into a final production using basic digital video editing, audio editing, video compositing and special effects. The software used will be primarily Adobe After Effects and Adobe Premier plus Quicktime. Fee: \$24 Prerequisites: IMED 1301, ARTC 2305. (CAT 2193)
- IMED 1391 SPECIAL TOPICS IN EDUCATIONAL/ INSTRUCTIONAL MEDIA TECHNOLOGY/ TECHNICIAN (3-2-4).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Fee: \$24 Prerequisites: Program Coordinator approval.
- IMED 2305 MULTIMEDIA AUTHORING II (3-2-4).** In-depth coverage of programming/scripting using an icon-based authoring system with emphasis on advanced development of interactive multimedia products. This course covers the uses and applications of basic programming techniques in interactive multimedia specific to interface design and functionality. Subjects will include basic programming and data structures, proper syntax, interface control and branching, and file input/output. Further discussions will include more advanced techniques concerning hybrid CD ROM authoring, data management, and object-oriented programming. Fee: \$24 Prerequisites: IMED 1301, ARTC 2305, IMED 1341, IMED 1305. (CAT 2143)
- IMED 2309 INTERNET COMMERCE (3-2-4).** An overview of the Internet as a marketing and sales tool with emphasis on developing a prototype for electronic commerce. Topics include database technology, creating web sites in order to collect information, performing on-line transactions, and generating dynamic content. Fee: \$24 Prerequisites: Web page design experience and familiarity with database concepts or Program Coordinator approval.
- IMED 2311 PORTFOLIO DEVELOPMENT (3-2-4).** Emphasis on preparation and enhancement of portfolio to meet professional standards, professional organizations, presentation skills, and job-seeking techniques. This capstone course enables the student to design a portfolio comprised of completed class projects focused in multimedia. Fee: \$24 Prerequisites: Program Coordinator approval. (CAT 2151)
- IMED 2315 WEB PAGE DESIGN II (3-2-4).** A study of hypertext mark-up language (HTML) and interesting layout techniques for creating engaging, well designed web pages. Emphasis on identifying the target audience and producing a web site

according to physical and technical limitations, cultural appearance, and legal issues. A course applying design principles and techniques to concept, theme, development, and Dynamic HTML (DHTML) enhancement of Web sites. Specific attention will be given to color theory, copy writing, animation, JAVA script, cascading style sheets, and the development of a practical and functional graphic interface. A comprehensive use of HTML tags will be used in conjunction with up-to-date authoring software to publish a complete Web site for a corporate identity. Concepts of designing for electronic advertising and promotion will be discussed. Fee: \$24 Prerequisites: ARTC 2305, IMED 1316. (CAT 2183)

- IMED 2341 ADVANCED DIGITAL VIDEO (3-2-4).** Instruction in the use of advanced digital video techniques for post-production. Emphasis on generation and integration of special effects, 2-D animation, and 3-D animation for film, video, CD-ROM, and the Internet. Exploration of new and emerging compression and video streaming technologies. Fee: \$24 Prerequisites: IMED 1351.
- IMED 2388 INTERNSHIP/ EDUCATIONAL/ INSTRUCTIONAL MEDIA TECHNOLOGY/ TECHNICIAN (3-1-12).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Prerequisites: Program Coordinator approval. (CAT 2093)

## VOCATIONAL NURSING

- VNSG 1115 DISEASE CONTROL AND PREVENTION (1-1-0).** Study of the general principles of prevention of illness and disease, basic microbiology, and the maintenance of aseptic conditions. Topics will include characteristics of microorganisms; types of microorganisms; the chain of infection; the actions of pathogens in the body; body's defenses against infection; immune process; resistance and susceptibility to infection; infection and the nursing process; handwashing and standard precautions for blood and body fluid; and purposes and types of isolation. Prerequisites: BIO 1714, HPRS 1206 or HPRS 2300 and department approval required.
- VNSG 1160 INTRODUCTORY CLINICAL FOR VOCATIONAL NURSING (1-0-4).** Provides the beginning vocational nursing student clinical opportunities to practice therapeutic communication skills and basic nursing skills within the framework of the nursing process. The basic concepts of critical thinking and beginning caring behaviors are

emphasized as the student explores the roles of the vocational nurse. Clinical emphasis is directed toward providing basic care of the elderly client. Insurance: \$12 Prerequisites: BIO 1714, HPRS 1206 or HPRS 2300 and department approval required.

