Course Descriptions Chapter 5 •

## TSI College Readiness Standards and Lee College Certificates and Degrees Fall 2006

Degree/Certificate	TSI College Readiness Required		
	Read	Write	Math
Certificates of Completion:			
Law Enforcement	yes	yes	no
All other certificates	no	no	no
All AA, AAT and AS Degrees:	yes	yes	yes
AAS Degrees:			
Accounting Technology	yes	yes	no
Alcohol and Drug Abuse Counseling	yes	yes	no
Computer Information Technology	yes	yes	yes
Computer Maintenance Technology	yes	yes	no
Cosmetology Instructor	yes	yes	no
Drafting Technology	yes	yes	no
E-Business Web Developer Specialist	yes	yes	no
Electrical Technology	yes	yes	no
Health Information Technology	yes	yes	no
Instrumentation Technology	yes	yes	no
Law Enforcement	yes	yes	no
Legal Assistant	yes	yes	no
Machine Shop	yes	yes	no
Machine Shop-Millwright	yes	yes	no
Management	yes	yes	no
Nursing (RN)	yes	yes	no
Personal Computer Support Specialist	yes	yes	no
Pipefitting	yes	yes	no
Process Technology	yes	yes	no
Professional Office Technology	yes	yes	no
Transitional Nursing (RN)	yes	yes	no
Welding Technology	yes	yes	no

## Notes:

<sup>1.</sup> While there is no TSI reading requirement for certificate programs, there is a College graduation requirement. (See p. 31)

<sup>2.</sup> The core curriculum for the AAS degree allows students the option of completing a natural science or math course. Students who select the math option must meet the TSI College Readiness standard in math. (See Course Options for Core Curriculum, p. 36)

 $<sup>\</sup>Omega$  indicates courses taught with optional honors contracts.

 $<sup>\</sup>Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### ACCT 2401

### Principles of Accounting I - Financial

This course introduces accounting concepts, principles, and procedures with an emphasis on financial accounting statements for corporations and accounting processes for a service and merchandise enterprise. The course focuses on elements of the balance sheet and income statement including current, plant and intangible assets, deferrals, accruals, current and long-term liabilities, and stock transactions. In addition, ethics, accounting systems and control, short and long-term securities are also studied. This course has a computerized lab, utilizing interactive financial accounting software. Note: Students who have not had high school accounting or have not worked in accounting may wish to take ACNT 1303 Introduction to Accounting I, before taking this course.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent

#### ACCT 2402 Ω

## Principles of Accounting II-Managerial

This course emphasizes managerial accounting concepts, including a study of cost behavior, budgeting, cost-volume profit analysis, manufacturing cost accounting, variance analysis, and cost controls. Tax and management decisions, cash flows, responsibility accounting, ethics and corporate structure analysis are also studied. A research component is required for honors credit. This course has a computerized lab, utilizing interactive managerial accounting software.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: ACCT 2401, READ 301 or equivalent

### **ACNT 1303**

## Introduction to Accounting I

A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

#### **ACNT 1311**

## Introduction to Computerized Accounting

Introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package. Students will utilize an integrated general ledger software package, including accounts receivable, accounts payable, inventories, and payroll systems. (Fall only)

 $Lecture\ Hrs = 2$ ,  $Lab\ Hrs = 2$ 

Prerequisite: ACCT 2401, READ 301 or equivalent

#### **ACNT 1313**

## **Computerized Accounting Applications**

A study of utilizing the computer to develop and maintain accounting record keeping systems, make management decisions, and process common business applications with emphasis on utilizing a spreadsheet and/or data base package/program. (Spring only)

 $Lecture\ Hrs = 2$ ,  $Lab\ Hrs = 2$ 

Prerequisite: ACCT 2401, READ 301 or equivalent

## ACNT 1329

### Payroll and Business Tax Accounting

A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and computerized environment. Students will learn to process payroll and maintain personnel and payroll information required by current laws. Course will also include accounting for franchise taxes, sales tax, and an overview of taxes relating to partnerships and corporations. (Spring only)

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ACCT 2401, READ 301 or equivalent

### **ACNT 1331**

#### Federal Income Tax: Individual

A study of the laws currently implemented by the IRS, providing a working knowledge of preparing taxes for the individual. The course focuses on identifying the determinants of taxable income, selection and use of proper forms, and compilation of income tax due. The use of computer tax program is included.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 301 or equivalent

## ACNT 2302

#### **Accounting Capstone**

A learning experience that allows students to apply broad knowledge of the accounting profession through discipline specific projects involving the integration of individuals and teams performing activities to simulate workplace situations.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ACNT 2303, READ 301 or equivalent

#### ACNT 2303

## Intermediate Accounting I

Critical analysis of generally accepted accounting principles, concepts, and theory underlying the preparation of financial statements. Emphasis on current theory and practice. In addition, this course includes the study of present and future value concepts; current, plant, and intangible assets; some payroll theory; other financial accounting topics. (Fall only)

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ACCT 2402, READ 301 or equivalent

## ACNT 2304

## Intermediate Accounting II

Continued in-depth analysis of generally accepted accounting principles underlying the preparation of financial statements including comparative analysis and statement of cash flow. In addition, special emphasis on corporation accounting, stockholder's equity, retained earnings, current and long-term liabilities, pensions, statement of cash flows, and other financial topics. (Spring only)

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: ACNT 2303, READ 301 or equivalent

## ACNT 2309

## **Cost Accounting**

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. The course also includes cost allocations, break-even analysis, profit-volume ratio, standard, direct and variable costing. (Fall only)

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ACCT 2402, READ 301 or equivalent

### **ACNT 2386**

# Internship—Accounting Technology/Technician and Bookkeeping

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Mentored and supervised by a work-place employee, the student achieves objectives that are developed and documented by the college. The experience may be paid or unpaid, MUST be in accounting related job for a minimum of 13 hours per week. Students must have an approved job site by the second class of the semester. As a capstone elective, this class must be taken in the student's last semester of the Accounting Technician Certificate.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 13 Prerequisite: ACCT 2401, READ 301 or equivalent

#### **ACNT 2387**

# Internship-Accounting Technology/Technician and Bookkeeping

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college. The experience may be paid or unpaid, MUST be in accounting related job for a minimum of 13 hours per week. Students must have an approved job site by the second class of the semester. As a capstone elective, this class must be taken in the student's last semester of the Advanced Accounting Technician Certificate.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 13 Prerequisite: ACCT 2402, READ 301 or equivalent

### **ACNT 2389**

#### Internship—Accounting

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college. The experience may be paid or unpaid, MUST be in accounting related job for a minimum of 13 hours per week. Students must have an approved job site by the second class of the semester. As a capstone elective, this class must be taken in the student's last semester of the AAS Accounting Technology degree.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 13 Prerequisite: ACNT 2303, READ 301 or equivalent

#### **AGRI 2317**

## **Introduction to Agricultural Economics**

An introduction to the study of the field of agricultural economics and fundamental economic problems and their applications to the problems of the industry of agriculture. Concepts are illustrated in terms of selected current social and economic issues, including the role of agriculture in both the national and international dimension.

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

### AIRP 1215

#### Private Flight

Flight training to prepare the student for the completion of the Federal Aviation Administration private pilot certificate, including dual and solo flight in the areas of maneuvers and cross-country navigation.

Lecture Hrs = 1, Lab Hrs = 2(18 pre/post, 30 dual, 0 solo)

Pre/Corequisite: READ 300 or equivalent

Corequisite: Two ground classes in Fall/Spring semesters;

one in summer terms

### AIRP 1255

## Intermediate Flight

Provides students with flight hours and skills necessary to fulfill solo cross-country hours required for the Federal Aviation Administration Commercial Pilot, single engine land, airplane certificate.

Lecture Hrs = 1, Lab Hrs = 3(15 pre/post, 27 dual, 22 solo) Prerequisite: AIRP 1215

Corequisite: Two ground classes in Fall/Spring semesters;

one in summer terms

Pre/Corequisite: READ 300 or equivalent

## **AIRP 1301**

#### Air Navigation

Instruction in Visual Flight rules navigation in the National Airspace System. Topics include sectional charts, flight computers, plotters, and navigation logs and publications. Qualifies as part of a program leading to Federal Aviation Administration Private Pilot certification.

Lecture Hrs = 3, Lab Hrs = 0Pre/Corequisite: READ 300 or equivalent

AIRP 1307

## Aviation Meteorology

In-depth coverage of meteorological phenomena affecting aircraft flight. Topics include basic concepts of aviation meteorology in the study of temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog. Also includes analysis and use of weather data for flight planning.

Lecture Hrs = 3, Lab Hrs = 0Pre/Corequisite: READ 300 or equivalent

## **AIRP 1317**

## Private Pilot Ground School

Basic ground school for the Federal Aviation Administration Private Pilot Certificate, providing the student with the necessary aeronautical knowledge that can be used for private pilot certification. Topics include principles of flight, radio procedures, weather, navigation, aerodynamics, and Federal Aviation Administration regulations.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

## **AIRP 1341**

## Advanced Air Navigation

Skill development in advanced airplane systems and performance including radio navigation and crosscountry flight planning. Includes an introduction to instrument flight operations and navigation. This course may be used as part of a program leading to Federal Aviation Administration certification.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: AIRP 1301

Pre/Corequisite: READ 300 or equivalent

### AIRP 1343

#### Aerodynamics

Study of the general principles of the physical laws of flight. Topics include physical terms and the four forces of flight: lift, weight, thrust, and drag. Aircraft design, stability control, and high-speed flight characteristics are also included.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### **AIRP 1345**

#### Aviation Safety

A study of the fundamentals essential to the safety of flight. A survey of the aviation industry including decision-making factors, accident reporting, accident investigation, air traffic systems, and aircraft technologies.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

### **Instrument Ground School**

A study of basic instrument radio and navigation fundamentals used in instrument flight. Topics include a description and practical use of navigation systems and instruments, charts used for instrument flight, and Federal Aviation Administration regulations. Qualifies as part of a program leading to Federal Aviation Administration certification.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

### AIRP 2239

## Commercial Flight

Flight instruction necessary to qualify for the Federal Aviation Administration Commercial Pilot Cerificate. Instruction includes both dual and solo flight training to prepare the student for mastery of all commercial pilot maneuvers.

Lecture Hrs = 1, Lab Hrs = 4(15 pre/post, 30 dual, 35 solo) Prerequisite: AIRP 2250

Corequisite: Two ground classes in Fall/Spring semesters;

one in summer terms

Pre/Corequisite: READ 300 or equivalent

## AIRP 2250

## Instrument Flight

Preparation for completion of the Federal Aviation Administration Instrument Pilot Rating with mastery of all instrument flight procedures.

Lecture Hrs = 1, Lab Hrs = 2(16 pre/post, 32 dual, 0 solo) Prerequisite: AIRP 1255

Corequisite: Two ground classes in Fall/Spring semesters;

one in summer terms

Pre/Corequisite: READ 300 or equivalent

## AIRP 2331

## Advanced Meteorology

Preparation for advanced aviation students to apply knowledge of varying meteorological factors including weather hazards to flight, techniques for minimizing weather hazards, and aviation weather services.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: AIRP 1307

Pre/Corequisite: READ 300 or equivalent

#### AIRP 2333

#### Aircraft Systems

Study of the general principles, operation, and application of pneumatic, hydraulic, electrical, fuel, environmental, protection, and warning systems. Emphasis on types of aircraft structures and their control systems.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

#### **AIRP 2337**

#### Commercial Ground School

A study of advanced aviation topics that can be used for Federal Aviation Administration certification at the commercial pilot level. Includes preparation for the Federal Aviation Administration Commercial Airplane written test.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: AIRP 2250

Corequisite: Two ground classes in Fall/Spring semesters;

one in summer terms

Pre/Corequisite: READ 300 or equivalent

#### ANTH 2351

## **Cultural Anthropology**

The course introduces theories and methods in the study of human cultures and how anthropologists comparatively research, analyze and interpret the cultural institutions such as languages, kinships, economic systems, political processes, social stratifications, arts, and religions. This course takes a critical look at cultural diversity, evolution, and cross-cultural interaction.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent, ENGL 302 or equivalent

#### **ARCE 1403**

## Architetural Materials and Methods of Construction

Properties, specifications, vendor references, and uses of materials as related to architectural systems of struc-

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent

#### ARCE 1442

## Codes, Specifications and Contract Documents

Study of ordinances, codes, and legal documents as they relate to specifications and drawing. Disussion of owner-architect-contractor responsibilities, duties and legal relationships.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent

#### **ARCE 1452**

## Structural Detailing

A study of structural systems including concrete foundations and frames, wood framing and trusses, and structural steel framing systems. Includes detailing of concrete, wood, and steel to meet industries standards including the American Institute of Steel Construction and the American Concrete Institute.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: DFTG 2419

Pre/Corequisite: READ 301 or equivalent

## **ARCE 2444**

## Statics and Strength of Material

The study of internal effects of forces acting upon elastic bodies and the resulting changes in form and dimensions, includes stress, shear, binding movements, and simple beam design.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: DFTG 2419

### ARCH 1301

#### Architectural History I

This course is a survey of the history of architecture and the built environment from prehistoric times to the middle of the 15th century, along with their relationship to the cultural heritage of the Western World.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, MATH 320 or equivalent, READ 301 or equivalent

## ARCH 1302

#### Architectural History II

This course follows ARCH 1301 (Architectural History I), with a survey of the history of architecture and the built environment from the Renaissance to the present. Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, MATH 320 or equivalent, READ 301 or equivalent

#### **ARCH 1303**

## Architectural Design I

Introduction to architectural concepts. The visual characteristics of two- and three-dimensional forms and spaces. Concepts are studied through the use of form, color, texture, and material. Emphasis is placed on three-dimensional form and the development of graphic communication skills.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent Pre/Corequisite: ARCH 2301

#### ARCH 1304

### Architectural Design II

This course is a continuation of ARCH 1303 (Architectural Design I), with emphasis on more complex, three-dimensional design problems.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: ARCH 1303, READ 301 or equivalent

## ARCH 1305

### **Architectural Aesthetics**

Architecture as a contemporary philosophical concept. Visual experience in the aesthetics of architecture.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 301 or equivalent

## ARCH 1307

## Architectural Graphics I

Architectural drafting techniques including orthographic and axonometric studies. Principals of shades and shadows, and perspective drawing. This course teaches the use of drafting tools and materials and their application to graphic representation of architectural subject matter. Design and graphic concepts are introduced through design problems, modeling and analysis.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisites: ENGL 301, MATH 310, READ 301 or equivalent

### **ARCH 1308**

## Architectural Graphics II

This course is a continuation of ARCH 1307 (Architectural Graphics I), with emphasis on more complex architectural graphic problems. Continued study of architectural drafting and modeling techniques including orthographic and axonometric studies. Design and graphic concepts are further studied through design problems, modeling and analysis.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: ARCH 1307, READ 301 or equivalent

#### ARCH 1311

#### Introduction to Architecture

An introduction to the elements of the architectural profession. Introduction to Architecture theory, history, technology, and practice. A survey study of the interrelationships between society, culture and architecture. Lecture Hrs=3,  $Lab\ Hrs=0$ 

Prerequisite: ENGL 301 or equivalent, READ 301 or equivalent

#### ARCH 1315

#### **Architectural Computer Graphics**

Introduction to computer graphics systems with emphasis on architectural applications. This is an introductory course devoted to the creation of architectural drawings using computer software. Instruction will include the use of computer software to create two and three-dimensional drawings of various types including plans, elevations, sections, and others. Procedures for creating and organizing a set of presentation and construction drawings are also presented.

Lecture Hrs = 3, Lab Hrs = 3Pre/Corequisite: ARCH 1311

### ARCH 2301

## Architectural Freehand Drawing I

Representational drawing using various media. Emphasis on principles of light, shade, scale, proportion, line, and tonal quality. This course involves the study and application of freehand drawing and other basic communication skills using various media. Use of computer software and its relationship to drawing are studied.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisites: ENGL 301, MATH 310, READ 301 or equivalent

## ARCH 2312

## Architectural Technology

Introduction to the properties, specifications, and application of materials related to architectural structures. Emphasis on methods of construction and the effect of design. This course involves the study of building systems and their structure, economics, and aesthetic uses in architecture. The varieties, manufacture, properties, and uses of building materials are also presented. Also included are units on accessibility, Life Safety, Building Envelope Systems, and Building Service Systems.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: READ 301 or equivalent

Pre/Corequisites: PHYS 1401, MATH 1316 or MATH 2412 or equivalent

#### ARTC 1413

## Digital Publishing I

The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout.

Offered in Spring semester only. Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent Pre/Corequisite: ITSC 1309

#### ARTC 1453

## Computer Illustration

Mastery of the tools and transformation options of an industry-standard drawing program to create complex illustrations and follow them through to the color output stage. Includes acquisition of images through scanning and the creative use of clip art.

Offered in Fall semesters only. Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: READ 301 or equivalent Pre/Corequisite: ITSC 1309 or BCIS 1405

## ARTC 2440

### Computer Illustration II

Advanced use of software capabilities with emphasis on various output procedures, the resolution of complex design issues, and concept development.

Offered in Spring semester only.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: ARTC 1453, READ 301 or equivalent Pre/Corequisite: ARTC 1413

#### ARTS 1301

#### Art Appreciation

A general education course open to all; design principles from the layman's point-of-view. Critical evaluation of selected works of painting, sculpture, and architecture. Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent

## ARTS 1303

## Art History I

A survey of painting, sculpture, and architecture from prehistoric times through the 13th century. Alternatively, the course may be presented topically.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent

## ARTS 1304

#### Art History II

A survey of painting, sculpture, and architecture from the 14th century to the present. Alternatively, the course may be presented topically.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 301 or equivalent

#### ARTS 1311

#### Design I

Emphasis upon two-dimensional design; includes the fundamentals of line, shape, value, texture, color, and consideration of arrangement and space.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

#### **ARTS 1312**

## Design II

Continuation of ARTS 1311 with emphasis on three-dimensional concepts.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 1311

Pre/Corequisite: READ 300 or equivalent

#### **ARTS 1313**

#### Art Education

A survey of philosophical, methodological and materials commonly used in primary art education. This course has the dual purpose of making the prospective teacher aware of children's art as a whole and at the same time the creative individuality of each child.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent

## ARTS 1316 **Ω**

## Drawing I

A beginning course investigating a variety of media, techniques and subjects, exploring perceptual and descriptive possibilities with consideration of drawing as a developmental process as well as an end in itself.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### ARTS 1317 **Ω**

### Drawing II

Expansion of ARTS 1316 stressing the expressive and conceptual aspects of drawing including the human figure within a spatial environment.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: ARTS 1316

Pre/Corequisite: READ 300 or equivalent

## ARTS 2313 $\Omega$

## Design Communications I

A course introducing the communication of ideas through processes and techniques of graphic design and illustration. This course will also introduce digital multimedia exploring elements of design and digital imagery.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Pre/Corequisite: READ 300 or equivalent

### ARTS 2314 $\Omega$

#### **Design Communications II**

This course continues to explore the communication of ideas through processes and techniques of graphic design and illustration. Emphasis will be placed on the use of computer applications for creative expressions. Course projects and methods of instruction emphasize the element of fine art design and conceptual development.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 1311 or ARTS 2313 Pre/Corequisite: READ 300 or equivalent

## ARTS 2316 Ω

## Painting I

Exploring the potentials of painting media with emphasis on color and composition.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

## ARTS 2317 $\Omega$

## Painting II

Continuation of ARTS 2316 with emphasis on individual expression.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 2316

Pre/Corequisite: READ 300 or equivalent

## ARTS 2323 $\Omega$

## Life Drawing I

Continuation of student exploration of various techniques and materials of drawing as applied to the human form. Portfolio review required.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 1316, ARTS 1317 Pre/Corequisite: READ 300 or equivalent

#### ARTS 2324 Ω

## Life Drawing II

Continuation of student exploration of the media and techniques of drawing as applied to the human form and the development of a portfolio of completed drawings with emphasis on stylistic development. Portfolio presentation required.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 2323

Pre/Corequisite: READ 300 or equivalent

## ARTS 2326 $\Omega$

## Sculpture I

An exploration of various approaches in a variety of media including additive and subtractive techniques. Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

#### ARTS 2327 Ω

#### Sculpture II

A continuation of ARTS 2326 with emphasis on individual expression.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 2326

Pre/Corequisite: READ 300 or equivalent

#### ARTS 2333 Ω

## Printmaking I

A beginning course investigating a number of printmaking approaches, techniques and principles.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

#### ARTS 2334 Ω

## Printmaking II

The advanced printmaking course expands on the beginning printmaking course investigating each printmaking technique more intensely. Ideas will be further developed into complete drawings to produce editions of prints through the various processes as well as unique presentations.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 2333

Pre/Corequisite: READ 300 or equivalent

#### ARTS 2346 Ω

#### Ceramics I

An introduction to basic ceramic processes.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Pre/Corequisite: READ 300 or equivalent

## ARTS 2347 **Ω**

#### Ceramics II

Opportunities for specialization in ceramic processes.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 2346

Pre/Corequisite: READ 300 or equivalent

## ARTS 2348v

## Digital Art I

Studio art course that explores the potential of the computer hardware and software medium for their visual, conceptual, and practical uses in the visual arts.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: ARTS 1311 or ARTS 2313 or ARTS 2314 Pre/Corequisite: READ 300 or equivalent

#### ARTS 2349 **Ω**

## Digital Art II

Studio art course that continues to explore the potential of the computer hardware and software medium for their visual, conceptual, and practical uses in the visual arts. This course also investigates the use of 3-D animation and its relationship to the fine arts.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: ARTS 1311 or ARTS 2313 or ARTS 2314 Pre/Corequisite: READ 300 or equivalent

## ARTS 2356 **Ω**

## Introduction to Photography

Fundamentals of photography. Covers cameras, lenses, shutters and filters; exposure time and apertures; light meters and lighting; developing, fixing, contact and projection printing; emulsions, solutions; characteristics of photographic papers; elements of composition. *Lecture Hrs* = 3, *Lab Hrs* = 3

Pre/Corequisite: READ 300 or equivalent

#### ARTS 2357 **Ω**

## **Advanced Photographic Practices**

A continuation of ARTS 2356, designed to give additional laboratory experience and advanced training to develop professional ability.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ARTS 2356

Pre/Corequisite: READ 300 or equivalent

#### **BCIS 1405**

## **Business Computer Applications**

This course discusses computer terminology, hardware, software, operating systems, and information systems relating to the business environment. 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.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent

#### BIBL 1371

## Survey of the Old Testament

Survey of the background and basic content of the Old Testament, including history of the Middle East from creation to 400 B.C., theories of creation, nine stages of Old Testament history, culture, religion, archeology, language, and politics of the Middle East, the history and literature of each of the books of the Old Testament; study of the Jews, Egyptians, Assyrians, Chaldeans, and Philistines. Course is not transferable to Texas colleges or universities.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

## BIOL 1322

## Nutrition

A study of the basic biological principles of human nutrition in health and disease. Includes the chemical nature of essential nutrients; the biology of their functions in the human body; survey of nutrition in the life cycles; introduction of computer use in diet analysis and diet adequacy; and modification of diets for therapeutic purposes. (May be offered as a video class)

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

Either BIOL 1406 and 1407 or BIOL 1411 and 1413 may be taken to meet the 8 hours of required laboratory science for most universities.

Students should check with the university they plan to attend.

## BIOL 1406 **Ω**

## General Biology I

A general biology course including basic biochemistry, cell biology, cell metabolism and energetics, photosynthesis, genetics, evolution, taxonomy, bacteria, and viruses. A research component is required for honors credit.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 302 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

## BIOL 1407 **Ω**

## General Biology II

A continuation of BIOL 1406 with emphasis on fungi, protists, plants, plant function, animals, animal physiology, ecology, and environmental issues. A research component is required for honors credit.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: BIOL 1406 (C or better)

Pre/Corequisites: READ 302 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

### **BIOL 1411**

#### **General Botany**

This course presents a panorama of plant life and how plants function, live, reproduce, and interact with their environment and man. The botanical principles discussed will convey a conceptual unity to the knowledge about plants and their relationships in a dynamic world.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Pre/Corequisite: READ 301 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

## BIOL 1413

## General Zoology

This course presents a panorama of animal life and how animals function, live, reproduce and interact with their environment and man. The zoological principles discussed will convey a conceptual unity to the knowledge about animals and their relationships in a dynamic world.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 301 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

#### **BIOL 1424**

### Plant Taxonomy

Taxonomy of flowering plants and principles of identification and classification of plants; nomenclature, characteristics, and field identification of the different plant groups.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

#### **BIOL 2305**

## Pathophysiology

A study of the structure and function of the human body with specialized emphasis on disease processes.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: BIOL 2401 (C or Better) or BIOL 2404 (C or Better), READ 301 or equivalent

#### **BIOL 2401**

## Human Anatomy and Physiology I

This course consists of the fundamentals of human anatomy and physiology with the emphasis on etiology and functions of anatomical systems. Laboratory includes dissection of a mammal, study of selected mammalian organs, histological studies, and physiological experiments.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent

## BIOL 2402

## Human Anatomy & Physiology II

A continuation of BIOL 2401.

 $Lecture\ Hrs=3, Lab\ Hrs=3$ 

Prerequisite: BIOL 2401 (C or Better), READ 301 or equivalent

## BIOL 2404

#### The Human Body

The study of the structure and function of the human body, includes integrated topics on nutrition, disease conditions, and hygiene.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent

Ω indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

### **BIOL 2416**

#### Genetics

A study of the principles of molecular and classical genetics and the function and transmission of hereditary material. May include population genetics and genetic engineering.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: Any BIOL Course (C or Better)

Pre/Corequisite: READ 301 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

#### BIOL 2421

#### Microbiology

A study of the morphology, physiology, and classification of microorganisms with special emphasis on bacteria. Laboratory work includes culturing, staining, and the procedures of disinfection and sterilization techniques.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent, ENGL 301 or equivalent, MATH 310 or equivalent

#### BMGT 1301

#### Supervision

A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.

 $Lecture \ Hrs=3, Lab \ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### BMGT 1303

#### Principles of Management

Concepts, terminology, principles, theories, and issues in the field of management.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## BMGT 1307

## **High Performance Work Teams**

A student of the basic principles of building and sustaining teams in organizations including team dynamics and process improvement.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

## BMGT 1383

# Cooperative Education-Business Administration and Management, General

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = 20 Prerequisite: READ 300 or equivalent

#### BMGT 1395

# Special Topic in Operations Management and Supervision: Process Control and Supply Chain

#### Management

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 was desinged to be repeated multiple times to improve student proficiency. Planning and control of production and service operations. Operations management entails all of the activities that create goods and services by transforming inputs to outputs. These activities include forecasting, process control, layout strategy, inventory management, aggregate planning, supply chain management, and work measurement.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 301 or equivalent

#### **BMGT 2303**

## Problem Solving and Decision Making

Decision making and problem solving processes in organizations, utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities such as small group discussions, case studies, and the use of other managerial decision aids.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: READ 301 or equivalent

## BMGT 2309 Leadership

Concepts of leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent

#### BMGT 2331

### Principles of Quality Management

Quality of productivity in organizations. Includes planning for quality throughout the organization, analysis of costs of quality, and employee empowerment.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent

#### **BMGT 2347**

## Critical Thinking and Problem Solving

Instruction in interpreting data for effective problem solving and recommending corrective action with emphasis on a structured approach to critical thinking and problem solving in a team environment.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## BMGT 2382

# Cooperative Education-Business Administration and Management, General

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = 20 Prerequisite: BMGT 1383, READ 301 or equivalent

## BMGT 2383

# Cooperative Education-Business Administration and Management, General

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = 20 Prerequisite: BMGT 1383, READ 301 or equivalent

## BUSG 2309

#### **Small Business Management**

Starting and operating a small business. Includes facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues.

Lecture Hrs = 3, Lab Hrs = 0

## BUSI 1301

#### **Business Principles**

Introduction to the role of business in modern society. Includes overview of business operations, analysis of the specialized fields within the business organization, and devlopment of a business vocabulary.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

#### BUSI 1307

#### Personal Finance

Personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting or home ownership, and wills and trust plans.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent

## BUSI 2301

## **Business Law**

Principles of law which form the legal framework for business activity.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 301 or equivalent

## CDAP 200

#### Career Development and Planning

Designed to help students identify personal strengths by exploring values, interests and skills through group and individual exercises, use of the Career and Transfer Center and informational interviews. Career planning and decision making will be discussed and explored. Lecture Hrs = 2, Lab Hrs = 0

Prerequisite: READ 300 or equivalent

#### CHEM 1405 **Ω**

### Introductory Inorganic Chemistry

An introductory course in inorganic chemistry for liberal arts and other nontechnical majors. This course satisfies requirements for most nursing students and other allied health majors. Covers general principles of chemistry, description of elements and compounds, chemical laws, application of chemistry to modern living. Credit will not be given for both CHEM 1405 and CHEM 1411 or 1412.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 3$ 

Pre/Corequisite: MATH 320 or equivalent, READ 301 or

equivalent

## CHEM 1411 **Ω**

## General Chemistry I

The study of fundamental concepts and laws underlying chemistry, including states of matter, atomic structure, periodic table, chemical bonding, chemical reactions, solutions, gas laws, properties of solids and liquids, qualitative and quantitative analysis including instrumental methods.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 301 or equivalent Pre/Corequisite: MATH 1414 or equivalent

#### CHFM 141

## General Chemistry II

A continuation of CHEM 1411. Study of equilibrium, oxidation-reduction reactions, electrochemistry, chemical thermodynamics, chemical kinetics, solutions, solubility of salts, acids and bases, buffers, properties of elements in the periodic groups, complexions, introductory organic chemistry, systematic qualitative analysis of common cations and anions, and quantitative analysis including instrumental methods.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: CHEM 1411, MATH 1414 or equivalent Pre/Corequisite: READ 301 or equivalent

#### CHEM 1419 **Ω**

#### **Introductory Organic Chemistry**

An introductory course in organic chemistry for liberal arts and other nontechnical majors. This course satisfies requirements for most nursing students and other allied health majors. Covers basic chemical principles, the chemistry of carbon and its compounds, fuels, polymers, foods and nutrition, and physiologically active compounds and application of organic chemistry to modern living. Credit will not be given for both CHEM 1419 and CHEM 1411 or 1412.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: MATH 320 or equivalent, READ 301 or

equivalent

#### CHEM 2401

## Analytical Environmental Chemistry

The principles and methods of quantitative chemical analysis dealing primarily with volumetric and gravimetric analysis and containing a brief introduction to instrumental methods. The laboratory consists of environmental analysis of air and water samples using standard methods commonly used in industry.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Prerequisite: CHEM 1412, MATH 1414 or equivalent Pre/Corequisite: READ 301 or equivalent

#### CHEM 2423

### Organic Chemistry I

A study of the nomenclature, mechanism of reactions, synthesis of organic compounds, isolation and analysis of organic compounds, and determination of physical constants. Includes both the aliphatic and aromatic hydrocarbons and their derivatives, cistrans and optical isomerism.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: CHEM 1412, MATH 1414 Pre/Corequisite: READ 302 or equivalent

#### **CHEM 2425**

## Organic Chemistry II

A continuation of CHEM 2423 which includes study of aldehydes and ketones, amines, alcohols, carboxylic acids and derivatives, amino acids and proteins, and carbohydrates. Continued study of the analysis of organic compounds, including instrumental methods.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: CHEM 2423, MATH 1414 or equivalent Pre/Corequisite: READ 302 or equivalent

#### CISA 2382

## Cooperative Education - Criminal Justice/Safety Studies

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = 15 Prerequisite: READ 301 or equivalent

#### COMM 1307

## Introduction to Mass Communications

A general study of the mass media with emphasis on print, broadcast, and film. Includes the interrelationship of mass media in modern society with reference to its evolution. Gives the non-journalism major the knowledge to be a more intelligent user of the mass media. Introduces the journalism major to all areas of journalism stressing responsibility and ethics. This course taught in fall semester only.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### COMM 2122

## **Advanced Recording and Production Techniques**

This course is designed to take those who have completed the earlier Audio courses and bring them into the realm of studio projects while familiarizing them with key aspects of the professional environment. Some of the main topics that will be discussed in this class are as follows: Development of Project Presentation; Development of Studio Procedure; Refinement of Tracking skills; Development of Mixing skills.

Lecture Hrs = 1, Lab Hrs = 3 Prerequisite: COMM 2220

Pre/Corequisite: READ 300 or equivalent

#### COMM 2220

### **Intermediate Recording Techniques**

This course is designed for hands-on training in the studio. Students will be taught how to begin a session, to run a session and to end a session. They will explore the art of Sound recording and it's various approaches. This course will explore: mixing concepts, bussing and routing concepts, the use of effects and dynamic processing and project conceptualizations. Some of the key topics that will be discussed in this course are as follows: Familiarization with studio equipment; Studio paperwork; Tracking techniques; Mixing techniques.

Lecture Hrs = 2, Lab Hrs = 3Prerequisite: COMM 2303

Pre/Corequisite: READ 300 or equivalent

#### **COMM 2303**

#### **Beginning Audio Recording Techniques**

The objective of this course is to introduce the student into the world of audio recording. Student will be given a fundamental understanding of the nature of sound: the waveform and its seven main properties, the stages of sound reflection through the acoustic environment and the wave-cycle. Student will also be given a thorough understanding of microphone design/construction, typical studio layout and basic design characteristic for an acoustically "sound" studio and how these topics relate directly to microphone application in the recording environment.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

## COMM 2305

## **Business Publication Design**

Technical emphasis on design and production of printed materials such as reports, brochures, booklets and manuals. Subjects covered will include typography, layout and effective use of color and graphic effects. This course is computer-based.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 302 or equivalent, READ 301 or equivalent

## COMM 2311

## Reporting I

A general study of newspaper writing, proof reading, interviewing, news judgement, news concept, and news qualities.

 $Lecture\ Hrs=3,\ Lab\ Hrs=1$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### COMM 2324

## **Electronic Music I (Editing Hard Disc)**

This course is designed for the serious engineer endeavoring to enter the world of Audio Recording. Student will be taught the fundamentals of Hard Disc (HDR) Recording (tracking, sample rates, time code, frame rates, editing and mixing etc..) for the purpose of: creating tracks/loops, repairing damaged audio and recording with Mac (Apple Corp) based software. Additionally, such topics as DAW and HD Technology will be discussed in their relationship to studio design and function.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: COMM 2220 and COSC 1301, or BCIS 1301,

or BCIS 1405

Pre/Corequisite: READ 300 or equivalent

#### COMM 2325

#### **Electronic Music II (MIDI Interface)**

An overview (history, systems, application) of Musical Instrument Digital Interface (MIDI). Hardware requirements, computer numbering systems, channels, modes, MIDI language implemented with computer based hard disk recording, synthesizer editing, digital sampling transfer of audio data, and CD mastering. Student will complete projects using synthesis techniques; edit samples and synthesizer voices.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: COMM 2303, READ 300 or equivalent

#### COMM 2389A

#### **Audio Recording Cooperative**

This course is designed to complete the beginning engineer's experience of 'studio-life' and prepare him/her for the professional environment. This course will teach the student fundamental procedures associated with studio management. These responsibilities include basic bookkeeping, scheduling sessions and a detailed look at work ethics.

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = 6
Prerequisite: READ 300 or equivalent, Instructor's permission

### COMM 2389H

## **Communications Cooperative**

This course provides students with work-related experience in any of the following areas: journalism, mass communications, electronic broadcast media, public relations, advertising, audio enhancement, graphic design, web page development.

Lecture Hrs = 1, Lab Hrs = 0, External Lab Hrs = 6 Prerequisite: READ 302 or equivalent, Instructor's permission

#### COMM 2389P

## **Professional Writing Internship**

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 the student's specific occupational goals. This may be a paid or unpaid experience.

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = 6

Prerequisite: Instructor's permission; READ 302 or equivalent

#### COSC 1301

### **Microcomputer Applications**

Overview of computer information systems. Introduces computer hardware, software, procedures, systems, and human resources and explores their integration and application in business and other segments in society. The fundamentals of computer problem solving and programming in a higher level programming language may be discussed and applied.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

#### COSC 1436

## Programming Fundamentals I

Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.(Fall Only)

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: COSC 1301, READ 301 or equivalent

#### COSC 1437

### **Programming Fundamentals II**

Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. (Spring Only) Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: COSC 1436, READ 301 or equivalent

#### COSC 2325

## Computer Organization and Machine Language

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. (Fall Only)

Lecture Hrs = 2,  $Lab\ Hrs = 2$ 

Prerequisite: COSC 1436, READ 301 or equivalent

#### COSC 2436

## Programming Fundamentals III

Further applications of programming techniques, introducing the fundamental concepts of data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. (Spring Only) Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: COSC 1437, READ 301 or equivalent

#### COSS 100

## **Applied Study Skills**

Application of study skills techniques to individual learning styles with concentration on notetaking, text marking, and test preparation.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 0$ 

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

### COSS 300

#### Study Skills

Techniques of study such as time management, listening and note-taking, text marking, library and research skills, preparation for examinations, and use of learning resources.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

#### **CPMT 1407**

## **Electronic and Computer Skills**

Modern electronic construction techniques including using common hand tools in disassembly, repair, and re-assembly of electronics and computer components. Fundamentals of DC, AC and solid-state concepts are presented. This course provides a foundation of tools and concepts for the computer maintenance technician. Lecture Hrs=3, Lab Hrs=3

Prerequisite: READ 300 or equivalent

#### CPMT 141

### Introduction to Computer Maintenance

Introduction to the installation, configuration, and maintenance of a microcomputer system. Emphasis on the evolution of microprocessors and microprocessor busstructures. Course prepares student to successfully complete the A+ certification hardware examination. Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: READ 300 or equivalent

#### **CPMT 1445**

## **Computer System Maintenance**

Functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids. Digital logic, combinational circuitry, and number systems are presented.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 300 or equivalent

#### 1

### Computer Networking Technology

Networking fundamentals, terminology, hardware, software, and network architecture. Includes local and wide area networking concepts and networking installations and operations.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: CPMT 1411, READ 300 or equivalent

## CPMT 2433

CPMT 1449

## **Computer Integration**

Integration of hardware, software, and applications. Customization of computer systems for specific applications such as engineering, multi-media, or data acquisition. Fieldbus applications are emphasized. The student will design special applications in the areas of multi-media, data acquisition, and engineering; install and maintain various hardware and software components for specialized applications; and analyze and test system operations.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: INTC 1450, READ 300 or equivalent

#### **CPMT 2445**

## Computer System Troubleshooting

Principles and practices involved in computer system troubleshooting techniques and repair procedures including advanced diagnostic test programs and the use of specialized test equipment.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: CPMT 1411, READ 300 or equivalent

#### CPMT 2449

## **Advanced Computer Networking Technology**

Network technology emphasizing network operating systems, network connectivity, hardware, and software. Includes implementation, troubleshooting, and maintenance of LAN and/or WAN network environments.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: READ 300 or equivalent Pre/Corequisite: CPMT 1449

#### **CPMT 2488**

### Internship-Computer Installation and Repair Technology/ Technician

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Lecture Hrs = 0,  $Lab\ Hrs = 0$ ,  $External\ Hrs = 15$ Prerequisite: CPMT 2445, READ 300 or equivalent

## Introduction to Criminal Justice

History, philosophy, and ethical considerations of criminal justice; the nature and impact of crime; and an overview of the criminal justice system, including law enforcement and court procedures.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

## CRIJ 1306

#### Court Systems & Practices

Study of the judiciary in the American criminal justice system and the adjudication processes and procedures.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

## CRIJ 1307

#### Crime in America

American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and prevention of crime.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

## CRIJ 1310

## **Fundamentals of Criminal Law**

Study of criminal law, its philosophical and historical development, major definitions and concepts, classifications and elements of crime, penalties using Texas statutes as illustrations, and criminal responsibility.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

#### CRIJ 1313

## Juvenile Justice System

A study of the juvenile justice process. Topics 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. Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent

#### CRIJ 2301

## **Community Resources in Corrections**

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.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

### CRIJ 2313

### Correctional Systems and Practices

Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: READ 301 or equivalent

#### CRIJ 2314

## Criminal Investigation

Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial prepara-

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ Prerequisite: READ 301 or equivalent

#### CRIJ 2323

## Legal Aspects of Law Enforcement

Police authority; responsibilities; constitutional constraints; law of arrest, search, and seizure; police liabil-

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

#### CRIJ 2328

#### Police Systems and Practices

The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues. Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 301 or equivalent

#### CSME 1248

## Principles of Skin Care

An introduction of the theory and practice of skin care. Lecture Hrs = 0, Lab Hrs = 6, Insurance Fee Pre/Corequisite: READ 300 or equivalent

#### **CSME 1293**

## Special Topics in Cosmetic Services, General

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 was designed to be repeated multiple times to improve student proficiency.