**VNSG 1219 PROFESSIONAL DEVELOPMENT (2-2-0).** Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multi-disciplinary health care team, professional organizations, and continuing education. The course will also include content related to beginning leadership and management skills and legal and ethical concerns affecting the practice of vocational nursing. Prerequisites: VNSG 1510 and VNSG 2462 and department approval required.

**VNSG 1230 MATERNAL-NEONATAL NURSING (2-2-0).** Utilization of the nursing process in the assessment and management of the childbearing family. Emphasis on the bio-psycho-socio-cultural needs of the family during the phases of pregnancy, childbirth, and the neonatal period including abnormal conditions. Prerequisites: VNSG 1510 and 2462 and department approval required.

**VNSG 1234 PEDIATRICS (2-2-0).** Study of childhood diseases and childcare from infancy through adolescence. Focuses on the care of well and ill child utilizing the nursing process. Disease processes are considered within the framework of the growth and development of the well and ill child. Emphasis is placed on learning the critical thinking skills required to provide nursing care to children and families experiencing acute, long-term and/or terminal illnesses. Prerequisites: VNSG 1510 and 2462 and department approval required.

**VNSG 1304 FOUNDATIONS OF NURSING (3-3-0).** Introduction to the nursing profession including history, standards of practice, legal and ethical issues and the role of the vocational nurse. Topics include the vocational nurse as provider of care, coordinator of care and member of a profession; mental health; therapeutic communication; cultural and spiritual diversity; introduction to the nursing process; elements of critical thinking; elements of caring behaviors; holistic awareness-human needs and stress and adaptation; elements of professional behavior to include accountability, responsibility, and honesty. Also included is an introduction to the client (patient) care team and the health care system: agencies, financing, and trends. Prerequisites: BIO 1714, HPRS 1206 or HPRS 2300 and department approval required.

**VNSG 1400 NURSING IN HEALTH AND ILLNESS I (4-4-1).** Introduction to general principles of growth and development, primary health care needs of the client across the life span, and therapeutic nursing interventions. Other topics will include concepts of health and illness, adjusting to loss, care of persons with chronic illnesses and rehabilitative needs, and an introduction to principles of health teaching. Prerequisites: BIO 1714, HPRS 1206 or HPRS 2300 and department approval required.

**VNSG 1423 BASIC NURSING SKILLS (4-3-3).** Mastery of entry level nursing skills and competencies for a variety of health care settings. Utilization of the nursing process for all nursing interventions. Fee: \$24 Insurance: \$2 Prerequisites: BIO 1714, HPRS 1206 or HPRS 2300 and department approval required.

**VNSG 1461 INTERMEDIATE CLINICAL FOR VOCATIONAL NURSING (4-0-16).** Provides the vocational nursing student clinical opportunities to utilize the nursing process to implement therapeutic nursing interventions in the care of middle aged and elderly persons having common health care problems. The roles of the vocational nurse and the concepts of critical thinking and caring are emphasized. Insurance: \$12 Prerequisites: HPRS 1206, HPRS 2300, VNSG 1304, VNSG 1400, VNSG 1115, VNSG 1423, VNSG 1160 and department approval.

**VNSG 1509 NURSING IN HEALTH AND ILLNESS II (5-5-0).** Introduction to common health problems requiring medical and surgical interventions. The course focuses on health promotion and health maintenance of middle-aged and elderly persons. Application of the nursing process and critical thinking skills to provide nursing care to diverse clients while offering opportunities for collaboration with members of the multidisciplinary health care team. Content includes common, but specific medical/surgical problems, sociological needs, the adaptation to internal and external influences. Prerequisites: HPRS 1206, HPRS 2300, VNSG 1304, VNSG 1400, VNSG 1115, VNSG 1423, VNSG 1160 and department approval.

**VNSG 1510 NURSING IN HEALTH AND ILLNESS III (5-5-0).** Continuation of Nursing in Health and Illness II. Further study of common medical-surgical problems of the client including concepts of mental illness. Incorporates knowledge necessary to make the transition from student to graduate vocational nurse. Emphasis will be placed on commonly occurring young adult medical-surgical problems. Prerequisites: VNSG 1509, VNSG 2331, VNSG 1461 and department approval required.