Lecture Hrs = 0, Lab Hrs = 6Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

#### **CSME 1330**

## Orientation to Nail Technology

An overview of the fundamental skills and knowledge necessary for the field of nail technology. Lecture Hrs = 1, Lab Hrs = 8, Insurance Fee

Pre/Corequisite: READ 300 or equivalent

## **CSME 1401**

## Orientation to Cosmetology

An overview of the skills and knowledge necessary for the field of cosmetology.

Lecture Hrs = 2, Lab Hrs = 7, Insurance Fee Pre/Corequisite: READ 300 or equivalent

## Introduction to Haircutting and Related Theory

Introduction to the theory and practice of hair cutting. Topics include terminology, implements, sectioning and finishing techniques.

Lecture Hrs = 2, Lab Hrs = 7, Insurance FeePre/Corequisite: CSME 1401, READ 300 or equivalent

#### **CSME 1431**

## Principles of Nail Technology I

A course in the principles of nail technology. Topics include anatomy, physiology, theory, and skills related to nail technology.

Lecture Hrs = 2, Lab Hrs = 8, Insurance Fee

Prerequisite: CSME 1330

Pre/Corequisite: READ 300 or equivalent

#### **CSME 1434**

## Cosmetology Instructor I

The fundamentals of instructing cosmetology students. Lecture Hrs = 2, Lab Hrs = 6, Insurance Fee Note: A High School diploma or GED and a valid Texas Cosmetology License is required for admission to this course.

Pre/Corequisite: READ 300 or equivalent

#### **CSME 1435**

### Orientation to the Instruction of Cosmetology

An overview of the skills and knowledge necessary for the instruction of cosmetology students.

Lecture Hrs = 2, Lab Hrs =  $\frac{6}{6}$ , Insurance Fee Note: A High School diploma or GED and a valid Texas Cosmetology License is required for admission to this

Pre/Corequisite: READ 300 or equivalent

#### **CSME 1441**

## Principles of Nail Technology II

A continuation of the concepts and principles of nail technology. Topics include advanced instruction in anatomy, physiology, theory, and related skills of nail technology.

Lecture Hrs = 2, Lab Hrs = 8, Insurance Fee

Prerequisite: CSME 1330

Pre/Corequisite: READ 300 or equivalent

## **CSME 1451**

## Artistry of Hair, Theory and Practice

Instruction in the artistry of hair design. Topics include theory, techniques, and application of hair design. Lecture Hrs = 2, Lab Hrs = 6, Insurance Fee

Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

## **CSME 1453**

## Chemical Reformation and Related Theory

Presentation of the theory and practice of chemical reformation including terminology, application, and workplace competencies.

Lecture Hrs = 2,  $Lab\ Hrs = 6$ ,  $Insurance\ Fee$ Pre/Corequisite: CSME 1401, READ 300 or equivalent

#### **CSME 2337**

## **Advanced Cosmetology Techniques**

Mastery of advanced cosmetology techniques including hair designs, professional cosmetology services, and workplace competencies.

Lecture Hrs = 1, Lab Hrs = 8 Insurance Fee

Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2343**

#### Salon Development

Exploration of salon development. Topics include professional ethics and goals, salon operation, and record keeping.

Lecture Hrs = 2, Lab Hrs = 4, Insurance Fee

Prerequisite: CSME 1401

#### **CSME 2401**

## The Principles of Hair Coloring and Related Theory

Presentation of the theory, practice, and chemistry of hair color. Topics include terminology, application, and workplace competencies related to hair color.

Lecture Hrs = 2, Lab Hrs = 7, Insurance Fee

Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2410**

## Advanced Haircutting and Related Theory

Advanced concepts and practice of haircutting. Topics include haircuts utilizing scissors, razor, and/or clippers.

Lecture Hrs = 2,  $Lab\ Hrs = 7$ ,  $Insurance\ Fee$ 

Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2414**

## Cosmetology Instructor II

A continuation of the fundamentals of instructing cosmetology students.

Lecture Hrs = 2, Lab Hrs = 6, Insurance Fee

Prerequisite: CSME 1435

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2415**

#### Cosmetology Instructor III

Presentation of lesson plan assignments and evaluation techniques.

Lecture Hrs = 2,  $Lab\ Hrs = 6$ ,  $Insurance\ Fee$ 

Prerequisite: CSME 1435

Pre/Corequisite: READ 300 or equivalent

## **CSME 2439**

## Advanced Hair Design

Advanced concepts in the theory and practice of hair design.

Lecture Hrs = 2,  $Lab\ Hrs = 7$ ,  $Insurance\ Fee$ 

Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2441**

# **Preparation for Texas Cosmetology Commission Examination**

Preparation for the Texas Cosmetology Commission Operator Examination.

Lecture Hrs = 2, Lab Hrs = 6, Insurance Fee Note: A High School diploma or GED is required for admission to this

Prerequisite: CSME 1401

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2444**

## Cosmetology Instructor IV

Advanced concepts of instruction in a cosmetology program. Topics include demonstration, development, and implementation of advanced evaluation and assessment techniques.

Lecture Hrs = 2, Lab Hrs = 6, Insurance Fee

Prerequisite: CSME 1435

Pre/Corequisite: READ 300 or equivalent

## CSME 2445

## Instructional Theory and Clinic Operation

An overview of the objectives required by the Texas Cosmetology Commission Instructor Examination.

Lecture Hrs = 2, Lab Hrs = 6, Insurance Fee

Prerequisite: CSME 1435

Pre/Corequisite: READ 300 or equivalent

#### **CSME 2530**

## Nail Enhancement

A course in the theory, application, and related technology of artificial nails.

Lecture Hrs = 3, Lab Hrs = 6, Insurance Fee

Prerequisite: CSME 1330

Pre/Corequisite: READ 300 or equivalent

#### **DAAC 1304**

## Pharmacology of Addiction

Psychological, physiological, and sociological effects of mood altering substances and behaviors. Emphasis is placed on pharmacological effects of tolerance, dependency/withdrawal, cross addiction, and drug interaction

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### **DAAC 1307**

#### Addicted Family Intervention

An introduction to the family as a dynamic system focusing on the effects of addiction pertaining to family roles, rules, and behavior patterns. Discuss the impact of mood altering substances and behaviors and therapeutic alternatives as they relate to the family from a multicultural and transgenerational perspective.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### **DAAC 1309**

#### Assessment Skill of Alcohol and Other Drug Addictions

Examines procedures and tools used to identify a client's strengths, weaknesses, problems, and needs.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### **DAAC 1311**

## Counseling Theories

Major theories and various treatment modalities.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### **DAAC 1314**

## **Dynamics of Group Counseling**

An introduction to the patterns and dynamics of group interactions across the life span. Focus includes group counseling, structure, types, stages, development, leadership, therapeutic factors, the impact of groups on the individual, group growth, and behavior. Effective group facilitation skills and techniques used to address special population issues and needs are addressed. Case management and record keeping are included.

Lecture Hrs = 3, Lab Hrs = 0
Prerequisite: READ 300 or equivalent

## **DAAC 1317**

## **Basic Counseling Skills**

Facilitate development of the basic counseling skills necessary to develop an effective helping relationship with clients. Includes the utilization of special skills to assist in achieving objectives through exploration of problems, examination of attitudes and feelings, consideration of alternative solutions, and decision making

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

## DAAC 1319

## Introduction to Alcohol and Other Drug Addictions

Causes and consequences of addiction as they relate to the individual, family, community, and society. Overview of alternatives regarding prevention, intervention, and treatment. Includes an explanation of competencies and requirements for licensure in Texas. Also covers addiction issues related to diverse populations.

Lecture Hrs = 3, Lab Hrs = 0, HIPPA Fee Prerequisite: READ 300 or equivalent

#### DAAC 1341

## Counseling Alcohol and Other Drug Addictions

Special skills and techniques in the application of counseling skills for the Alcohol and Other Drug (AOD) client. Design and utilization of treatment planning using a treatment team approach will be introduced. Confidentiality and ethical issues will be reviewed and practiced.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

## DAAC 1343 **Ω**

#### **Current Issues**

A study of issues that impact addiction counseling. Special populations, dual diagnosis, ethics, gambling, and infectious diseases associated with addiction counseling will be investigated.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### **DAAC 1391**

## Special Topics in Alcohol/Drug Abuse Counseling: Advanced Group Skills

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. This course was desinged to be repeated multiple times to improve student proficiency. This course will be a continuation of the study of the patterns and dynamics of group interactions across the life span. Focus includes group therapy, structure, types, stages, development, leadership, therapeutic factors, the effectiveness of group on the individual, group growth and behavior. Effective group facilitation skills, techniques, case management, and record keeping are addressed.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: DAAC 1314, READ 300 or equivalent

#### **DAAC 2280**

# Cooperative Education-Substance Abuse/Addiction Counseling

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Lecture Hrs = 1,  $Lab\ Hrs = 0$ ,  $External\ Hrs = 10$ ,  $Insurance\ Fee$ 

Prerequisite: 18 SCH of DAAC Coursework Pre/Corequisite: READ 300 or equivalent

Ω indicates courses taught with optional honors

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

### **DAAC 2281**

# Cooperative Education-Substance Abuse/Addiction Counseling

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

 $Lecture\ Hrs=1, Lab\ Hrs=0, External\ Hrs=10, Insurance$ 

Fee

Prerequisite: 18 SCH of DAAC Coursework Pre/Corequisite: READ 300 or equivalent

#### **DFTG 1405**

## **Technical Drafting**

Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes.

 $Lecture\ Hrs=3, Lab\ Hrs=3$ 

Pre/Corequisite: READ 301 or equivalent

#### **DFTG 1409**

## **Basic Computer-Aided Drafting**

An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems, and plot/print to scale.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: DFTG 1405, READ 301 or equivalent

#### **DFTG 1417**

### Architectural Drafting-Residential

Architectural drafting procedures, practices, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## **DFTG 1433**

## **Mechanical Drafting**

Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, pictorial drawings, including bill of materials. (Fall and Spring only)

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## **DFTG 1458**

## **Electrical/Electronics Drafting**

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.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## **DFTG 2400**

## Intermediate Architectural Drafting-Residential

Continued application of principles and practices used in residential construction.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

#### **DFTG 2408**

### Instrumentation Drafting

Principles of instrumentation as applicable to industrial applications; fundamentals of measurement and control devices; currently used ISA (Instrument Society of America) symbology; basic flow sheet layout and drafting practices.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## DFTG 2410

#### Structural Drafting

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.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## **DFTG 2412**

## **Technical Illustration and Presentation**

Pictorial drawing including isometrics, obliques, perspectives, charts, and graphs. Emphasis on rendering and using different media.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent

#### **DFTG 2419**

### Intermediate Computer - Aided Drafting

A continuation of practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3 dimensional drawings, interfacing 2d and 3d environments and extracting data.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: DFTG 1405, DFTG 1409 Pre/Corequisite: READ 301 or equivalent

## DFTG 2423

## Pipe Drafting

A study of pipe fittings, symbols, specifications and their applications to a piping process system. Creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. (Spring only)

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

#### DFTG 2427

## Landscape Drafting

A study of site planning and landscape design.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## **DFTG 2428**

### Architectural Drafting-Commercial

Architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 1417

Pre/Corequisite: READ 301 or equivalent

## **DFTG 2430**

#### Civil Drafting

An in-depth study of drafting methods and principles used in civil engineering.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

#### DFTG 2431

# Advanced Technologies in Architectural Design and Drafting

Use of architectural specific software to execute the elements required in designing standard architectural exhibits utilizing custom features to create walls, windows and specific design requirements for construction in residential/commercial and industrial architecture.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 1417

Pre/Corequisite: READ 301 or equivalent

#### **DFTG 2432**

## **Advanced Computer-Aided Drafting**

Advanced techniques, including the use of a customized system. Presentation of advanced drawing applications, such as three-dimensional solids modeling and linking graphic entities to external non-graphic data. (Fall only)

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 2419

Pre/Corequisite: READ 301 or equivalent

#### DFTG 2435

## Advanced Technologies in Mechanical Design and

Use parametric based mechanical design software for mechanical assembly design and drafting. (Summer only)

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 1433

Pre/Corequisite: READ 301 or equivalent

## **DFTG 2438**

#### Final Project-Advanced Drafting

A drafting course in which students participate in a comprehensive project from conception to conclusion.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 2419

Pre/Corequisite: READ 301 or equivalent

## DFTG 2440

#### Solid Modeling/Design

A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: DFTG 2419

Pre/Corequisite: READ 301 or equivalent

## DFTG 2442

## **Aeronautical Drafting**

A study of aeronautical drawings required in the aircraft and aerospace industries.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: DFTG 1405, DFTG 1409

Pre/Corequisite: DFTG 2419, READ 301 or equivalent

## DFTG 2445

## **Advanced Pipe Drafting**

A continuation of pipe drafting concepts building on the basic principles acquired in pipe drafting. (Summer only)

Lecture Hrs = 3, Lab Hrs = 3
Prerequisite: DFTG 2419, DFTG 2423
Pre/Corequisite: READ 301 or equivalent

### **DFTG 2467**

# Practicum (or Field Experience) - Drafting and Design Technology/Technician, General

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture=0, Lab=0, External 40 Prerequisite: DFTG 1405, DFTG 1409 Pre/Corequisite: READ 301 or equivalent

#### **DFTG 2486**

# Internship - Drafting and Design Technology/Technician, General

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Lecture=0, Lab=0, Clinical 20 Prerequisite: DFTG 2419

Pre/Corequisite: READ 301 or equivalent

### DRAM 1120 Theatre Arts Lab I

Open to all students interested in theatre. Credit is earned for acting, technical work, or other participation. Limited to one semester credit hour each semester. Each course may be taken up to two times.

Lecture Hrs = 0, Lab Hrs = 6 Prerequisite: READ 300 or equivalent

#### DRAM 1121

#### Theater Arts Lab II

Open to all students interested in theatre. Credit is earned for acting, technical work, or other participation. Limited to one semester credit hour. Each course may be taken up to two times.

Lecture Hrs = 0, Lab Hrs = 6 Prerequisite: READ 301 or equivalent

## DRAM 1310

## Introduction to the Theatre

An introduction to the nature of theatre art and the dramatic genres, and the functions of the basic practices of the playwright, actor, director, and designer in contemporary theatre.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

## DRAM 1330

## **Elementary Stagecraft**

Introduction to the technical aspects of set design, lighting, sound, costumes, and makeup. Participation in the Drama Department's productions required.

Lecture Hrs = 2, Lab Hrs = 2 Prerequisite: READ 300 or equivalent

## DRAM 1341

## Principles of Theatrical Makeup

The principles of straight and character makeup, intensive practical application, and experience in stage productions are provided to the student.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: READ 300 or equivalent

## **DRAM 1351**

## Introduction to Acting

Introduction to the basic techniques of acting, with major emphasis on diction and character development. Opportunity to participate in the Drama Department's productions. Class scenes required.

Lecture Hrs = 2, Lab Hrs = 2 Prerequisite: READ 300 or equivalent

### DRAM 1352

#### Advanced Acting

Study and practical experience in problems of creating characterization with emphasis on developing vocal and physical skill in acting.

Lecture Hrs = 2, Lab Hrs = 2

Prerequisite: DRAM 1351, READ 300 or equivalent

#### DRAM 2120 Ω

## Theatre Arts Lab III

Open to all students interested in theatre. Credit is earned for acting, technical work, or other participation. Limited to one semester credit hour each semester. Each course may be taken up to two times.

Lecture Hrs = 0, Lab Hrs = 6 Prerequisite: READ 300 or equivalent

#### DRAM 2121

### Theater Arts Lab IV

Open to all students interested in theatre. Credit is earned for acting, technical work or other participation. Course can be taken up to two times.

Lecture Hrs = 0, Lab Hrs = 6

Pre/Corequisite: READ 300 or equivalent

### DRAM 2189

#### Theatre Academic Cooperative

Individualized instruction or supervised projects in various areas of theatre.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 6 Pre/Corequisite: READ 300 or equivalent

#### DRAM 2331

### Advanced Stagecraft

General consideration of the art of the theatre as it relates to the stage, scenery, and lighting for college production. Participation in Drama Department's productions required.

 $Lecture\ Hrs=2,\ Lab\ Hrs=2$ 

Prerequisite: DRAM 1330, READ 300 or equivalent

## DRAM 2336

## Voice and Diction

Open to all students interested in improving their diction. Development of the voice and proper diction. Coaching of the individual student with the aid of audio taping and an audio journal. Same as SPCH 1342.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 300 or equivalent

#### DRAM 2361

## History of Theatre I

Survey of growth and development of the theatre from its beginnings to 1660 with consideration of dramatic literature, physical theatre, style of presentation, and social significance of theatre.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### DRAM 2362

## History of Theatre II

Survey of growth and development of the theatre from 1660 to the present with consideration of dramatic literature, physical theatre, style of presentation, and social significance of theatre.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

Σ indicates honors courses. See page 31 for additional information on the honors program.

#### DRAM 2366

## History and Development of Motion Pictures

A survey of the history and development of motion pictures with emphasis on analysis and understanding of significant movements and schools of filmmaking, critical approaches, sociological impact, and visual aesthetics of motion pictures. Two lecture hours and one two-hour film screening a week for one semester.

Lecture Hrs = 2, Lab Hrs = 2 Prerequisite: READ 300 or equivalent

#### ECON 230

#### **Principles of Economics: Macroeconomics**

This course emphasizes macroeconomics; economic analysis of forces determining levels of income, prices, and employment; economic growth; explanation of economic terms and institutions; and consideration of current problems.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 301 or equivalent, MATH 310 or equivalent

#### ECON 2302

#### **Principles of Economics-Microeconomics**

This course emphasizes microeconomics; economic analysis of decision making in perfect and imperfect product and factor markets, explanation of economic terms and institutions, and consideration of current problems.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent, MATH 310 or equivalent

### **EDUC 1300**

## Learning Framework

A study of the 1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies. Theoretical models of strategic learning and motivation serve as the conceptual basis for the introduction of college-level student academic strategies.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

#### DUC 1301

## Introduction to the Teaching Profession

An enriched integrated pre-service course with content experience that provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic, and academic diversity and equity with an emphasis on learning. The course includes a minimum of 16 contact hours of field observations in P-12 classrooms and aligns with the State Board of Educator Certification Pedagogy and Professional Responsibilities standards.