**VNSG 2331 ADVANCED NURSING SKILLS (3-2-2).** Mastery of advanced level nursing skills and competencies in a variety of health care settings utilizing the nursing process as a problem-solving tool. Fee: \$24 Insurance: \$2 Prerequisites: HPRS 1206, HPRS 2300, VNSG 1304, VNSG 1400, VNSG 1115, VNSG 1423, VNSG 1160 and department approval required.

**VNSG 2462 ADVANCED CLINICAL FOR VOCATIONAL NURSING (4-0-16).** Provides the vocational nursing student clinical opportunities to apply therapeutic communication skills and administer therapeutic nursing interventions to young adult and groups of medical-surgical clients and clients experiencing mental illnesses. The roles of the vocational nurse and the concepts of critical thinking and caring are emphasized. Insurance: \$12 Prerequisites: VNSG 1509, VNSG 2331, VNSG 1461 and department approval required.

**VNSG 2463 MATERNAL-CHILD AND LEADERSHIP CLINICAL VOCATIONAL NURSING (4-0-16).** Provides the vocational nursing student clinical opportunities to care for children and the childbearing family in acute care and community settings while utilizing therapeutic communication skills and therapeutic nursing interventions. The vocational nursing role of coordinator of care is expanded as the student develops beginning leadership and management skills in selected clinical environments. The concepts of critical thinking and caring are emphasized. Insurance: \$12 Prerequisites: VNSG 1510, VNSG 2462, Department approval required.

## WELDING TECHNOLOGY (See also Jewelry)

**NDTE 1405 INTRODUCTION TO ULTRASONIC TESTING (4-3-3).** A theoretical study and practical application of ultrasonic testing methods, including the study of ultrasonic capabilities and limitations, equipment, proper application, and written practices and procedures. Concentration will be given to acoustic waveforms, soundbeam divergence, and the relationships between time, distance, and amplitude. Teaches oscilloscope operation using delay, sweep, gain, and other functions. Through laboratory practice with purposely-flawed weld samples, an understanding will be imparted of longitudinal mode geometry in both contact and immersion testing. Insurance: \$3 (WLDG 1473)

**NDTE 1454 INTERMEDIATE ULTRASONICS (4-3-3).** Basic theory and applications of the ultrasonic techniques of materials testing covering the theoretical material from the certification test for Ultrasonic Level I American Society of Non-Destructive Testing. Prerequisites: NDTE 1405 or instructor approval. (WLDG 1474)

**NDTE 2401 ADVANCED ULTRASONIC TESTING (4-3-3).** Designed to strengthen the student's knowledge and skills in ultrasonic testing. Emphasis is on welded plate, pipe, and TKY connections, immersion testing, written practices, and procedures. Prerequisites: NDTE 1454 Insurance: \$3 (WLDG 1474)

**PPPB 2401 PIPE FABRICATION AND INSTALLATION I (4-3-3).** Skill development in pipe fabrication and pipe supports. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 2406 OR WLDG 1435.

**WLDG 1191 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST (1-1-1).** Course designed for the student who wants to pursue special topics and directed studies in welding, joining, or materials technology. Topics vary. May be substituted for required courses in some degree and certificate plans with approval from Program Coordinator. Fee: \$24 Prerequisites: Instructor approval. (WLD 2401)

**WLDG 1391 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST 6 COLD FORMING TECHNIQUES (3-2-4).** A study of joining and forming without heat. Includes various methods of surface enhancement such as engraving, roller embossing, repousse, chasing, and patination. Cold forging, construction of hinges and clasps, riveting, hammered inlay, and the use of taps and dies are also taught. Fee: \$24 Insurance: \$3 Prerequisites: Instructor approval required. (WLD 2433)

**WLDG 1291 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST (2-2-1).** Course designed for the student who wants to pursue special topics and directed studies in welding, joining, and materials technology. Topics vary. May be substituted for required courses in some degree and certificate plans with approval from Program Coordinator. Fee: \$24 Prerequisites: Instructor approval. (WLD 2422)

**WLDG 1391 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST (3-2-4).** Course designed for the student who wants to pursue special topics and directed studies in welding, joining, and materials technology. Topics vary. May be substituted for required courses in some degree and certificate plans with approval from Program coordinator. Fee: \$24 Insurance: \$3 Prerequisites: Instructor approval. (WLD 2433)

**WLDG 1405 ART METALS (4-3-3).** Fundamentals of conceptualizing and producing utilitarian items on ferrous and non-ferrous metals. Skill development through the techniques of sinking, raising, repousse, and piercing to create objects from flat sheet. Topics include brazing, soldering, tinning, polishing, and tool making. Fee: \$24 Insurance: \$3 (WLDG 1471)

**WLDG 1413 INTRODUCTION TO BLUEPRINT READING FOR WELDERS (4-3-3).** A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes, including systems of measurement and industry standards. Interpretation of plans and drawings used by industry. Prerequisites: WLDG 1428 and WLDG 1457 or Instructor approval. (WLD 2064)

**WLDG 1417 INTRODUCTION TO LAYOUT AND FABRICATION (4-3-3).** A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes used in construction. Fee: \$24 Insurance: \$3 (WLD 2104)

**WLDG 1425 INTRODUCTION TO OXY-FUEL WELDING AND CUTTING (4-3-3).** An introduction to oxy-fuel welding and cutting, including history and future in welding, safety, setup and maintenance of oxy-fuel welding and cutting equipment and supplies. Fee: \$24 Insurance: \$3 (WLD 1224)

- WLDG 1427 WELDING CODES&CERTIFICATION (4-3-3).** Prepares the student for certification tests required by industry. Includes the study of welding codes and their development in accordance with structural standards, welding processes, destructive and nondestructive test methods. This is the Capstone Experience course for the Code Welding degree and for the Art Metals degree. Fee: \$24 Insurance: \$3 Prerequisites: Instructor approval. (WLDG 2409)
- WLDG 1428 INTRODUCTION TO SHIELDED METAL ARC WELDING (4-3-3).** An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welds in various positions. Fee: \$24 Insurance: \$3 (WLD 1214)
- WLDG 1434 INTRODUCTION TO GAS TUNGSTEN ARC (GTAW) WELDING (4-3-3).** An introduction to the principles of Gas Tungsten Arc Welding, Gas Metal Arc Welding, and Flux-Cored Arc Welding; setup and use of equipment, and safe use of tools and equipment. Welding instruction in various positions and joint designs. Fee: \$24 Insurance: \$3 (WLD 1244)
- WLDG 1435 INTRODUCTION TO PIPE WELDING&API 1104 (4-3-3).** An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G, 2G, and 5G using various electrodes, in accordance with American Petroleum Institute API-1104: Standard for Welding Pipelines and Facilities. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1457. (WLD 2214)
- WLDG 1437 INTRODUCTION TO METALLURGY (4-3-3).** A study of ferrous and nonferrous metals from the ore to the finished product. Emphasis on metal alloys, heat treating, hard surfacing, welding techniques, forging, foundry processes, and mechanical properties of metal, including hardness, machinability, and ductility. Insurance: \$3 (WLD 2054)
- WLDG 1442 METAL SCULPTURE (4-3-3).** Instruction in the techniques and methods of art metals and metalsmithing. Skill development in welding, brazing, and finishing techniques. Topics address work ethics, artistic styles, and professionalism. Students will be urged to develop individualized work ethics and artistic styles. All welding, brazing, and finishing techniques will be open to the student's discretion. This is the Capstone Experience course for the Art Metals Certificate. Fee: \$24 Insurance: \$3 (WLDG 1472)
- WLDG 1453 INTERMEDIATE LAYOUT AND FABRICATION (4-3-3).** A continuation of WLDG 1417. Covers design and production of shop layout, fabrication, and field erection of critical building and bridge moment connections. Emphasis placed on symbols, blueprints, and written

specifications. This is the Capstone Experience course for the Plate Welding Certificate. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1457. (WLD 2144)