Lecture Hrs = 2, Lab Hrs = 2 Prerequisite: READ 301 or equivalent

## EDUC 2301

## **Introduction to Special Populations**

An enriched integrated pre-service course with content experience that provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, with an emphasis on learning. This course includes a minimum of 16 contact hours of field observations of P-12 special populations; and aligns with the State Board of Educators Certification Pedagogy and Professional Responsibilities standards. Lecture Hrs = 2,  $Lab\ Hrs = 2$ 

Prerequisite: EDUC 1301, READ 302 or equivalent

#### **ELPT 1321**

### Introduction to Electrical Safety and Tools

Safety rules and regulations. Includes the selection, inspection, use, and maintenance of common tools for electricians.

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### **ELPT 1325**

#### National Electrical Code I

An introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring design, protection, methods, and materials; equipment for general use; and basic calculations.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### **ELPT 1419**

#### Fundamentals of Electricity I

An introduction to basic direct current (DC) theory including electron theory and direct current applications. Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

### ELPT 1420

#### Fundamentals of Electricity II

Introduces to alternating current (AC). Includes AC voltage, frequency, mechanical and electrical degrees, waveforms, resistors, capacitors, and inductors.

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=3$ Prerequisite: ELPT 1419

Pre/Corequisite: READ 300 or equivalent

## ELPT 1441

#### Motor Control

Operating principles of solid-state conventional controls along with their practical applications. Includes braking, jogging, plugging, and safety interlocks wiring, and schematic diagram interpretations.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ Prerequisite: ELPT 1419

Pre/Corequisite: READ 300 or equivalent

## ELPT 1445

## **Commercial Wiring**

Commercial wiring methods. Includes overcurrent protection, raceway panel board installation, proper grounding techniques, and associated safety procedures.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

#### **ELPT 1455**

## **Electronic Applications**

Electronic principles and the use of electronic devices. Includes diodes, transistors, and rectifires.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: ELPT 1419

Pre/Corequisite: READ 300 or equivalent

### **ELPT 1457**

#### **Industrial Wiring**

Wiring methods used for industrial installations. Includes motor circuits, raceway and bus way installations, proper grounding techniques, and associated safety procedures.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

#### **ELPT 2301**

#### Journeyman Electrician Exam Review

Preparation for journeyman electrician licensure with emphasis on calculations and the National Electrical

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### ELPT 2319

## Programmable Logic Controllers I

Fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls.

 $Lecture\ Hrs=2$ ,  $Lab\ Hrs=2$ 

Pre/Corequisite: ELPT 1420, READ 300 or equivalent

#### **ELPT 2325**

### National Electrical Code II

In-depth coverage of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring protection and methods, special conditions, and advanced calculations.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

## **ELPT 2331**

#### AC/DC Drives

Installation and maintenance of alternating current (AC) and direct current (DC) variable speed drives with emphasis on application, operating characteristics, and troubleshooting techniques.

Lecture Hrs = 2, Lab Hrs = 2Prerequisite: ELPT 2405

Pre/Corequisite: READ 300 or equivalent

#### **ELPT 2355**

## Programmable Logic Controllers II

Advanced concepts in programmable logic controllers and their applications and interfacing to industrial con-

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisites: ELPT 2319 or ELPT 1455 Pre/Corequisite: READ 300 or equivalent

#### ELPT 2405

## Motors and Transformers

Operation of single-and three-phase motors and transformers. Includes transformer banking, power factor correction, and protective devices.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: ELPT 1420

Pre/Corequisite: READ 300 or equivalent

#### ENGL 301

## Fundamentals of Writing I

Practice in development of effective sentences and paragraphs with emphasis on structure, clarity, unity, and development of topic. Review of fundamentals of grammar, punctuation, and spelling in a laboratory setting. Credit for this course is not transferable.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

## ENGL 302

## Fundamentals of Writing II

Practice in development of full-length themes with emphasis on structure, organization, unity, and development of thesis. Credit for this course is not transfer-

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or ESOL 301; READ 300 or equivalent

#### ENGL 1301 Σ

#### **English Composition I**

A concentrated study of the fundamentals of English usage; training in accurate reading and writing of prose, chiefly expository; study of the principles of library research and the techniques of writing research papers. Research required.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 302 or equivalent, READ 302 or equivalent

#### ENGL 1302 ΩΣ

#### **English Composition II**

A study of the principles of effective writing through analysis of selected novels, short stories, poems, and plays. Continued study of methods of library research and of writing research papers. Research required.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 1301 (C or better), READ 302 or equivalent

### ENGL 2189D

### Manuals and Documents

A workshop course designed to give experience in writing for science-based industries. Students will do several case studies requiring the creation of science-oriented documents for both in-house and consumer audiences.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 300 or equivalent

## ENGL 2189F

## **Feature Writing**

A workshop course designed to give students experience in creating articles about business and industry, for publication in trade journals, house organs or mass media outlets. Students will find topics, do interviews and write articles slanted to specific audiences and publications.

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ Pre/Corequisite: ENGL 2311

## ENGL 2189I

## **International Technical Communications**

A course designed to train students for written communication for an international audience. Students will learn the processes of localization, translation, and internationalization through writing new, or revising existing, documents for use by audiences beyond the U.S.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: ENGL 2311

## ENGL 2189L **Legal Writing**

A course designed to instill basic skills in writing for legal purposes. Students will learn to create legal memoranda, briefs, citation forms and contracts and will experience communicating legal information to lay audiences.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Pre/Corequisite: ENGL 2311

## **ENGL 2189M** Medical Writing

A workshop course designed to give experience in writing for medical, pharmaceutical and related industries. Through case studies, students will create both in-house and consumer-aimed documents about medical topics. Lecture Hrs = 3, Lab Hrs = 0

### ENGL 2189N

### **Newsletter Writing & Production**

A workshop course designed to give students experience in writing, designing and producing corporate newsletters, bulletins and information pages. Students will learn to find topics of interest to readers, research and write articles, design publication formats, layout and produce newsletters for mass consumption.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: ENGL 2311, COMM 2305

### ENGL 2189 Σ Science Writing

A workshop course designed to give experience in writing for science-based industries. Students will do several case studies requiring the creation of science-oriented documents for both in-house and consumer au-

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ Prerequisite: ENGL 2311

## ENGL 2307 Ω Creative Writing I

A critical study for writers of poetry: narrative or lyric; of fiction: sketches, anecdotes, short stories, novels, and drama; of factual writing: articles, biography, or family history. Creativity, criticism, and revision are emphasized. Analyses of contemporary models and techniques are examined with emphasis on literary qualities.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: ENGL 1302, READ 302 or equivalent

## ENGL 2308 **Q**

## Creative Writing II

Same as ENGL 2307 but more advanced.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 2307, READ 302 or equivalent

## ENGL 2311 Ω

### **Technical Writing**

A course designed to develop professional document writing in the technical and business world. A speech component is included. Requirements include an original report of considerable scope and length. Research required.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 302 or equivalent, READ 301 or equivalent

## ENGL 2315 **Ω**

## **Advanced Technical Writing**

A course designed to train students to deal with special communications issues that occur in the corporate environment. Students do a number of case study projects designed to explore technical, communication and political issues that occur in the communiation process. Serves as the capstone course for professional writing

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ Prerequisite: ENGL 2311

## ENGL 2322 Ω

#### **English Literature: Beowulf to Romantic**

A direct study of significant masterpieces of English literature from the earliest times to the Romantic Period with particular attention to the main currents of thought and the major writers of Britain.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 1302, READ 302 or equivalent

#### ENGL 2323 Ω

#### **English Literature: Romantic to Present**

A direct study of significant masterpieces of English literature from the Romantic Period to the present with particular attention to the main currents of thought and the major writers of Britain.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

#### ENGL 2326 Ω

## American Literature Survey

A general study of the significant writers and movements of American literature from its origins to the present.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

#### ENGL 2327 **Ω** Σ

#### American Literature to 1860

A general survey of the major works in American literature from its origins to 1860.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

### ENGL 2328 **Ω** Σ

#### American Literature-1860 to Present

A general survey of the major works in American literature from 1860 to the present.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

#### ENGL 2331 Ω

#### **Cross-Cultural Literature**

An introduction to literature across cultures. This course focuses on story-telling as a way to learn about peoples from around the world. Authors selected are from North America, Asia, Africa, Latin America, and Europe.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

#### ENGL 2332 Ω

## World Literature - Greeks to Renaissance

A study of the masterpieces of western world literature, from the ancient Greek classics through the early

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

#### ENGL 2333 Ω

## World Literature-Fifteenth Century to the Present

A study of the masterpieces of western world literature from Shakespeare through the present.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

## ENGL 2341 Ω

## Forms of Literature

The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 1302, READ 302 or equivalent

## $\Omega$ indicates courses taught with optional honors

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

### ENGR 1304

### **Engineering Graphics I**

Engineering graphics is a general course for all types of engineering. Its practical and technical content is essential for engineers, designers and manufacturers. In many other vocations, a knowledge of working drawings and the techniques of engineering drawing are of inestimable value. Students who register for engineering graphics will require a complete set of drafting instruments which meet the approval of the instructor in charge. Care and use of instruments, freehand lettering, geometric construction, orthographic projection, technical sketching, pictorial drawing, dimensioning, solutions to engineering problems, details and assemblies, and blueprinting.

Lecture Hrs = 2, Lab Hrs = 4Prerequisite: MATH 1414

Pre/Corequisite: READ 302 or equivalent

#### **ENGR 1305**

## **Engineering Graphics II**

Engineering applications of problems relating to points, lines, planes, solids, intersections of planes and solids, development of surfaces, perspectives, auxiliary view, and double curved and warped surfaces.

Lecture Hrs = 2, Lab Hrs = 4Prerequisite: ENGR 1304

Pre/Corequisite: READ 302 or equivalent

### ENGR 2301

#### **Engineering Statics**

Elementary principles of mechanics applied to particles at rest and in motion. Kinematics of particles, resultants of forces, Newton's Laws for a particle work and energy, impulse and momentum principles. Elementary rigid body statics.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: MATH 2413

Pre/Corequisite: PHYS 2425, READ 302 or equivalent

## ENGR 2302

## **Engineering Dynamics**

Extension of the principles of mechanics to rigid bodies at rest and in motion. Kinematics of rigid body motion, extension of Newton's Law to translation, rotation, plane motion of rigid bodies. Equilibrium and motion of bodies affected by friction. Work-energy and impulse-momentum for rigid bodies.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: ENGR 2301

Pre/Corequisite: READ 302 or equivalent

### ENVR 1401 Ω

## **Environmental Science**

A general study of ecological concepts; an introduction to chemical and biological principles that relate to ecology; an introduction to resources including animal, plant, energy, water, soil and air. A study of pollution problems and solutions. Laboratory exercises include soil testing, air and water quality measurements, field sampling techniques, and related nature studies. Optional field trips.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: MATH 310, READ 302 or equivalent

#### ESOL 300

## ESOL Developmental Written Communication I

A beginning course in written English for students who are native speakers of languages other than English. Students receive extensive practice and assistance in basic vocabulary, spelling, grammar, comprehension and writing simple sentences. Although the course may include some speaking, the emphasis is on developing writing skills. Credit for this course is not transferable. TSI regulations for developmental requirements apply. Lecture Hrs=3,  $Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### ESOL 301

#### **ESOL Developmental Written Communication II**

An intermediate course in written English for students who are native speakers of languages other than English. Students receive extensive practice and assistance in further development of vocabulary, spelling, grammar, comprehension, simple paragraphs, and/or short essays. Although the course may include some speaking, the emphasis is on developing writing skills. Credit for this course is not transferable. TSI regulations for developmental requirements apply.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### ESOL 302

### **ESOL Developmental Written Communication III**

An advanced essay writing course for students who are native speakers of languages other than English. Students receive extensive practice and assistance in advanced vocabulary, spelling, grammar, comprehension, and writing expository essays. Although the course may include some speaking, the emphasis is on developing writing skills. Credit for this course is not transferable. TSI regulations for developmental requirements apply.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### ESOL 303

#### **ESOL Developmental Oral Communication I**

A beginning course in spoken English for students who are native speakers of languages other than English. Students receive extensive practice and assistance in basic vocabulary, pronunciation skills, and reading comprehension. Although the course may include some writing, the emphasis is on developing speaking and reading skills. Credit for this course is not transferable. TSI regulations for developmental requirements apply. Lecture Hrs=3,  $Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### ESOL 304

## ESOL Developmental Oral Communication II

An intermediate course in spoken English for students who are native speakers in languages other than English. Students receive extensive practice and assistance in more complex vocabulary, pronunciation skills, and reading comprehension. Students may make short oral presentations. Although the course may include some writing, the emphasis is on developing speaking and reading skills. Credit for this course is not transferable. TSI regulations for developmental requirements apply. Lecture Hrs=3,  $Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### ESOL 30

## ESOL Developmental Oral Communication III

An advanced course in spoken English for students who are native speakers of languages other than English. Students receive extensive practice and assistance in developing vocabulary, pronunciation skills, and reading comprehension at a more advanced level. Students may make longer oral presentations and respond to questions in an interview format. Although the course may include some writing, the emphasis is on developing speaking and reading skills. Credit for this course is not transferable. TSI regulations for developmental requirements apply.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### **GEOG 1300**

### Introduction to College Geography

The world and its climate regions, its resources, and man's use of the earth and its resources.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 301 or equivalent

## **GEOG 1303**

## World Regional Geography

A study of major developed and developing regions with emphasis on the awareness of prevailing world conditions and developments, including emerging conditions and trends, and the awareness of diversity of ideas and practices to be found in those regions. Course content may include one or more regions.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent, ENGL 301 or equivalent

## **GEOL 1301**

## **Earth Science**

Survey of physical sciences with emphasis on the earth's ecological and geological processes. Note: Students are advised to complete their science requirements before attempting this course.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

#### GEOL 1403

## Physical Geology

Earth forms, structures, materials and processes which have formed them. An introduction to minerals, rocks and topographic maps. Optional field trips.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent

#### **GEOL 1404**

## Historical Geology

A history of the earth and the development of its life forms and land forms throughout geologic time. Introduction to fossils and geologic maps. Optional field trips.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 301 or equivalent

#### GEOL 1405

## **Environmental Geology**

Environmental geology is an introductory survey to some of the various processes that help to shape our earth, the resources that come from it, and the problems that arise from their use. Lab studies will investigate such problems as flooding, faulting, subsidence, landfills, and other pertinent land use issues. Optional field trips.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Pre/Corequisite: READ 301 or equivalent

#### **GERS 1301**

### Introduction to Gerontology

Overview of the social, psychological, and biological changes that accompany aging, and the implications of these changes for the individual, as well as for the larger society.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

#### GERS 1302

## **Directing Activities in Long-Term Care Environments**

Exploration of the role of the activity director in longterm care facilities. Topics include the assessment of client needs, development of care plans, design of programs using therepeutic recreation techniques, and the supervision of recreation personnel.

Lecture Hrs = 3, Lab = 0

Pre/Corequisite: READ 300 or equivalent

#### **GERS 1303**

## Fitness and Wellness for Aging Populations

Healthy aging and welness promotion for the older adult. Includes an overview of the aging process and its effect on major body systems. Also addresses various wellness practices, including lifestyle changes and exercise/nutrition planning. Emphasizes issues involving attitude and social interaction, as well as recommendations for home safety and personal security. Projects in wellness planning and resource location will be discussed.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

#### **GERS 1306**

## **Practical Eldercare Skills**

Health management and hands-on skills for becoming caregivers and / or assisting caregivers of elderly people with health problems.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

## **GERS 1342**

#### Aging and Mental Health

Introduction and analysis of current knowledge and concerns related to psychological aging. Includes the theoretical and empirical foundations relevant to the psychological study of the later part of the life span. The course is taught from an interdisciplinary perspective and focuses on topics related to perceptual, cognitive, personality, and interpersonal social development. Examination of issues related to psychological adjustment and death and dying.

Lecture Hrs = 1, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### GERS 2330

## Issues of Long-Term Care

Exploration of current information regarding a variety of long-term care settings for the elderly.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### **GERS 2366**

# Practicum (or Field Experience) - Adult Development and Aging

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 22 Pre/Corequisite: READ 300 or equivalent

#### GOVT 2301 Ω

#### American Government I

Theory and forms of government, political socialization, United States and Texas constitutions, federalism, civil rights and civil liberties, and political parties and elections. This course will fulfill Texas teacher certification requirements in government for individuals with out-of-state degrees.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or eauivalent

#### GOVT 2302 Ω

#### American Government II

United States and Texas executive, legislative, and judicial branches, governmental finance, foreign policy, and county and municipal government.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

### HIST 1301 **Ω** Σ

#### History of the United States to 1877

The political, economic, social, and intellectual history of the United States from the discovery of America to 1877. A research component is required for honors

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### HIST 1302 Ω Σ

### History of the United States Since 1877

The political, economic, social, and intellectual history of the United States from 1877 to the present day. A research component is required for honors credit.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## HIST 2301 Ω

## History of Texas

Texas history from colonization to the present day with attention given to political, social, economic, and intellectual history. Designed for any students interested in local history, the course is particularly recommended for prospective teachers in the public schools of Texas. (Based on House Bill 935, this can be substituted for an American history course.) A research component is required for honors credit.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## HIST 2321 Ω

#### History of World Civilizations to 1500

A comparative historical study of Europe, Asia, Africa, the Americas, and Australia to 1500. A research component is required for honors credit.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## HIST 2322 **Ω**

#### History of World Civilizations from 1500 to Present

A comparative historical study of Europe, Asia, Africa, the Americas, and Australia from 1500 to the present. A research component is required for honors credit. Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### HITT 1301

#### Health Data Content and Structure

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.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 300 or equivalent

### Medical Terminology

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.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

## Coding and Classification Systems

Application of basic coding rules, principles, guidelines, and conventions.

 $Lecture\ Hrs = 2$ ,  $Lab\ Hrs = 2$ 

Prerequisite: HITT 1305, READ 301 or equivalent

#### HITT 1345

## **Health Care Delivery Systems**

Introduction to organization, financing, and delivery of health care services, accreditation, licensure, and regulatory agencies.

Lecture Hrs = 3, Lab Hrs = 0

## Prerequisite: READ 300 or equivalent

#### HITT 1349

## Pharmacology

Overview of the basic concepts of the pharmacological treatment of various diseases affecting major body sys-

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent Pre/Corequisite: HITT 1305

## Legal and Ethical Aspects of Health Information

Concepts of confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information.

Lecture Hrs = 3, Lab Hrs = 0, HIPPA Fee Prerequisite: READ 300 or equivalent

#### HITT 1355

## **Health Care Statistics**

General principles of health care statistics with emphasis in hospital statistics. Skill development in computation and calculation of health data.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: MATH 310 or equivalent, READ 300 or equivalent

#### HITT 2160

## Clinical-Health Information/Medical Records Technology/ Technician

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0, Lab Hrs = 0, External Lab = 6, Insurance

Prerequisite: HITT 1301, HITT 1341, HITT 1345, MRMT 1307, READ 300 or equivalent

#### HITT 2161

#### Clinical-Health Information/Medical Records Technology/ Technician

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0, Lab Hrs = 0, External Lab Hrs = 6, Insurance

Prerequisite: READ 300 or equivalent Pre/Corequisite: HITT 2335

#### HITT 2260

## Clinical-Health Information/Medical Records Technology/

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0, Lab Hrs = 0, External Lab = 8, Insurance

Prerequisite: HITT 2160, READ 300 or equivalent Pre/Corequisite: HITT 1353, HITT 1355

#### HITT 2261

## Clinical - Health Information/Medical Records Technology/Technician

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0,  $Lab\ Hrs = 0$ ,  $External\ Lab = 8$ , Insurance

Prerequisite: HITT 2260, READ 300 or equivalent Pre/Corequisite: HITT 2343

### HITT 2335

## Coding and Reimbursement Methodologies

Development of advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding prospective payment systems and methods of reimbursement.