- WLDG 1457 INTERMEDIATE SHIELDED METAL ARC WELDING (SMAW) (4-3-3).** A study of the production of various fillet and groove welds. Preparation of specimens for testing in test positions. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1428 (WLD 1234)
- WLDG 1491 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST (4-3-3).** Course designed for the student who wants to pursue special topics and directed studies in welding, joining, and materials technology. Topics vary. May be substituted for required courses in some degree and certificate plans with approval from Program Coordinator. Fee: \$24 Insurance: \$3 Prerequisites: Instructor approval. (WLD 2394)
- WLDG 1491 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST& COPPERSMITHING (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Course designed for developing skills in the use of copper for sinking, raising, and repousse to create objects from flat sheets. Topics will include soldering polishing and surface treatment to produce utilitarian items in copper. Fee: \$24 Insurance: \$3
- WLDG 1491 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST& ARCHITECTURAL HARDWARE (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Emphasis on the manufacture of architectural hardware and ornament encountered in the blacksmithing and metalsmithing industries. Fee: \$24 Insurance: \$3
- WLDG 1491 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST& CHASING AND REPOUSSAGE (4-3-3).** Topics address recently identified current events, skills, knowledge in chasing and repoussage and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Fee: \$24 Insurance: \$3
- WLDG 1491 SPECIAL TOPICS IN WELDER/ WELDING TECHNOLOGIST& INDUSTRY PRACTICES (4-3-3).** Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Topics initiated by students on current industry practices with instructor approval. Designed to acquaint the student with current needs of industry. Where applicable, field

trips to area installations to observe the manufacturing applications. Information theory on market analysis for students defining career choices. Business planning for those desiring to become entrepreneurs. Fee: \$24 Insurance: \$3

**WLDG 1491 SPECIAL TOPICS IN WELDER/WELDING TECHNOLOGIST&METAL DESIGN & FUNCTION (4-3-3).** Course designed for developing skills in designing and fabricating functional metal objects using and aesthetic skills in the spirit of quality craftsmanship. Students will utilize various metal-working and welding techniques as they apply to fabricating realistic projects, with a special emphasis on concept, design, and safety. Fee: \$24 Insurance: \$3

**WLDG 1491 SPECIAL TOPICS IN WELDER/WELDING TECHNOLOGIST&TOOL MAKING (4-3-3).** Topics address recently identified current events, skills, knowledge in tool making and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Fee: \$24 Insurance: \$3

**WLDG 2406 INTERMEDIATE PIPE WELDING& ASME SECTION IX (4-3-3).** A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G, and 6G using various electrodes in accordance with the American Society of Mechanical Engineers' Boiler and Pressure Vessel Code, Section IX.. Topics covered include electrode selection, equipment setup, and safe shop practices. This is the Capstone Experience course for the Pipe Welding Certificate. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1457. (WLD 2234)

**WLDG 2411 PREPARATION FOR WELDING INSPECTION CERTIFICATION (4-3-3).** Preparation of students for certification as welding inspectors, including accepted testing requirements and procedures, measurement systems, duties and responsibilities of inspectors, destructive and nondestructive testing, quality assurance/quality control, welding codes and blueprints, procedures, and case studies. An overview of welding tools and equipment, metallurgy, chemistry, and joint design. This is the Capstone Experience course for the Inspection Certificate. Insurance: \$3 Prerequisites: Instructor approval. (WLD 2134)

**WLDG 2413 WELDING USING MULTIPLE PROCESSES (4-3-3).** Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: Oxy-fuel cutting and welding, Shielded Metal Arc Welding, Gas Metal Arc Welding, Flux-cored Arc Welding, Gas Tungsten Arc Welding, or any other approved welding process. Fee: \$24 Insurance: \$3 (WLD 1094)

**WLDG 2433 METALSMITHING (4-3-3).** A study of welding techniques for ferrous and non-ferrous metals. Skill development in brazing, forging, and welding in all processes to include coal and gas forges. Emphasis on combining metals and processes to demonstrate technique versatility. Students will be urged to produce individualized items or objects of junction. Combining metals and processes will be encouraged in order to give a strong understanding of the versatility of these techniques and materials and the vast number of objects that can be created. Fee: \$24 Insurance: \$3 (WLDG 2472)

**WLDG 2435 ADVANCED LAYOUT AND FABRICATION (4-3-3).** A continuation of the Intermediate Layout and Fabrication course which covers production and fabrication of layout tools and processes. Emphasis on application of fabrication and layout skills. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1453

**WLDG 2440 STUDIO PROBLEMS (4-3-3).** Project development in an open-studio atmosphere. Individualized instruction to encourage skill combinations and experimentation. Topics include portfolio preparation and presentation. Students will be encouraged to combine skills, materials and techniques and to experiment freely. Instruction will be offered in an individualized format according to project demands. Portfolio presentation will be the final project. This is the Capstone Experience course for the Metal Sculpture certificate. Fee: \$24 Insurance: \$3 Prerequisites: Department approval. (WLDG 2470)

**WLDG 2441 POWER HAMMER (4-3-3).** Skill development in pneumatic, treadle, and trip hammer techniques. Topics include forging various steel alloys and larger stock configurations, tool making, machine care, and hardware. Projects to create functional esthetic objects using power hammers. Fee: \$24 Insurance: \$3 Prerequisites: Department approval. (WLDG 2475)

**WLDG 2450 ORBITAL TUBE WELDING (4-3-3).** An overview of welding in the semi-conductor and related industries. Special emphasis on the disciplines of orbital tube welding, including cutting, facing, and development of weld procedures. This is the Capstone Experience course for the Ultrahigh Purity Piping Certificate. Prerequisites: WLDG 1434. (WLDG 2474)

**WLDG 2451 ADVANCED GAS TUNGSTEN ARC WELDING (4-3-3).** Advanced topics in GTAW welding, including welding in various positions and directions on sheetmetal, pipe, tube and exotic materials. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1434.

**WLDG 2473 MAINTENANCE AND REPAIR (4-3-3).** Designed to acquaint the student with repair of structural steel, such as pipe, plate, beams, angles, automotive, and heavy equipment. Emphasis on identifying the material from parts are made and the

proper welding procedures to eliminate distortion from the welding process. Fee: \$24 Insurance: \$3 Prerequisites: WLDG 1428 and WLDG 1457 or Instructor approval. (WLD 2094)

**WLDG 2488 INTERNSHIP6WELDER/WELDING TECHNOLOGIST (4-1-13).** An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Insurance: \$3 Prerequisites: Department approval.

## WOMEN'S STUDIES

**WMS 1613 IMAGES OF WOMEN (3-3-0).** A multidisciplinary study of the evolution of women's roles and images in society.

## WRITING - DEVELOPMENTAL

**DEVW 0041 FUNDAMENTALS OF WRITING LAB (1-0-2).** Designed for students currently registered in DEVW 0403 to promote greater writing improvement. Individualized and group setting providing additional practice and explanation to supplement DEVW 0403. This lab is mandatory for all DEVW 0403 sections. This lab is combined with DEVW 0403. (DVW 0041)

**DEVW 0141 WRITING SKILLS I LAB (1-0-2).** Designed for students currently registered in DEVW 1403, Writing Skills I course, to promote greater writing improvement. Individualized and group setting providing additional practice and explanation to supplement DEVW 1403. This lab is mandatory for all DEVW 1403 sections. (DVW 0141)

**DEVW 0241 WRITING SKILLS II LAB (1-0-2).** Designed for students currently registered in DEVW 1413, Writing Skills II Lab, to promote greater writing improvement. Individualized and group setting providing additional practice and explanation to supplement DEVW 1413. (DVW 0241)

**DEVW 0401 FUNDAMENTALS OF WRITING (1-1-0).** Focuses on the basic errors of grammar, but includes composition of complete sentences, paragraphs, and simple essays as well. Attention paid to correct punctuation and spelling. Individualized and group instruction in a classroom or workshop setting. Repeatable for credit. Prerequisites: Placement by the following scores: COMPASS Writing Test 0-37 and Reading Test 36-59; CPT Writing Test 0-62; ASSET Writing Test 23-34. (DVW 0401)

**DEVW 0402 FUNDAMENTALS OF WRITING (2-2-0).** Focuses on the basic errors of grammar, but includes composition of complete sentences, paragraphs, and simple essays as well. Attention paid to correct punctuation and spelling. Individualized and group instruction in a classroom or workshop setting. Repeatable for credit. Prerequisites: Placement by the following scores: COMPASS Writing Test 0-37 and Reading Test 36-59; CPT Writing Test 0-62; ASSET Writing Test 23-34. (DVW 0402)

**DEVW 0403 FUNDAMENTALS OF WRITING (3-3-1).** Focuses on the basic errors of grammar, but includes composition of complete sentences, paragraphs, and simple essays as well. Attention paid to correct punctuation and spelling. Individualized and group instruction in a classroom or workshop setting. A modified course is offered in a one hour (DEVW 0401) and two hour (DEVW 0402) format. A one-hour mandatory lab is required. Prerequisites: Placement by the following scores: COMPASS Writing Test 0-37 and Reading Test 36-59; CPT Writing Test 0-62; ASSET Writing Test 23-34. (DVW 0403)