Lecture Hrs = 2, Lab Hrs = 2

Prerequisite: HITT 1341, READ 300 or equivalent

## HITT 2339

## Health Information Organization and Supervision

Principles of organization and supervision of human, fiscal, and capital resources.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 300 or equivalent

## Quality Assessment and Performance Improvement

Study of the many facets of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality improvement functions, quality tools, utilization management, risk management, and medical staff data quality issues.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: READ 300 or equivalent

#### HRPO 1311

#### **Human Relations**

Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

#### HUMA 1301 **Ω** Σ

#### Introduction to the Humanities I

A multicultural, interdisciplinary introduction to the study of humankind's cultural legacy in at least four of the disciplines of the humanities, which are approached individually, in synthesis with one or more of the others, or thematically: the visual arts, motion pictures, architecture, music, dance, philosophy, and literature as well as the social sciences, history, mathematics, medicine, physical sciences and communication as they have contributed to that cultural legacy.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 301 or equivalent, ENGL 302 or equivalent

### HUMA 1302 **Ω** Σ

#### Introduction to the Humanities II

Honors only. A historical overview of humankind's cultural legacy in at least four of the disciplines of the humanities, which are approached individually, in synthesis with one or more of the others, or thematically: the visual arts, motion pictures, architecture, music, dance, philosophy, and literature as well as the social sciences, history, mathematics, medicine, and the physical sciences as they have contributed to that cultural legacy.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Prerequisite: READ 301 or equivalent, ENGL 302 or equivalent

### HYDR 1345

#### **Hydraulics and Pneumatics**

Fundamentals of hydraulics and types of hydraulic pumps, cylinders, valves, motors, and related systems including operations, maintenance, and system analysis.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

## IBUS 1305

## Introduction to International Business and Trade

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.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

## IMED 1301

#### Introduction to Multimedia

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.

Offered in Fall semester only. Lecture Hrs = 3, Lab Hrs = 1 Prerequisite: READ 301 or equivalent

## IMED 1316

#### Web Page Design I

Instruction in web page design and related graphic design issues, including mark-up languages, web sites, and browsers.

Offered in Spring semester only. Lecture Hrs = 3, Lab Hrs = 1 Prerequisite: READ 301 or equivalent

#### IMED 2309

#### **Internet Commerce**

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 websites in order to collect information, performing on-line transactions, and generating dynamic content.

Offered in Fall semester only. Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: MRKG 1311, READ 301 or equivalent

### IMED 2315

## Web Page Design II

A study of mark-up language advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing web sites according to accessibility standards, cultural appearance, and legal issues.

Offered in Spring semester only. Lecture Hrs = 3, Lab Hrs = 1 Prerequisite: READ 301 or equivalent Pre/Corequisite: IMED 1316

#### NTC 1305

### Introduction to Electronic Instrumentation

A survey of the instrumentation field and the professional requirements of the instrumentation technician, including an introduction to computer and calculator applications involved in basic electronic circuit analysis. Safety applications and fundamental math applications are included.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### INTC 1312

#### Introduction to Instrumentation and Safety Technology

An overview of industries employing instrument technicians. Course also covers instrument safety techniques and practices as applied to the instrumentation field. Lecture Hrs=3,  $Lab\ Hrs=0$ 

Prerequisite: READ 300 or equivalent

#### INTC 1343

## **Application of Industrial Automatic Control**

A study of automatic process control including measuring devices, analog and digital instrumentation, signal transmitters, recorders, alarms, controllers, control valves, and process and instrument drawings. Includes connection and troubleshooting of loops. The study begins with ISA, electrical, and process symbology. Course addresses the engineering package which may include such documents as P&IDs, loop diagrams, sketches, spec sheets, bills of materials, and simplified flow diagrams. The course includes basic sketching techniques.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: INTC 1456, READ 300 or equivalent

## INTC 1425

## Instrument Hardware Installation I

Introduces installation of instrument to the accepted methods for the mounting instrumentation equipment. Also addressed are aspects of introducing a piece of instrumentation equipment into the process environment

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 300 or equivalent

#### INTC 1441

## **Principles of Automatic Control**

A study of the theory of basic measurements, automatic control systems and design, closed loop systems, recorders, controllers, feedback, control modes and control configurations.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 300 or equivalent

#### INTC 1456

#### **Instrumentation Calibration**

A study of techniques for calibrating electronic and pneumatic transmitters, controllers, recorders, valves, and valve positioners including tear down, assembly, alignment, and calibration of equipment.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: READ 300 or equivalent

#### INTC 2339

## Critique of Instrument and Control

An overview of instruments and control stressing preparation for industry employment testing and either the National Institute of Engineering Technologist Certification (Level 2) or the Instrumentation Systems and Automation Certified Control Systems Technician Level I Certificate (ISA CCST).

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

Prerequisite: INTC 1343, READ 300 or equivalent

## INTC 2405

#### Instrument Hardware Installation II

A continuation of Hardware Instrumentation I. Students will improve istrumentation skills in tubing and piping, measuring, layout, welding, and testing. Also covers instrumentation wiring, circuitry, heat tracing, chemical treatment and craft related trigonometry.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 300 or equivalent

## INTC 2436

### Distributed Control and Programmable Logic

An overview of distributed control systems including configuration of programmable logic controllers, smart transmitters, and field communicators. Functions of digital systems in a process control environment. This course offers a deeper understanding of current automatic control applications in industry. The course takes a holistic approach to understanding the role of instrumentation in the process industry. The student integrates typical processing equipment and applied instrumentation for that equipment. Studies include advanced control concepts, computer control schemes, programmable logic control applications, and advanced troubleshooting techniques. The lab offers the student hands-on application opportunities relating to the topics above.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: INTC 1441, READ 300 or equivalent

## INTC 2450

## Fieldbus Process Control Systems

A comprehensive view into the field of instrument technicians with regards to fieldbus systems. Fieldbus equipment and systems with the theory, applications and hands-on experiences preparing the student for the installation and maintenance of this apparatus will be introduced.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: INTC 1441, READ 300 or equivalent

### ITCC 1402

### **CCNA 1: Networking Basics**

A course introducing the basics of networking including network terminology, local area networks (LAN) and wide area networks (WAN). Topics include network protocols such as TCP/IP, Open System Interconnection (OSI) models, cabling and routers.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 300 or equivalent

#### ITCC 1406

#### **CCNA 2: Router and Routing Basics**

An introduction to basic Cisco router configuration for local area networks. Topics include initial router configuration for TCP/IP, management of Cisco IOS and router configuration files, routing protocols, and access control lists.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: ITCC 1402, READ 300 or equivalent

#### ITCC 1442

### **CCNA 3: Switching Basic and Intermediate Routing**

A course focusing on advanced topics including IP addressing techniques, intermediate routing protocols, CLI configuration of switches, Ethernet switching, VLANs, Spanning Tree Protocol, and VLAN Trunking Protocol

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: ITCC 1406, READ 300 or equivalent

#### ITCC 1446

#### **CCNA 4: WAN Technologies**

This course focuses on advanced IP addressing techniques (Network Address Translation [NAT], Port Address Translation [PAT], and DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management and introduction to optical networking. In addition, the student will prepare for the CCNA exam.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: ITCC 1442, READ 300 or equivalent

#### ITNW 1337

## Introduction to the Internet

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.

Offered in Fall semesters only. Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: ITSC 1309, READ 300 or equivalent

#### ITNW 1445

## Implementing Network Directory Services

Provides students with the knowledge and skills necessary to install, configure, and administer Network Directory service.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: CPMT 1449, READ 300 or equivalent

## ITSC 1309

### Integrated Software Applications I

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.

Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: READ 301 or equivalent

#### ITSC 1364

# Practicum (or Field Experience) Computer and Information Sciences, General

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 21

Prerequisite: 12 or more SCH of Coursework in COSC, CPMT, ITSC, ITCC, ITSE, and/or ITSW courses, READ 301 or equivalent

#### ITSC 2321

## **Integrated Software Applications II**

Continued study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software.

Offered in Fall semesters only. Lecture Hrs = 3, Lab Hrs = 1

Prerequisite: ITSC 1309, READ 301 or equivalent

#### ITSE 1331

#### Introduction to Visual BASIC Programming

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.

 $Lecture\ Hrs=3,\ Lab\ Hrs=1$ 

Prerequisite: READ 301 or equivalent

### ITSE 1350

#### System Analysis and Design

Comprehensive introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools.

Lecture Hrs = 3, Lab Hrs = 1

Prerequisite: Any Programming Course (COSC 1436, COSC 1437, ITSE 1310, ITSE 1331, ITSE 2317, ITSE 2349, and/or ITSE 2359), READ 301 or equivalent

#### ITSW 2301

## Fundamentals of Geographic Information System (GIS)

Instruction in the use of geographic information systems software for planning and problem-solving. *Offered in Fall semesters only.* 

Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: ITNW 1337, READ 301 or equivalent

#### ITSW 2337

#### Advanced Database

Designed to provide an understanding of advanced functionality of databases.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 1$ 

Pre/Corequisite: ITSC 2321, READ 301 or equivalent

## KINE 1101

#### Bowling, Beginning

A course designed to learn the rules, scoring and fundamental techniques for bowling. An emphasis will be placed on proper execution and selection of equipment. Lecture Hrs = 1, Lab Hrs = 2, Materials Fee

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### KINE 1102

### Bowling, Experienced

A course designed to learn techniques for experienced individuals. Emphasis will be placed on proper and additional techniques with regard to strategy.

Lecture Hrs = 1,  $Lab\ Hrs = 2$ ,  $Materials\ Fee$ 

Prerequisite: KINE 1101

Pre/Corequisite: READ 300 or equivalent

#### **KINE 1103**

## Exercise, Beginning

A course designed to study and apply the components of muscular strength and endurance, flexibility, body composition and cardiovascular endurance into a personal designed program of exercise. A prescribed program will be designed for students following pre-fitness assessment.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### **KINE 1104**

## Exercise, Experienced

A course designed to study and apply various programs of exercise such as circuit training, weight training, super circuit training and other prescribed programs for experienced individuals.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1103

Pre/Corequisite: READ 300 or equivalent

#### KINE 1105

#### Golf, Beginning

A course designed to learn rules, scoring, etiquette, and fundamental techniques for golf. An emphasis will be placed on proper execution of all skills for golf using woods, irons, and putter.

Lecture Hrs = 1,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

## KINE 1106

### Golf, Experienced

A course designed to learn rules, scoring, etiquette, and fundamental techniques for golf. An emphasis will be placed on proper execution of all skills for golf using woods, irons, and putter.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1105

Pre/Corequisite: READ 300 or equivalent

## KINE 1107

#### Cycling, Beginning

A course designed to develop cardiovascular fitness through stationary cycling (spinning). Some emphasis will be on setting up the bicycle, correct technique, nutrition, and hydration.

 $Lecture\ Hrs=1,\ Lab\ Hrs=2$ 

Pre/Corequisite: READ 300 or equivalent

## KINE 1108

## Cycling, Experienced

A course designed to further improve cardiovascular fitness, strengthen the lower body and increase flexibility. Emphasis will remain on correct cycling techniques, nurtrition, and hydration strategies.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1107

### **KINE 1109**

#### Pilates, Beginning

A course designed to strengthen, lengthen, and tone the body without machines.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

#### **KINE 1110**

#### Pilates, Experienced

A course designed to strengthen, lengthen, and tone the body with an emphasis on students' progressing to intermediate and advanced levels.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 2$ Prerequisite: KINE 1109

Pre/Corequisite: READ 300 or equivalent

### KINE 1111

### Aerobic Components, Beginning

A course designed to develop cardiovascular fitness through aerobic exercise. This course will consist of regular aerobics, step aerobics, and cardio kickboxing. Correct technique, nutrition, and hydration will be emphasized.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

### KINE 1112

#### Aerobic Components, Experienced

A course designed to further improve cardiovascular fitness through aerobic exercise. The course will consist of regular aerobics, step aerobics, and cardio kick boxing. Correct techniques, nutrition, and hydration will be emphasized.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1111

Pre/Corequisite: READ 300 or equivalent

## KINE 1113

## Racquetball, Beginning

A course designed to learn rules, fundamental techniques and strategies for racquetball. Emphasis will be placed on proper techniques for singles and double play. Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## KINE 1114

## Racquetball, Experienced

A course designed to learn rules and techniques for the experienced students. An emphasis will be placed on skill development, strategy, and advance shot selection.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1113

Pre/Corequisite: READ 300 or equivalent

#### KINE 1115

## Swimming, Beginning

A course designed to learn the skills for the crawl, back crawl, breaststroke, elementary backstroke, and sidestroke. Emphasis will be given to proper technique and proper breathing skills.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### **KINE 1116**

## Swimming, Experienced

A course designed to review the skills for the five basic strokes. Attention will be given to competency in execution of the five basic strokes. Endurance will also be emphasized.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1115

Pre/Corequisite: READ 300 or equivalent

### KINE 1117

### Tennis, Beginning

A course designed to learn the fundamental techniques of tennis. Emphasis wil be given to the skills of forehand, backhand, overhead, serve, and volley. Rules, etiquette, and strategy for single and doubles play will be addressed.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### **KINE 1118**

#### Tennis, Experienced

A course designed to review the skills for tennis. Rules will be reviewed and attention to style of play and strategy will be addressed for both singles and doubles play.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1117

Pre/Corequisite: READ 300 or equivalent

### Volleyball, Beginning

A course designed to learn the fundamental skills for volleyball such as serving, overhead pass, forearm pass, attacking, blocking and floor defense. Team offensive and defensive systems will be discussed. Rules and proper equipment will be addressed.

Lecture Hrs = 1, Lab Hrs = 2 Pre/Corequisite: READ 300 or equivalent

#### **KINE 1120**

## Volleyball, Experienced

A course designed to review the fundamental skills for volleyball. Team offensive and defensive systems will be emphasized especially in regard to speed of play and set selection. Rules will be addressed.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1119

Pre/Corequisite: READ 300 or equivalent

## KINE 1121

## Water Aerobics, Beginning

A course designed to learn the basic skills for exercise in the water. Emphasis will be placed on various exercise routines in the water that incorporate strength, endurance and flexibility.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## KINE 1122

## Water Aerobics, Experienced

A course designed to review the basic skills for exercise in the water. Emphasis will be placed on various exercise routines with extended duration. Students will devise a routine of their own and incorporate strength, endurance and flexibility.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1121

Pre/Corequisite: READ 300 or equivalent

## KINE 1123

## Weight Training, Beginning

A course designed to introduce a variety of programs for building strength, power, endurance, flexibility and cardiovascular endurance. Both machines and free weights will be used for programs. Weight management will be discussed.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

## Weight Training, Experienced

A course designed to review a variety of programs for building strength, power, endurance, flexibility and cardiovascular endurance. Supplementation and nutrition will be addressed.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1123

Pre/Corequisite: READ 300 or equivalent

## KINE 1125

## Sailing, Beginning

A course designed to learn the basic techniques in sailing with emphasis on equipment, safety and the skills of rigging, setting the sails, starting and stopping, tacking, tiller movement, leaving and returning to the beach. Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### **KINE 1126**

## Sailing, Experienced

A course designed to review the techniques in sailing with emphasis on the skills of rigging, setting the sails, starting and stopping, tacking, jibing, tiller movement, leaving a beach, returning to beach, and correct language for sailing.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1125

Pre/Corequisite: READ 300 or equivalent

## Yoga, Beginning

A course designed to learn the importance and benefits of yoga. Learning skills will include postures (asanas), breathing, and relaxation techniques. An emphasis will be made to improve flexibility, strength, muscle tone, and concentration.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

## KINE 1128

## Yoga, Experienced

A course designed to review the postures and techniques for Hatha Yoga. Emphasis will be given to flexibility, breathing and relaxation techniques.

Lecture Hrs = 1, Lab Hrs = 2Prerequisite: KINE 1127

Pre/Corequisite: READ 300 or equivalent

## **KINE 1129**

#### Basketball, Beginning

A course designed to learn rules, fundamental techniques and strategies for the sport of basketball. Emphasis will be placed on proper execution of individual and team skill concepts.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## **KINE 1130**

## Basketball, Experienced

A course designed to learn rules, advanced techniques and strategies for the sport of basketball. Emphasis will be placed on proper execution of individual and team skill concepts.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 2$ Prerequisite: KINE 1129

### KINE 1133

### Yogalates, Beginning

An introductory course designed to teach students how to strengthen core and postural muscles, while also improving balance and coordination. This course is an integration of Pilates for core strength, and Hatha Yoga for limb strength and flexibility.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### KINE 1141

## Self-Defense, Beginning

Instruction will include specific moves related to martial art movements in regard to self-protection.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### KINE 1142

### Self-Defense, Experienced

A course designed to review specific moves related to martial art movements in regard to self-protection. Students will be required to demonstrate proficiency in martial art movements in sequence.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1141

Pre/Corequisite: READ 300 or equivalent

#### KINE 1149

#### **Conditioning for Athletics**

A course designed to develop strength and endurance as related to athletics.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

### KINE 1150

### Conditioning for Athletics

A course designed to develop speed and power as related to athletics.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1149

Pre/Corequisite: READ 300 or equivalent

#### KINE 1151

## Skin and Scuba Diving, Beginning

A course designed to learn fundamental techniques for under water procedures. Techniques in breathing, communicating and diving will be taught. Manipulation of diving equipment will be covered as well as safety procedures.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: Good Swimming Skills Pre/Corequisite: READ 300 or equivalent

#### KINE 115

## Scuba Diving, Experienced

Must be at least 17 years of age and have participated in scuba diving for one year as a certified diver.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1151

Pre/Corequisite: READ 300 or equivalent

## KINE 1183M Basketball Team

A course designed for indivduals on athletic scholarships who participate in basketball.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: Instructor's permission Pre/Corequisite: READ 300 or equivalent

### **KINE 1184M**

## **Basketball Team**

A course designed for indivduals on athletic scholarships who participate in basketball.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 1183M, Instructor's permission Pre/Corequisite: READ 300 or equivalent

#### **KINE 1185W**

#### Tennis Team

A course designed for individuals on athletic scholarships who participate in tennis.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: Instructor's permission Pre/Corequisite: READ 300 or equivalent

### KINE 1186M Tennis Team

## A course designed for individuals on athletic scholarships who participate in tennis.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 1185W, Instructor's permission Pre/Corequisite: READ 300 or equivalent

## KINE 1187M

## Volleyball Team

A course designed for individuals on athletic scholarships who participate in volleyball.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: Instructor's permission Pre/Corequisite: READ 300 or equivalent

## KINE 1188M

#### Volleyball Team

A course designed for individuals on athletic scholarships who participate in volleyball.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 1187W, Instructor's permission Pre/Corequisite: READ 300 or equivalent

## KINE 1301

## Foundations in Physical Education

A course which includes the history, principles, terminology, aims and objectives of physical education and related areas of health and recreation.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 301 or equivalent

## KINE 1304

## Personal Health

Fundamentals of health dealing with personal hygiene. Includes a study of bodily organs and diseases, physical and mental health concepts, and community health problems.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 301 or equivalent

#### KINE 1305

## The Healthy American

A course designed for individuals to make lifestyle assessments within the six dimensions of wellness; the physical, emotional, mental, social, spiritual and occupational dimensions.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 301 or equivalent

## KINE 1306 First Aid

A course which includes instruction in American Red Cross Standard First Aid and personal safety and cardiopulmonary resuscitation. Upon successfully completing the course, students are certified in first aid and CPR.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent

## KINE 1308

## **Sports Officiating**

Acourse designed for students desiring to increase their knowledge and appreciation of sports. Students will be given an insight into the rules of various sports, the technique, procedure and practice of officiating.