**DEVW 1401 WRITING SKILLS I (1-1-0).** A review of grammar, sentence structure punctuation, spelling, and words often confused. Introduction to writing paragraphs and essays. Emphasis on planning, writing, and revising of assignments. Individualized and group instruction in a classroom or workshop setting. Prerequisites: Grade of C or better in DEVW 0403 Fundamentals of Writing or placement by one of the following scores: COMPASS Writing Test 38-58; CPT Writing Test 63-72; ASSET Writing Test 35-38. (DVW 1401)

**DEVW 1402 WRITING SKILLS I (2-2-0).** A review of grammar, sentence structure, punctuation, spelling, and words often confused. Introduction to writing paragraphs and essays. Emphasis on planning, writing, and revising of assignments. Individualized and group instruction in a classroom or workshop setting. Prerequisites: Grade of C or better in DEVW 0403 Fundamentals of Writing or placement by one of the following scores: COMPASS Writing Test 38-58; CPT Writing Test 63-72; ASSET Writing Test 35-38. (DVW 1402)

**DEVW 1403 WRITING SKILLS I (3-3-1).** A review of grammar, sentence structure, punctuation, spelling, and words often confused. Introduction to writing paragraphs and essays. Emphasis on planning, writing, and revising of assignments. Individualized and group instruction in a classroom or workshop setting. A modified course is offered in a one hour (DEVW 1401) and two hour (DEVW 1402) format. Prerequisites: Grade of C or better in DEVW 0403 Fundamentals of Writing or placement by one of the following scores: COMPASS Writing Test 38-58; CPT Writing Test 63-72; ASSET Writing Test 35-38. (DVW 1403)

- DEVW 1403 WRITING SKILLS I PAIRED WITH DEVR 1303 READING SKILLS I (3-3-1).** Designed to take advantage of the interrelationships between reading and writing. Paired courses must be taken concurrently. Improvement of comprehension skills, vocabulary development and rate of reading combined with a review of grammar, sentence structure, punctuation, spelling, and words often confused. Introduction to writing paragraphs and essays. Prerequisites: Grade of C or better in DEVR 0303 and DEVR 0403 or one of the following scores in reading and writing: COMPASS Reading Test 50-67 and Writing Test 38-58; CPT Reading Test of 39-57 and Writing Test 63-72; ASSET Reading Test 33-36 and Writing Test 35-38. (DVR 1303)
- DEVW 1411 WRITING SKILLS II (1-1-0).** Writing with an emphasis on different methods of developing compositions. Advanced review of grammar, sentence structure, punctuation, spelling, and words often confused. Emphasis on planning, writing, and revising of assignments. Individualized and group instruction in a classroom or workshop setting. Prerequisites: Grade of C or better in DEVW 1403 or one of the following scores in writing: COMPASS Writing Test 59-81; CPT Writing Test 73-85; ASSET Writing Test 39-45. (DVW 1411)
- DEVW 1412 WRITING SKILLS II (2-2-0).** Writing with an emphasis on different methods of developing compositions. Advanced review of grammar, sentence structure, punctuation, spelling, and words often confused. Emphasis on planning, writing, and revising of assignments. Individualized and group instruction in a classroom or workshop setting. Prerequisites: Grade of C or better in DEVW 1403 or one of the following scores in writing: COMPASS Writing Test 59-81; CPT Writing Test 73-85; ASSET Writing Test 39-45. (DVW 1412)
- DEVW 1413 WRITING SKILLS II (3-3-0).** Writing with an emphasis on different methods of developing compositions. Advanced review of grammar, sentence structure, punctuation, spelling, and words often confused. Emphasis on planning, writing, and revising of assignments. Individualized and group instruction in a classroom or workshop setting. A modified course is offered in a one hour (DEVW 1411) and two hour (DEVW 1412) format. Prerequisites: Grade of C or better in DEVW 1403 or one of the following scores in writing: COMPASS Writing Test 59-81; CPT Writing Test 73-85; ASSET Writing Test 39-45. (DVW 1413)
- DEVW 1413 WRITING SKILLS II (3-3-0).** This course is also offered as a learning community where Writing Skills II students can fulfill their TASP requirements and have an opportunity to earn college credit in ENGL 1301. Prerequisites: Must pass reading portion of the TASP/TASP alternative or a Grade of C or better in DEVR 1313; Grade of B or better in DEVW 1403; and one of the following scores in writing: TCOM 51-58, T-CPT/Accuplacer 76-79, T-ASSET 38-39.