Lecture Hrs = 2, Lab Hrs = 2

Pre/Corequisite: READ 301 or equivalent

#### KINE 1332

#### **Elementary and Recreational Game Skills**

Instruction in games, recreational activities and rhythm skills for preschool through grade six with emphasis on methods of presentation.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 301 or equivalent

#### **KINE 1338**

## **Concepts of Physical Fitness**

This course presents the concepts and use of selected physiological variables of fitness, individual testing and consultation, and the organization of sport and fitness programs.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Pre/Corequisite: READ 301 or equivalent

#### KINE 2149

#### **Conditioning for Athletics**

A course designed to develop dynamic speed, coordination and balance as related to athletics.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### **KINE 2150**

## **Conditioning for Athletics**

A course designed to develop dynamic power and flexibility for athletics.

Lecture Hrs = 1, Lab Hrs = 2 Prereauisite: KINE 2149

Pre/Corequisite: READ 300 or equivalent

### KINE 2155 Water Safety

Basic Lifeguarding is designed to: (1) train participants in basic water safety and rescue skills; (2) develop the skills necessary to obtain Basic Lifeguarding certification; and (3) prepare students for summer-time employment

Required swimming skills: Students must be able to swim continuously 500 yards competently demonstrating the five basic strokes (crawl,

back crawl, breaststroke, elementary backstroke and sidestroke). Students should be able to dive to a minimum depth of 9 feet and bring a

10-pound diving brick to the surface. Students should be able to dive to a depth of 5 feet and swim underwater for at least 15 yards and be

able to tread water for 1 minute. Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### KINE 2183M Basketball Team

A course designed for indivduals on athletic scholarships who participate in basketball.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 1184M, Instructor's permission Pre/Corequisite: READ 300 or equivalent

### KINE 2184M

#### **Basketball Team**

A course designed for indivduals on athletic scholarships who participate in basketball.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 2183M, Instructor's permission Pre/Corequisite: READ 300 or equivalent

## KINE 2185 W

#### **Tennis Team**

A course designed for individuals on athletic scholarships who participate in tennisl.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 1186W

Pre/Corequisite: READ 300 or equivalent

### KINE 2186W Tennis Team

A course designed for individuals on athletic scholarships who participate in tennisl.

Lecture Hrs = 1, Lab Hrs = 2 Prerequisite: KINE 2185W

Pre/Corequisite: READ 300 or equivalent

## KINE 2187W Volleyball Team

A course designed for individuals on athletic scholarships who participate in volleyball.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 1188W, Instructor's permission Pre/Corequisite: READ 300 or equivalent

## KINE 2188W Volleyball Team

A course designed for individuals on athletic scholarships who participate in volleyball.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: KINE 2187W, Instructor's permission Pre/Corequisite: READ 300 or equivalent

## KINE 2356

## Care and Prevention of Athletic Injuries

Students will acquire knowledge regarding the signs and symptoms of injuries specific to each body part. Along with injury recognition, they will also learn how to treat and stabilize a variety of orthopedic injuries. To help students learn practical skills, hands-on learning labs will be utilized throughout the course in areas of wound management, splinting, vital signs, transporting athletes, modalities, and supportive taping techniques.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 301 or equivalent

#### **LGLA 1301**

## **Legal Research and Writing**

This course provides a working knowledge of fundamentals of effective legal research and writing. Topics include law library techniques, computer assisted legal research, briefs, and legal memoranda.

Lecture Hrs = 3, Lab Hrs = 0
Prerequisite: READ 301 or equivalent

#### LGLA 1307

## Introduction to Law and the Legal Professions

This course provides an overview of the law and the legal professions. Topics include legal concepts, systems, and terminology; ethical obligations and regulations; professional trends and issues with particular emphasis on the paralegal.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

### LGLA 1343

#### Bankruptcy

This course presents fundamental concepts of bankruptcy law and procedure with emphasis on the paralegal's role. Topics include individual and business liquidation and reorganization.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 1345

#### Civil Litigation

This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Topics include pretrial, trial, and post trial phases of litigation.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 1351

#### Contracts

This course presents fundamental concepts of contract law with emphasis on the paralegal's role. Topics include formation, performance, and enforcement of contracts under the common law and the Uniform Commercial Code.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 1353

### Wills, Trusts and Probate Administration

This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegal's role.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

### LGLA 1355

## Family Law

This course presents fundamental concepts of family law with emphasis on the paralegal's role. Topics include formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 2301

#### **Environmental Law**

This course presents fundamental concepts of environmental law with emphasis on the paralegal's role. Topics include terminology, creation of environmental law, and the application of statutes and government regulations to specific fact situations.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 2303

## Torts and Personal Injury Law

This course presents fundamental concepts of tort law with emphasis on the paralegal's role. Topics include intentional torts, negligence, and strict liability.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

## LGLA 2307

### Law Office Management

Basic principles and structure of management, administration and substantive systems in the law office. Includes law practice technology as applied to paralegals.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 2309

## **Real Property**

This course presents fundamental concepts of real property law with emphasis on the paralegal's 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.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

### LGLA 2311

## **Business Organizations**

Basic concepts of business organizations with emphasis on the paralegal's role. Includes law of agency, sole proprietorships, partnerships, corporations, and other emerging business entities.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

#### LGLA 2313

### Criminal Law and Procedure

Procedures from arrest to final disposition, principles of federal and state law, and the preparation of pleadings and motions as applied to pralegals.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

## LGLA 2323

## **Intellectual Property**

Paralegal's role in creation, procurement, preparation, filing of and for patents, copyrights, and trademarks. Includes processes of intellectual property litigation.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: LGLA 1307, ENGL 1301

## LGLA 2331

#### Advanced Legal Research and Writing

Computerized research techniques and preparation of complex legal documents such as briefs, legal office memoranda, and citation forms.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: LGLA 1301, LGLA 1307, ENGL 1301, READ 301 or equivalent

## LGLA 2333

## **Advanced Legal Document Preparation**

Preparation of legal documents by paralegals based on hypothetical situations drawn from various areas including real estate, family law, contracts, litigation, and business organizations.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: 15 SCH of LGLA Coursework, POFI 1401, READ 301 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### LGLA 2388

### Internship - Legal Assistant/Paralegal

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 13 Prerequisite: 24 SCH of LGLA Coursework, ENGL 1302, SPCH 1315, POFI 1401, READ 301 or equivalent

#### **MATH 110**

#### Mathematics for Allied Health

Treats the area of mathematics of dosages and solutions, reflecting a major emphasis on the metric, apothecary, and household systems in terms of refresher math, instruction in reading dosage labels, measurements of parenteral dosages, and pediatric drug calculation.

Lecture Hrs = 1, Lab Hrs = 0

Prerequisite: MATH 310 or equivalent; READ 300 or equivalent

## MATH 310

## **Basic Mathematics**

This course provides the basic arithmetic skills of addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals; ratio and proportion, percent, measures, averages, exponents, square roots, problem solving, geometry, logic, and introduction to algebra. In this course a grade of "C" or higher prepares the student to take MATH 315. Credit for this course is not transferable.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

## MATH 315 Pre Algebra

This course provides a transition from arithmetic to algebra. Algebric concepts are introduced through traditional arithmetic topics including whole numbers, fractions, decimals, percents, geometric formulas, ratio and proportions, and signed numbers. Unit conversion and basic data analysis will also be studied. A grade of "C" or higher prepares the student to take MATH 320. Credit for this course is not transferable. Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 310 or equivalent, READ 300 or equivalent

## MATH 320

## Introductory Algebra

This course provides a strong emphasis on algebraic skills and concepts of the numbers of ordinary arithmetic and their properties; integers and rational numbers; polynomials in one or more variables; factoring; fractional expressions; solving systems of equations; graphs of linear equations; solving radical, linear and quadratic equations; inequalities; sets; and applied problems. This course prepares students to take MATH 330 or MATH 1332 when completed with a grade of "C" or higher. May not be applied toward a certificate or degree at Lee College. Credit for this course is not transferable.

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

Prerequisite: MATH 315 or equivalent, READ 300 or equivalent

### MATH 330

### Intermediate Algebra

Covers these topics: real numbers and their properties, linear equations, system of equations, polynomials and functions, fractional expressions and equations, exponents, powers, roots, quadratic equations and functions, equations of second degree and their graphs, inequalities and sets, exponential and logarithmic functions, and problem solving. This course, when completed with a grade of "C" or higher, provides adequate preparation for MATH 1414. Credit for this course is not transferable

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

Prerequisite: MATH 320 or equivalent, READ 300 or equivalent

#### MATH 520

### Pre Algebra and Introduction to Algebra

This course provides a review of addition, subtraction, multiplication and division of integers and rational numbers with a strong emphasis on decimals, fractions, ratio, proportions, and percents. Also, a strong emphasis on algebraic skills and concepts of the real number system, solving equations and inequalities, exponents and polynomials, factoring, rational expressions, graphing linear equations, linear systems, roots and radicals, quadratic equations and applied problems. This course prepares students to take MATH 330, MATH 530 or MATH 1332, when completed with a grade of "C" or higher. May not be applied toward a certificate or degree at Lee College. Will not transfer to another college or university.

Lecture Hrs = 5, Lab Hrs = 0

Prerequisite: MATH 310 or equivalent, READ 300 or equivalent

#### MATH 530

## Introductory and Intermediate Algebra: A Combined Course

This course provides a strong emphasis on algebraic skills and concepts of the real number system, solving polynomials, factoring, rational expressions and equations, linear systems, roots and radicals, quadratic equations and inequalities, functions including exponents and logarithmic matrices, and problem solving. This course prepares students to take MATH 1414 when completed with a grade of "C" or higher. May not be applied toward a certificate or degree at Lee College. Will not transfer to another college or university.

 $Lecture\ Hrs=5,\ Lab\ Hrs=0$ 

Prerequisite: MATH 315, READ 300 or equivalent

#### MATH 1316

## Plane Trigonometry

This course covers trigonometric functions, identities, equations, and applications.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Prerequisite: MATH 1414 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

## MATH 1324

### Finite Mathematics with Business Applications

Includes such topics as sets, functions, linear and quadratic inequalities, linear programming, the simplex method, matrix algebra, counting techniques, probability, and decision making. A computer component may be included.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 1414 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

#### MATH 1325

## Calculus with Business Applications (Transfer Only)

For transfer students who took a course equivalent to MATH 1325 but articulate it after that course changed to 1425

### MATH 1332

#### Contemporary Mathematics I

This course assists students in becoming familiar with certain mathematical topics: sets, logic, different numeration systems, number theory, the real numbers and their properties, mathematical systems, equations, inequalities, graphs, and functions. Note: Students entering the University of Houston-Clear Lake, in the School of Human Sciences and Humanities (with the exception of education majors) may use MATH 1332 as an admission requirement instead of college algebra.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: MATH 320, MATH 520, or equivalent, ENGL 301 or equivalent, READ 302 or equivalent

## MATH 1333

#### Contemporary Mathematics II

This course assists students in becoming familiar with basic geometric terms and concepts. The student will be exposed to counting methods, introductory probability, statistics, consumer mathematics, computers and matrices and their applications.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 1332 (C or Better), ENGL 301 or equivalent, READ 302 or equivalent

### MATH 1350

#### Fundamentals of Mathematics I

This course covers concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade or EC-Grade 4 (4-8) teacher certification.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 1414 or equivalent (C or better), ENGL 301 or equivalent

Pre/Corequisite: READ 302 or equivalent

## MATH 1351

## Fundamentals of Mathematics II

This course covers concepts of geometry, probability, and statistics, as well as applications of alegebraic properties of real numbers to concepts of measurements with an emphasis on problem solving and critical thinking. This course is designed specifically for students who week middle grade or EC-Grade 4 (4-8) teacher certification.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: MATH 1350, ENGL 301 or equivalent.

Pre/Corequisite: READ 302 or equivalent

### MATH 1414 College Algebra

This course covers the study of quadratics; polynomial, rational, logarithmic, and exponential functions; systems of equations; progressions; sequences and series; and matrices and determinants.

Lecture Hrs = 4, Lab Hrs = 0

Prerequisite: MATH 330, MATH 530 or equivalent, ENGL 301 or equivalent

### MATH 1425

### **Calculus with Business Applications**

Includes such topics as limits and continuity, rates of change, slope, differentiation, the derivative, maxima and minima techniques, integration: definite and indefinite integration techniques.

Lecture Hrs = 4, Lab Hrs = 0

Prerequisite: MATH 1414 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

#### MATH 2305

#### Discrete Mathematics

A study of set theory, relations, functions, matrices, number systems, number theory, difference equations, graphs and trees, combinatorics, probability, and Boolean Algebra.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: MATH 1414 or equivalent (C or better), ENGL 301 or equivalent,

READ 302 or equivalent

## MATH 2412

#### Precalculus

This course covers the applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions and may include topics from analytical geometry.

 $Lecture\ Hrs = 4$ ,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 1414 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

### MATH 2413

#### Calculus I with Analytic Geometry

This course includes limits, continuity of functions, algebraic and trigonometric function derivative of functions with application in related-rate and optimization problems, differentials, indeterminate forms, L'Hospital's Rule, Max-Min Theorems, Mean Value Theorem, Fundamental Theorem of Calculus, integration with applications to area, volumes, surface area, moments, centers of mass, work and hydrostatic force, and numerical integration.

Lecture Hrs = 4,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 2412 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

## MATH 2414

## Calculus II with Analytic Geometry

Transcendental functions, methods of integration conic sections, other plane curves, parametric equations, hyperbolic functions: definitions, identities, derivatives, and integrals; inverse hyperbolic functions; polar coordinates. Sequences, infinite series, convergence, power series, Taylor Polynomials, Taylor's Theorem, convergence of power series: Differentiation, integration, multiplication, and division; vectors.

Lecture Hrs = 4,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 2413 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

### MATH 2415

## Calculus III with Analytic Geometry

Vector functions and motion, surfaces, cylindrical and spherical coordinate systems, and curve sketching. Limits and continuity of functions of two variable, partial derivatives, directional derivatives, gradient, surfaces, tangent planes, differential approximations, LaGrange multipliers, multiple integration, physical applications, triple integration, center of gravity, movement of inertia, line integrals, Green's Theorem, surface integrals, Gauss and Stokes Theorem, and differential equations. Lecture Hrs = 4, Lab Hrs = 0

Prerequisite: MATH 2414 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

### MATH 2418

#### Linear Algebra

Introductory course in linear algebra covering abstract ideas of vector spaces and linear transformations as well as applications of these concepts, systems of linear equations, matrices and determinants, quadratic forms, equivalence and similarity of matrices eigenvectors and eigenvalues, and the Gram-Schmidt procedure.

Lecture Hrs = 4,  $Lab\ Hrs = 0$ 

Prerequisite: MATH 2413 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

#### MATH 2420

### **Differential Equations**

Integration of differential equations of the first order by elementary methods, geometry and integral curves, physical applications, properties of linear equations, simultaneous equations with applications, solutions by Laplace transforms and series.

 $Lecture\ Hrs=4$ ,  $Lab\ Hrs=0$ 

Prerequisite: MATH 2414 or equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

#### MATH 2442

### **Elementary Statistics**

A study of collection and tabulation of data, bar charts, graphs, sampling, measures of central tendency and variability, correlation, index numbers, statistical distributions, probability, linear regression, and applications to various fields of study.

Lecture Hrs = 4, Lab Hrs = 0

Prerequisite: MATH 1414 equivalent (C or better), ENGL 301 or equivalent, READ 302 or equivalent

#### MCHN 1300

## **Shop Calculations**

Designed to prepare the student for the use of math related to machining courses.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

## MCHN 1343

#### **Machine Shop Mathematics**

Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

## MCHN 1391

# Special Topics in Machinist/Machine Technologist: Machine Parts Metrology and Design

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 was designed to be repeated multiple times to improve student proficiency. Topics will include mechanical field sketching through basic blueprints. Practical experience in precision measuring and dimensioning for manufacturing.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### MCHN 1416

## Machine Tool Repair

Basic repair of machine tools, disassembly, parts fabrication, and assembly of machine types, including related math, blueprint reading, and safety.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: MCHN 2445

Pre/Corequisite: READ 300 or equivalent

### MCHN 1425

## Millwright I

An introduction to millwright technology. A study of common millwright tools and fasteners. Development of skills in basic layout procedures, gasket making and installation and oxygen/fuel cutting. Emphasis on safety in the accomplishment of these activities.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

#### MCHN 1429 Millwright II

# An introduction to millwright tools including speciality power and precision tools. A study of the property

ity power and precision tools. A study of the property of metals and in the installation of packings. Emphasis on safety in the accomplishment of these activities.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: MCHN 1425

Pre/Corequisite: READ 300 or equivalent

#### MCHN 1452

## Intermediate Machining I

Operation of drills, milling machines, lathes, and power saws. Introduction to precision measuring techniques. Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: READ 300 or equivalent

#### MCHN 1454

## Intermediate Machining II

Development of job process plan to include operation of lathes, milling machines, drill press machines, and power saws. Set-up, layout, and tool maintenance is included. Emphasis on shop safety and preventative maintenance.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: MCHN 1452, READ 300 or equivalent

## MCHN 2403

# Fundamentals of Computer Numerical Controlled (CNC) Machine Controls

An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: MCHN 1454, READ 300 or equivalent

### MCHN 2405 Millwright III

An introduction to bearings and seals. Identification of common bearings and seals. Emphasis on design and installation of seals and bearings, and couplings.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: MCHN 1425

Pre/Corequisite: READ 300 or equivalent

## MCHN 2407 Millwright IV

A study in the recognition and application of pumps. Emphasis on troubleshooting, repair, and installation of pumps.

Lecture Hrs = 3, Lab Hrs = 3Prerequisite: MCHN 1429

Pre/Corequisite: READ 300 or equivalent

## MCHN 2412

## Millwright V

A study of the recognition and application of gearboxes. A review of drive installations using chain and belt drives. This course will focus on troubleshooting, repairing, and installing gearboxes, chain drives, and belt

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: MCHN 2407, READ 300 or equivalent

MCHN 2434

**Operation of CNC Machining Centers** 

A continuation of Fundamentals of CNC Machine Controls with an emphasis on machining centers.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: MCHN 1391, MCHN 2445, READ 300 or

equivalent

MCHN 2441

Advanced Machining I

An advanced study of lathe and milling operations. Emphasis on advanced cutting operations of the lathe and milling machines, including the use of carbide insert tooling, special tooling, bench assembly, and materials metallurgy.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: MCHN 1452, READ 300 or equivalent

MCHN 2445

Advanced Machining II

Advanced milling, drilling, grinding, and lathe operations to close tolerance dimensions. Emphasis on job planning and advanced uses of precision measuring instruments.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: MCHN 1452, READ 300 or equivalent

MRKG 1311

**Principles of Marketing** 

Introduction to the 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.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 301 or equivalent

MRKG 2333

Principles of Selling

Overview of the selling process. Identification of the elements of the communication process between buyers and sellers. Examination of the legal and ethical issues of organizations which affect salespeople.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

MRMT 1167

Practicum (or Field Experience) - Medical Transcription/ Transcriptionist

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture Hrs = 0,  $Lab\ Hrs = 0$ , External Lab = 8, Insurance

Prerequisite: MRMT 1307, READ 300 or equivalent Pre/Corequisite: MRMT 2433

MRMT 1307

Medical Transcription I

Fundamentals of medical transcription with hands-on experience in transcribing physician dictation including basic reports such as history and physicals, discharge summaries, consultations, operative reports, and other medical reports. Utilizes transcribing and information processing equipment compatible with industry standards. Designed to develop speed and accuracy. Lecture Hrs = 1, Lab Hrs = 4

Prerequisite: HITT 1305, ITSC 1309, READ 300 or equivalent

MRMT 2433

Medical Transcription II

Production of advanced reports of physician dictation with increasing speed and accuracy, including history and physicals, consultations, discharge summaries, operative reports, and other medical reports.

Lecture Hrs = 3,  $Lab\ Hrs = 2$ 

Prerequisite: MRMT 1307, READ 300 or equivalent

MUAP 1101

Strings - Violin

Pre/Corequisite: READ 300 or equivalent

MUAP 1102

Strings - Violin

Pre/Corequisite: READ 300 or equivalent

MUAP 1105

Strings - Viola

Pre/Corequisite: READ 300 or equivalent

MUAP 1106

Strings - Viola

Pre/Corequisite: READ 300 or equivalent

MUAP 1109

Strings - Cello

Pre/Corequisite: READ 300 or equivalent

MUAP 1110

Strings - Cello

Pre/Corequisite: READ 300 or equivalent

MUAP 1113

Strings - String Bass

Pre/Corequisite: READ 300 or equivalent

MUAP 1114

Strings - String Bass

Pre/Corequisite: READ 300 or equivalent

MUAP 1117

Woodwind - Flute

Pre/Corequisite: READ 300 or equivalent

MUAP 1118

Woodwind - Flute

Pre/Corequisite: READ 300 or equivalent

MUAP 1121

Woodwind - Oboe

Pre/Corequisite: READ 300 or equivalent

MUAP 1122

Woodwind - Oboe

Pre/Corequisite: READ 300 or equivalent

MUAP 1125

Woodwind - Bassoon

Pre/Corequisite: READ 300 or equivalent

MUAP 112

Woodwind - Bassoon

Pre/Corequisite: READ 300 or equivalent

MUAP 1129

Woodwind - Clarinet

Pre/Corequisite: READ 300 or equivalent

MUAP 1130

Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

MUAP 1133

Woodwind - Saxophone

Pre/Corequisite: READ 300 or equivalent

MUAP 1134

Woodwind - Saxophone

Pre/Corequisite: READ 300 or equivalent

MUAP 1137

**Brass** - Trumpet

Pre/Corequisite: READ 300 or equivalent

MUAP 1138

Brass - Trumpet

Pre/Corequisite: READ 300 or equivalent

MUAP 1141

Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

MUAP 1142

Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

MUAP 1145

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

MUAP 1146

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

MUAP 1153

Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

MUAP 1154

Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

MUAP 1157

Percussion

Pre/Corequisite: READ 300 or equivalent

MUAP 1158

Percussion

Pre/Corequisite: READ 300 or equivalent

MUAP 1161

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 1162

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 1165

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 1166

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 1169

Piano

MUAP 1170

Piano

Pre/Corequisite: READ 300 or equivalent

MUAP 1177

Harp

Pre/Corequisite: READ 300 or equivalent

MUAP 1178

Harp

Pre/Corequisite: READ 300 or equivalent

MUAP 1181

Voice

Pre/Corequisite: READ 300 or equivalent

MUAP 1182

Voice

Pre/Corequisite: READ 300 or equivalent

MUAP 1187

Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 1188

Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 1191

Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 1192

**Strings - Electric Guitar** 

Pre/Corequisite: READ 300 or equivalent

MUAP 1201

Strings - Violin

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 1202

Strings - Violin

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 1203

Violin - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1204

Violin - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1205

Strings - Viola

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 1206

Strings - Viola

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

**MUAP 1207** 

Viola - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1208

Viola - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1209

Strings - Cello

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 1210

Strings - Cello

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

**MUAP 1211** 

Cello - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1212

Cello - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1213

Strings - String Bass

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

**MUAP 1214** 

Strings - String Bass

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

**MUAP 1215** 

String Bass - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1216

String Bass - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1217

Woodwinds - Flute

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1218

Woodwinds - Flute

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1219

Flute - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1220

Flute - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1221

Woodwinds - Oboe

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

MUAP 1222

Woodwinds - Oboe

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 1223

Oboe - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1224

Oboe - Freshman Major

Pre/Corequisite: READ 300 or equivalent

**MUAP 1225** 

Woodwinds - Bassoon

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1226

Woodwinds - Bassoon

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1227 Bassoon - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1228

Bassoon - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1229

Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1230 Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1231

Clarinet - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1232

Clarinet - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1233

Woodwinds - Saxophone

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1234

**Woodwinds - Saxophone** *Pre/Corequisite: READ 300 or equivalent* 

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1235

Saxophone - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1236

Saxophone - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1237 Brass - Trumpet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 1238 Brass - Trumpet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 1239

Trumpet - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1240

Trumpet - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1241

Brass - French Horn

 $Pre/Corequisite:\ READ\ 300\ or\ equivalent$ 

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1242

Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 1243

French Horn - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1244

French Horn - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1245

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1246

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 1247

Trombone - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1248

Trombone - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1253

Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1254 Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)
MUAP 1255

Tuba - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1256

Tuba - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1257

Percussion

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1258 Percussion

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 1259

Percussion - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1260

Percussion - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1261

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 1262

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 1263

Classical Guitar - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1264

Classical Guitar - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1265

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 1266

Organ

Pre/Corequisite: READ 300 or equivalent

**MUAP 1267** 

Organ - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1268

Organ - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1269 Piano

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2142, MUEN 1142, MUEN 2142, MUEN 1152, MUEN 1135, or MUEN 2135

(must select one or more)

MUAP 1270

Piano

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2142, MUEN 1142, MUEN 2142, MUEN 1152, MUEN 1135, or MUEN 2135

(must select one or more)

MUAP 1271 Piano - Freshman Major

Pre/Corequisite: READ 300 or equivalent

**MUAP 1272** 

Piano - Freshman Major

Pre/Corequisite: READ 300 or equivalent

**MUAP 1277** 

Harp

Pre/Corequisite: READ 300 or equivalent

MUAP 1278

Pre/Corequisite: READ 300 or equivalent

MUAP 1279

Harp - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1280

Harp - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1281

Voice

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2141, MUEN 1142, MUEN 2142, or MUEN 1152 (must select one or more)

MUAP 1282

Voice

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2141, MUEN 1142, MUEN 2142, or MUEN 1152 (must select one or more)

MUAP 1283

Voice - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1284

Voice - Freshman Major

MUAP 1287 Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 1288 Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 1289

Bass Guitar - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1290

Bass Guitar - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1291

Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 1292

Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 1293

Electric Guitar - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 1294

Electric Guitar - Freshman Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2101 Strings - Violin

Pre/Corequisite: READ 300 or equivalent

MUAP 2102 Strings - Violin

Pre/Corequisite: READ 300 or equivalent

MUAP 2105 Strings - Viola

Pre/Corequisite: READ 300 or equivalent

MUAP 2106 Strings - Viola

Pre/Corequisite: READ 300 or equivalent

MUAP 2109 Strings - Cello

Pre/Corequisite: READ 300 or equivalent

MUAP 2110 Strings - Cello

Pre/Corequisite: READ 300 or equivalent

MUAP 2113 Strings - String Bass

Pre/Corequisite: READ 300 or equivalent

MUAP 2114 Strings - String Bass

Pre/Corequisite: READ 300 or equivalent

MUAP 2117 Woodwinds - Flute

Pre/Corequisite: READ 300 or equivalent

MUAP 2118 Woodwinds - Flute

Pre/Corequisite: READ 300 or equivalent

MUAP 2121

Woodwinds - Oboe

Pre/Corequisite: READ 300 or equivalent

MUAP 2122

Woodwinds - Oboe

Pre/Corequisite: READ 300 or equivalent

MUAP 2125

Woodwinds - Bassoon

Pre/Corequisite: READ 300 or equivalent

MUAP 2126

Woodwinds - Bassoon

Pre/Corequisite: READ 300 or equivalent

MUAP 2129

Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

MUAP 2130

Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

MUAP 2133

Woodwinds - Saxophone

Pre/Corequisite: READ 300 or equivalent

MUAP 2134

Woodwinds - Saxophone

Pre/Corequisite: READ 300 or equivalent

MUAP 2137

**Brass - Trumpet** 

Pre/Corequisite: READ 300 or equivalent

MUAP 2138

**Brass** - Trumpet

Pre/Corequisite: READ 300 or equivalent

MUAP 2141

Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

MUAP 2142

Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

MUAP 2145

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

MUAP 2146

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

MUAP 2153

Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

MUAP 2154

Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

MUAP 2157

Percussion

Pre/Corequisite: READ 300 or equivalent

MUAP 2158

Percussion

Pre/Corequisite: READ 300 or equivalent

MUAP 2161

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 2162

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 2165

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 2166

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 2169

Piano

Pre/Corequisite: READ 300 or equivalent

MUAP 2170

Piano

Pre/Corequisite: READ 300 or equivalent

MUAP 2177

Harp

Pre/Corequisite: READ 300 or equivalent

MUAP 2178

Harp

Pre/Corequisite: READ 300 or equivalent

MUAP 2181

Voice

Pre/Corequisite: READ 300 or equivalent

MUAP 2182

Voice

Pre/Corequisite: READ 300 or equivalent

MUAP 2187

Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 2188

Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 2191

Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 2192

Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

MUAP 2201

Strings - Violin

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

MUAP 2202 Strings - Violin

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2203 Ω

Violin - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2204 Ω

Violin - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2205 Strings - Viola

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2206 Strings - Viola

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2207 Ω

Viola - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2208 Ω

Viola - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2209 Strings - Cello

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2210 Strings - Cello

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2211 **Ω** 

Cello - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2212  $\Omega$ 

Cello - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2213 Strings - String Bass

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2214

Strings - String Bass

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2215 **Ω** 

String Bass - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2216 **Ω** 

String Bass - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2217

Woodwinds - Flute

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 2218

Woodwinds - Flute

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2219 Ω

Flute - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2220 Ω

Flute - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2221

Woodwinds - Oboe

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2222

Woodwinds - Oboe

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

**MUAP 2223 Ω** 

Oboe - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2224 Ω

Oboe - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2225

Woodwinds - Bassoon

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2226

Woodwinds - Bassoon

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2227 Ω

Bassoon - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2228 Ω

Bassoon - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2229

Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2230

Woodwinds - Clarinet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select one or more)

MUAP 2231 **Ω** 

Clarinet - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2232 Ω

Clarinet - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2233

Woodwinds - Saxophone

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2234 Woodwinds - Saxophone

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2235  $\Omega$ 

Saxophone - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2236 Ω

Saxophone - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2237

Brass - Trumpet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2238

Brass - Trumpet

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2239 Ω

Trumpet - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2240 Ω

Trumpet - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2241

Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2242 Brass - French Horn

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2243 **Ω** 

French Horn - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2244 Ω

French Horn - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2245

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2246

Brass - Trombone

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MÜEN 2123, MÜEN 1125, MÜEN 2125, MÜEN 1135, or MÜEN 1235 (must select

one or more)

MUAP 2247  $\Omega$ 

Trombone - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2248 **Ω** 

Trombone - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2253

Brass - Tuba

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2254

Brass - Tuba

 $Pre/Corequisite:\ READ\ 300\ or\ equivalent$ 

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2255 **Ω** 

Tuba - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2256 Ω

Tuba - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2257

Percussion

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2258

Percussion

Pre/Corequisite: READ~300~or~equivalent

Corequisite: MUEN 1123, MUEN 2123, MUEN 1125, MUEN 2125, MUEN 1135, or MUEN 1235 (must select

one or more)

MUAP 2259 Ω

Percussion - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2260 Ω

Percussion - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2261

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 2262

Strings - Classical Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 2263 Ω

Classical Guitar - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2264 Ω

Classical Guitar - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2265

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 2266

Organ

Pre/Corequisite: READ 300 or equivalent

MUAP 2267 Ω

Organ - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2268 Ω

Organ - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2269

Piano

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MÜEN 2142, MUEN 1142, MUEN 2142, MUEN 1152, MUEN 1135, or MUEN 2135

(must select one or more)

MUAP 2270

Piano

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2142, MUEN 1142, MUEN 2142, MUEN 1152, MUEN 1135, or MUEN 2135

(must select one or more)

MUAP 2271 Ω

Piano - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2272 Ω

Piano - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2277

Harp

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123

MUAP 2278

Harp

Pre/Corequisite: READ 300 or equivalent Corequisite: MUEN 1123 or MUEN 2123 MUAP 2279 Ω

Harp - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2280 Ω

Harp - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2281

Voice

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2141, MUEN 1142,

MUEN 2142, or MUEN 1152 (must select one or more)

MUAP 2282

Voice

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1141, MUEN 2141, MUEN 1142, MUEN 2142, or MUEN 1152 (must select one or more)

MUAP 2283 Ω

Voice - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2284 Ω

Voice - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

**MUAP 2287** 

Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 2288

Strings - Bass Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 2289 **Ω** 

Bass Guitar - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2290 **Ω** 

Bass Guitar - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

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MUAP 2291 Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 2292

Strings - Electric Guitar

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUEN 1137

MUAP 2293 Ω

Electric Guitar - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2294 Ω

Electric Guitar - Sophomore Major

Pre/Corequisite: READ 300 or equivalent

MUAP 2299

Music Conducting

Private study of strings, woodwinds, bass, percussion, guitar, organ, piano, voice, harp, and music conduct-

ing is offered for credit. Lecture Hrs = 1, Lab Hrs = 1

#### MUEN 1123

### **Baytown Symphony Orchestra**

Open to all Lee College students. Required of instrumental majors when feasible. Study and performance of standard orchestral literature. One three-hour rehearsal plus one hour of section rehearsal and individual assistance per week. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3,  $Lab\ Hrs = 1$ 

Pre/Corequisite: READ 300 or equivalent

#### MUEN 1125 Concert Band

An instrumental class, organized for the study and performance of wind ensemble and concert band, including literature that is both historical and contemporary. Admission by audition or instructor's consent. May be repeated for credit.

 $Lecture\ Hrs=3,\ Lab\ Hrs=1$ 

Pre/Corequisite: READ 300 or equivalent

## MUEN 1133

#### Woodwind Ensemble

Open to all Lee College students. Study of literature for small woodwind ensembles (4 or more students). Admission by audition or instructor's consent.

 $Lecture\ Hrs=1, Lab\ Hrs=1$ 

Pre/Corequisite: READ 300 or equivalent

## MUEN 1134

#### **Brass Ensemble**

Open to all Lee College students. Study of literature for small brass ensembles (4 or more students). Admission by audition or instructor's consent.

Lecture Hrs = 1, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

## MUEN 1135

## Iazz Ensemble

Practice and performance of various jazz idioms. Admissions by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 2, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## MUEN 1137

## **Guitar Ensemble**

Study and performance of guitar ensemble literature (4 or more students). Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 1, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

#### MUEN 1138

#### Percussion Ensemble

Ensemble experience presenting balance between basic percussive techniques used individually and in sectional performance requirements, (4 or more students). Admission by audition or instructor's consent.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 1$ 

Pre/Corequisite: READ 300 or equivalent

#### MUEN 1141

#### Lee College Concert Choir

Open to all students of Lee College. Study and performance of various types and styles of choral literature. Concerts given on and off campus each semester. Admission by audition or instructor's consent. May be repeated for credit.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 1$ 

Pre/Corequisite: READ 300 or equivalent

#### **MUEN 1142**

## **Baytown Community Chorus**

Open to all Lee College students. Study and performance of major choral literature. One four-hour class per week. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

#### MUEN 1152

#### Chamber Choir

A vocal ensemble class organized for the study and performance of madrigal literature primarily from the 16th and 17th centuries. May be repeated for credit.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### MUEN 1153

#### Chamber Choir

(Continuation of MUEN 1152). The study of vocal chamber ensemble class organized for the study and performance of madrigal literature primarily from the 16th and 17th centuries.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: MUEN 1152

Pre/Corequisite: READ 300 or equivalent

#### MUEN 1154

## Swing Choir

The study of swing, popular and jazz vocal idoms in a small vocal chamber ensemble for the study and performance of contemporary literature.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

### MUEN 2123

### **Baytown Symphony Orchestra**

Open to all Lee College students. Required of instrumental majors when feasible. Study and performance of standard orchestral literature. One three-hour rehearsal plus one hour of section rehearsal and individual assistance per week. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

## MUEN 2124

## **Baytown Community Chorus**

Open to all Lee College students. Study and performance of major choral literature. One four-hour class per week. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

#### MUEN 2125

## Concert Band

An instrumental class, organized for the study and performance of wind ensemble and concert band, including literature that is both historical and contemporary. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3,  $Lab\ Hrs = 1$ 

Pre/Corequisite: READ 300 or equivalent

#### MUEN 2133

## Woodwind Ensemble

Open to all Lee College students. Study of literature for small woodwind ensembles (4 or more students). Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 1, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

#### MUEN 2134

#### **Brass Ensemble**

Open to all Lee College students. Study of literature for small brass ensembles (4 or more students). Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 1, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

#### MUEN 2135

## Jazz Ensemble

Practice and performance of various jazz idioms. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 2,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

#### **MUEN 2138**

#### Percussion Ensemble

Ensemble experience presenting balance between basic percussive techniques used individually and in sectional performance requirements, (4 or more students). Admission by audition or instructor's consent. May be repeated for credit.

 $Lecture\ Hrs=1,\ Lab\ Hrs=1$ 

Pre/Corequisite: READ 300 or equivalent

#### **MUEN 2141**

#### Lee College Concert Choir

Open to all students of Lee College. Study and performance of various types and styles of choral literature. Concerts given on and off campus each semester. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3,  $Lab\ Hrs = 1$ 

Pre/Corequisite: READ 300 or equivalent

#### MUEN 2142

## **Baytown Community Chorus**

Open to all Lee College students. Study and performance of major choral literature. One three-hour class per week. Admission by audition or instructor's consent. May be repeated for credit.

Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1116

## Elementary Sight Singing & Ear Training I

Singing tonal music in treble, bass, alto, and tenor clefs. Aural study, including dictation, of rhythm, melody, and diatonic harmony. Open to other students with instructor's consent. Development of aural and sight-singing skills through study of scales, musical intervals, varying chord structures, and rhythms. Tutorial lab required.

Offered in Fall semester only. Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUSI 1311

#### MUSI 1117

## Elementary Sight Singing & EarTraining II

Singing tonal music in treble, bass, alto, and tenor clefs. Aural study, including dictation, of rhythm, melody, and diatonic harmony. Open to other students with instructor's consent. Development of aural and sight-singing skills through study of scales, musical intervals, varying chord structures, and rhythms. Tutorial lab required.

Offered in Spring semester only. Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: MUSI 1116, READ 300 or equivalent

Corequisite: MUSI 1312

### MUSI 1181

#### Class Piano

Open to all students, including music majors preparing for the proficiency examination. Guidelines for this course and subsequent levels of the course may require that the student register instead for MUAP applied lessons in piano. Additional information may be obtained from the instructor. Degree seeking students are required to enroll in piano study until proficiency requirements are met.

 $Lecture\ Hrs=0,\ Lab\ Hrs=2$ 

Pre/Corequisite: READ 300 or equivalent

## MUSI 1182 Class Piano

Open to all students, including music majors preparing for the proficiency examination. Guidelines for this course and subsequent levels of the course may require that the student register instead for MUAP applied lessons in piano. Additional information may be obtained from the instructor. Degree seeking students are required to enroll in piano study until proficiency requirements are met.

 $Lecture\ Hrs=0,\ Lab\ Hrs=2$ 

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1183

## **Beginning Voice Class**

Open to all Lee College students. Study of correct vocal production: posture, vowels, consonants, dynamics, phrasing and other information pertinent to the subject.

Lecture Hrs = 0, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1184

## Intermediate Voice Class

Open to all Lee College students. Continued development of physical and musical aspects of singing at the intermediate level.

 $Lecture\ Hrs=0,\ Lab\ Hrs=2$ 

Pre/Corequisite: READ 300 or equivalent

## MUSI 1192 Guitar Class

For beginning guitar students. Study of basic guitar techniques, chords and repertoire.

Lecture Hrs = 0,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

## MUSI 1193 Guitar Class

For beginning guitar students. Study of basic guitar techniques, chords and repertoire.

Lecture Hrs = 0, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## MUSI 1263

#### Jazz Improvisation

Class groups discussing topics in the area of jazz with special emphasis on its development and the contributions jazz has made to American culture. Improvisation on the students' instruments is an integral part of the course. May be repeated for credit.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1301

#### Fundamentals of Music

Open to all students at Lee College. Designed to prepare students for freshman study in music theory or to familiarize the non-music major with the meaning of musical notation and the harmonic, melodic, and rhythmic structure of music.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1306

#### Music Appreciation

A music listening course designed for the non-music major. Students explore music through its basic elements, forms, styles, and major composers. Music majors should enroll in MUSI 1307.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1307

## Survey of Music Literature

Open to all students and required of music majors and minors. It includes a study of various masterpieces in music, a study of the major composers, a study of stylistic characteristics of historical eras. Included also will be an introduction to score reading and music research techniques. Concert attendance is required. Performance/Lecture Series attendance is required.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1308

### Music Literature I - Church Music

Survey of the principal musical forms and cultural periods as illustrated in the literature of major composers in the rrenaissance, baroque and classical periods, specifically applicable to the continued study of sacred music, including the history and use of hymnody, introduction to the lectionary, score study and conducting, rehearsal, planning and techniques and general stylistic practices.

Lecture Hrs = 2,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

#### MUSI 1309

## Music Literature II - Church Music

Survey of the principal musical forms and cultural periods as illustrated in the literature of major composers in the romantic,  $20^{th}$  century and modern periods, specifically applicable to the continued study of sacred music, including the history and use of hymnody, introduction to the lectionary, score study and conducting, rehearsal, planning and techniques and general stylistic practices.

Lecture Hrs = 2, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent, MUSI 1308

#### MUSI 1310

## **Contemporary American Music**

General survey of various styles of American Music. Topics may include jazz, ragtime, folk, rock, and contemporary art music.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 300 or equivalent

## MUSI 1311

## Music Theory I

Theoretical analysis and writing of tonal melody using diatonic harmony. Analysis and writing of small compositional forms. Open to all students with consent of instructor. Tutorial lab required.

Offered in Fall semester only. Lecture Hrs = 3, Lab Hrs = 1

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUSI 1116

### MUSI 1312

#### Music Theory II

Theoretical analysis and writing of tonal melody using diatonic harmony. Introduction to secondary dominant chords and modulation to closely related keys. Analysis and writing of small composition forms. Open to all students with consent of instructor. Tutorial lab required.

Offered in Spring semester only. Lecture Hrs = 3, Lab Hrs = 1

Prerequisite: MUSI 1311, READ 300 or equivalent

Corequisite: MUSI 1117

#### MUSI 2116

#### Advanced Sight Singing and Ear Training I

Singing more difficult tonal music including modal, ethnic and 20th century materials. Aural study, including dictation, or more complex rhythm, melody, chromatic harmony and extended tertian structures. Transfer students admitted by examination. Open to all students with consent of instructor. Tutorial lab required. Offered in Fall semester only.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: MUSI 1117, READ 300 or equivalent

Corequisite: MUSI 2311

#### MUSI 2117

## Advanced Sight Singing and Ear Training II

Singing more difficult tonal music including modal, ethnic and 20th century materials. Aural study, including dictation, or more complex rhythm, melody, chromatic harmony and extended tertian structures. Transfer students admitted by examination. Open to all students with consent of instructor. Tutorial lab required. Offered in Spring semester only.

Lecture Hrs = 1, Lab Hrs = 2

Prerequisite: MUSI 2216, READ 300 or equivalent

Corequisite: MUSI 2312

## MUSI 2181

#### Class Piano

Open to all students, including music majors preparing for the proficiency examination. Guidelines for this course and subsequent levels of the course may require that the student register instead for MUAP applied lessons in piano. Additional information may be obtained from the instructor. Degree seeking students are required to enroll in piano study until proficiency requirements are met.

Lecture Hrs = 0, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### MUSI 2182

#### Class Piano

Open to all students, including music majors preparing for the proficiency examination. Guidelines for this course and subsequent levels of the course may require that the student register instead for MUAP applied lessons in piano. Additional information may be obtained from the instructor. Degree seeking students are required to enroll in piano study until proficiency requirements are met.

 $Lecture\ Hrs=0,\ Lab\ Hrs=2$ 

Pre/Corequisite: READ 300 or equivalent

## MUSI 2183

## Advanced Voice Class

Concert and recital preparation.

Lecture Hrs = 0, Lab Hrs = 2 Note: Instructor's consent required to register for this course.

### MUSI 2189

#### Music Cooperative

In conjunction with seminars or on-campus instruction, students will study various aspects of music unique to their interests or career objectives. Limited to 1 credit hour per semester. Course can be taken up to three times. Lecture Hrs = 1,  $Lab\ Hrs = 0$ ,  $External\ Hrs = 2$ 

Lecture Hrs = 1, Lab Hrs = 0, External Hrs = Prerequisite: COMM 2324, COMM 2220

## MUSI 2311 **Ω** Music Theory III

Advanced harmony part writing and keyboard analysis and writing of more advanced tonal harmony including chromaticism and extended tertian structures. Introduction to 20th century compositional procedures and survey of the traditional large forms of composition. Open to all students with consent of instructor. Transfer students admitted by examination. Study of 18th and 19th century harmonic practices, advanced hamonic techniques; complex choral vocabulary; all secondary dominants; leading tone chords and altered chords.

Lecture Hrs = 3, Lab Hrs = 1

Prerequisite: MUSI 1312, READ 300 or equivalent

Corequisite: MUSI 2216

## MUSI 2312 $\Omega$

## Music Theory IV

Advanced harmony part writing and keyboard analysis and writing of more advanced tonal harmony including chromaticism and extended tertian structures. Introduction to 20th century compositional procedures and survey of the traditional large forms of composition. Open to all students with consent of instructor. Transfer students admitted by examination. Continued study of 18th and 19th century harmonic practices, advanced harmonic techniques; complex choral vocabulary; altered chords; distant modulations, and introduction to contrapuntal techniques.

Offered in Spring semester only. Lecture Hrs = 3, Lab Hrs = 1 Prerequisite: MUSI 2311

Pre/Corequisite: READ 300 or equivalent

Corequisite: MUSI 2117

#### **NDTE 1401**

## Film Interpretation of Weldments

A study of radiographic film, including exploration of radiographic basic interpretations, and causes and effects of discontinuities.

 $Lecture\ Hrs=3,\ Lab\ Hrs=3$ 

Pre/Corequisite: READ 300 or equivalent

#### **NDTE 1410**

### Liquid Penetrant/Magnetic Particle Testing

A theoretical study and practical application of the nondestructive testing techniques of penetrant and magnetic particle testing required by quality assurance and test personnel, including proper test technique, or combination of techniques, interpretation and evaluation of test results.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### **NDTE 2411**

### **Preparation For Welding Inspection**

General principles of welding inspection including welding processes, terms and definitions, welding discontinuities, 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. Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

## **OSHT 1301**

### Introduction to Safety and Health

An introduction to the basic concepts of safety and health

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### OSHT 1309

## Physical Hazards Control

A study of the physical hazards in industry and the methods of workplace design and redesign to control these hazards. Emphasis on the regulation codes and standards associated with the control of physical hazards.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### **OSHT 1313**

### Accident Prevention, Inspection, and Investigation

Principles and practices providing a basis for understanding the nature of occupational hazard recognition, accident prevention, Loss reduction, inspection techniques, and accident investigation analysis.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: READ 300 or equivalent

## OSHT 1316

## Material Handling

Proper methods for material handling and storage including safety practices, proper equipment usage, engineering controls, personal protective equipment, and motor fleet safety.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

## OSHT 1321

## Fire Protection Systems

A study of fire protection systems and their applications with emphasis on the National Fire Protection Association codes.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 300 or equivalent

#### OSHT 2309

## Safety Program Management

Examine the major safety management issues that effect the workplace including awareness, loss control, regulatory issues, and human behavior modification.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: OSHT 1301

#### OSHT 2401

## Safety Management Tech

A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to general industry.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: OSHT 1301

#### PFPB 1305

## **Basic Blueprint Reading for Pipefitters**

Reading and interpreting working drawings. Includes symbols and abbreviations and the use of sketching techniques to create isometric and multiview drawings of piping and piping components.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: PFPB 1350

Pre/Corequisite: READ 300 or equivalent

#### PFPB 1350

#### Plumbing and Pipefitting Equipment and Safety

Safe use of hand tools, power tools, rigging, and power equipment used in the plumbing trade for installation of different plumbing systems.

Lecture Hrs=3, Lab Hrs 0

Pre/Corequisite: READ 300 or equivalent

## PFPB 1408

## **Basic Pipefitting Skills**

Mathematical operations necessary to calculate laying lenghts of threaded pipe fabrication. Identification and use of hand tools and power tools. Identification of pipe, pipe fittings, flanges, and fasteners used in the trade.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

#### PFPB 2343

#### **Pipe Practices**

Identification, installation, and testing of steam traps and steam trap station components. Valve identification, application, and maintenance. Identification, storage, and handling of in-line specialties. Hydrostatic testing of process piping.

Lecture Hrs = 2, Lab Hrs = 2 Prerequisite: PFPB 2408

Pre/Corequisite: READ 300 or equivalent

## PFPB 2349

### Field Measuring, Sketching, & Layout

Use, care and setup of transit and level. Includes field dimensioning, sketching, and layout of future process piping. Emphasizes advanced trade math including the use of trigonometric functions and tables.

Lecture Hrs = 2,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

## PFPB 2401

## Pipe Fabrication and Installation I

Pipe fabrication procedures of threaded, socketweld, and buttweld pipe joints. Includes pipe and tube bending with hand benders, saddling in and saddling on pipe brances to pipe headers, and fabrication and installation of pipe supports.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: PFPB 1408

Pre/Corequisite: READ 300 or equivalent

#### PFPB 2408

## Piping Standards and Materials

Identification, description, and application of piping standards and specifications. Includes identification and use of various metallic and non-metallic piping materials, identification and installation of valves, and material take-offs.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: PFPB 2401

#### PFPB 2441

### Pipe Fabrication and Installation II

Advanced pipe fabrication procedures of threaded, socketweld, and buttweld pipe joints. Layout and fabrication of vertical, horizontal, and rolling off-sets using 45-degree fitting and odd-angle fittings.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ Prerequisite: PFPB 2401

Pre/Corequisite: READ 300 or equivalent

#### PFPR 2449

#### Field Measuring, Sketching, and Layout

Use, care, and setup of transit and level. Includes field dimensioning, sketching, and layout of future process piping. Emphasizes advanced trade math including the use of trigonometric functions and tables.

Lecture Hrs=3, Lab Hrs 3 Prerequisite: PFPB 2338

Pre/Corequisite: READ 300 or equivalent

### PHED 1109 Cardio Fitness

A course designed to emphasize the use of various equipment for improving cardiovascular fitness and reducing resting heart rates. Treadmills, climbers, bicycles, elliptic machines, and gymnasium walking will be used in program design. Program design will focus on individual goals.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

#### PHED 1110

#### **Exercise Endurance and Power**

A course designed to emphasize the use of free weights and machine weights for development of muscular strength and endurance. Program design will focus on individual goals.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 1111

## **Circuit Training**

A course designed to emphasize the alternating of various exercise stations. Consideration of the selection of exercises will be based on individual goals.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 1131

## **Aquatic Fitness**

A course designed to emphasize the use of various forms of exercise with and without props in the water to develop fitness.

 $Lecture\ Hrs = 1$ ,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

## PHED 1132

## **Aquatic Cardio Training**

A course designed to emphasize cardiovascular training in the water. Emphasis will be on reducing resting heart rates.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 1133

## **Aquatic Power Training**

A course designed to emphasize the component of power movements in water such as jumping, skipping and running. Movements will be explosive within short bursts of time. Intervals of work will be a major component of this class.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 1134

### Hatha Yoga and Breathing

A course designed to emphasize the techniques of Hatha yoga postures with an emphasis on proper breathing techniques, which are termed as pranayamas.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 1135

## Hatha Yoga and Postures

A course designed to learn the importance and benefits of yoga. Learning skills will include breathing and relaxation techniques with an emphasis on postures.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 1136

### Hatha Yoga and Nutrition

A course designed to emphasize the techniques of Hatha yoga postures with an emphasis on improving flexibility and range of motion.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 1137

### Hatha Yoga & Meditation

A course designed to learn the importance and benefits of yoga. Learning skills will include postures, breathing and relaxation techniques. Emphasis will be made on reflection and contemplation.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### Hatha Yoga and Relaxation

A course designed to learn the importance and benefits of yoga. Learning skills will include postures, breathing and an emphasis on relaxation techniques.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 1139

## Hatha Yoga and Flexibility

A course designed to learn the importance and benefits of yoga. Learning skills will include postures, breathing and relaxation techniques. An emphasis will be on the component of flexibility.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 1140

#### Hatha Yoga and Balance

A course designed to learn the importance and benefits of yoga. Learning skills will include postures, breathing and relaxation techniques. An emphasis will be on the component of balance.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 1141

## Tennis Movement

A course designed to emphasize the footwork patterns necessary for efficient movement to various ball positions for tennis.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### PHED 2105

## **Exercise/Weight Management Fitness**

A course designed to monitor weight changes through various fitness programs. These fitness programs are designed for weight loss or weight gain.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 2106

### **Cross Training Fitness**

A course designed to vary exercise programs that emphasize different training modes of fitness for cross training benefit. Program design will use cardiovascular equipment in a sequence manner.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 2107

## **Personal Fitness**

A course designed to emphasize personal goals of fitness which is not limited to weight management, cardiovascular improvement, flexibility and muscular strength and endurance.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 2108

#### **Elite Fitness**

A course designed to use various fitness programs with increased intensity to promote training at a high level. Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## **Aquatic Weight Management**

A course designed to emphasize various uses of exercise routines in the water with attention given to nutritional guidelines for weight reduction or management. Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 2133

#### **Aquatic Endurance Training**

A course designed to emphasize the endurance component of fitness. Duration of exercise will be emphasized.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 2134

#### **Aquatic Flexibility Training**

A course designed to include all components of fitness with emphasis in range of motion to improve flexibil-

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## PHED 2135

## **Aquatic Cross Training**

A course designed to vary water exercise programs that emphasize different training modes of fitness for cross training benefit.

 $Lecture\ Hrs = 1,\ Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

#### PHED 2136

## **Aquatic Personal Training**

A course emphasizing individual goals of fitness which are incorporated in a water exercise program.

Lecture Hrs = 1, Lab Hrs = 2

#### PHED 2139

### Hatha Yoga & Advance Techniques

A course designed to emphasize the importance and benefits of yoga. Skills will include advance postures with breathing and relaxation techniques.

Lecture  $Hrs = \overline{1}$ , Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### PHED 2140

## Hatha Yoga and Personal Health

A course designed to emphasize the importance and benefits of yoga. Personal health goals will be incorporated in course design.

Lecture Hrs = 1,  $Lab\ Hrs = 2$ 

Pre/Corequisite: READ 300 or equivalent

### PHIL 1301 Ω

## Introduction to Philosophy

An introduction to the basic issues in philosophy, including: reality, justice, morality, freedom and responsibility, and the good life. We approach these issues through the original writings of selected classical, modern, and contemporary philosophers.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### PHIL 1304 Ω

#### **Introduction to World Religions**

An introduction to selected world religions, including but not limited to: Hinduism; Buddhism; Jainism; Sikhism; Taoism; Confucianism; Shinto; Judaism; and Christianity.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## PHIL 2303

## Introduction to Logic

This course coveres the nature and methods of clear and critical thinking skills and methods of reasoning, such as deduction, induction, scientific reasoning, and fallacies.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### PHIL 2306

## **Introduction to Ethics**

An intermediate level philosophy course which covers moral theory (what's right) and ethical theory (what's good). The course also covers specific issues such as: religion, spirituality, and moral purpose; environmental ethics; feminist ethics; and the use of science and technology.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: PHIL 1301, ENGL 301 or equivalent,

READ 302 or equivalent

## PHYS 1401

## College Physics I: Mechanics and Heat

Physics 1401 and 1402 are designed to meet the needs of students who need one year of algebra/trigonometry - based physics. An introduction to the concepts and problems of classical mechanics and heat and thermodynamics, enriched with modern physics concepts. Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: READ 302 or equivalent Pre/Corequisite: MATH 1414 or equivalent

### PHYS 1402

# College Physics II: Sound, Electricity, Magnetism, Light, & Modern Physics

Physics 1401 and 1402 are designed to meet the needs of students who need one year of algebra/trigonometry - based physics. Completes one year of physics. Includes an introduction to the concepts and problems of wave motion, sound, electricity and magnetism, light, and modern physics.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: PHYS 1401, READ 302 or equivalent

### PHYS 1405

#### General Physics I

An elementary course in fundamental concepts of mechanics, heat, gravitation and sound with emphasis on the scientific approach to solving problems. For elementary education, liberal arts, and other non-science majors and students.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 302 or equivalent Pre/Corequisite: MATH 320 or equivalent

## PHYS 1407

## General Physics II

An elementary course in fundamental concepts of electricity, magnetism, light, and modern physics with emphasis on the scientific approach to solving problems. For elementary education, liberal arts, and other non-science majors and students.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 302 or equivalent Pre/Corequisite: MATH 320 or equivalent

#### PHYS 1411

#### Introductory Astronomy I

An introductory course, will concentrate on the origin, life, and fate of the solar system, the various bodies in the solar system (planets, satellites, meteors, comets, and asteroids), the solar system mechanics. Theories about the structure and origin of the solar system, with emphasis on recent discoveries will be included.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: MATH 1414 or equivalent, READ 302 or equivalent

## PHYS 1412

## Introductory Astronomy II

An introductory course, will concentrate on the origin, life and fate of the stars and the universe, the various objects in the universe, the exploration of the universe by astronomers, and the understanding of the principles that lie behind the functioning of 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 will be included. Recent discoveries about quasars, black holes, and cosmology will be emphasized.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: PHYS 1411

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### PHYS 1415

#### Physical Science

This course emphasizes the fundamental principles in physics, chemistry, geology, astronomy, meteorology, and environmental science. Emphasis is placed on the history of ideas and interrelationships among these various fields of science.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: MATH 320 or equivalent, READ 301 or equivalent

#### PHYS 2425

#### Mechanics and Heat

Principles of mechanics, thermodynamics, kinetic theory of gases, and mechanics of solids and fluids; also engineering applications of physical principles by means of computer numerical methods; primarily for science, mathematics, and engineering students.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: MATH 2413, READ 302 or equivalent

#### PHYS 2426

#### Electricity, Optics and Waves

Principles of electricity and magnetism, geometrical and physical optics, wave motion and sound, and introductory quantum theory; primarily for physical science, mathematics, and engineering majors.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: PHYS 2425, READ 302 or equivalent

#### POFI 1341

## Computer Applications II

Continued study of current computer terminology and technology. Advanced skill development in computer hardware, software applications, and procedures. Advanced functions of word processing, spreadsheets, database documents, and presentation software are emphasized.

 $Lecture\ Hrs=3,\ Lab\ Hrs=1$ 

Prerequisite: POFI 1401, READ 301 or equivalent

## POFI 1349

#### Spreadsheets

In-depth coverage in the use of a spreadsheet software focusing on business application.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 1$ 

Prerequisite: POFT 1321, POFI 1401, READ 301 or equivalent

## POFI 1401

#### Computer Applications I

Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures. This course provides a brief introduction to word processing, spreadsheet, presentation, and database terminology and concepts.

Lecture Hrs = 3, Lab Hrs = 3 Note: This course requires keyboarding proficiency.

Prerequisite: READ 301 or equivalent

## POFI 2301 Word Processing

In-depth coverage of word processing software focusing on business applications.

Lecture Hrs = 3, Lab Hrs = 1 Note: This course requires keyboarding proficiency.

#### POFI 2331

## **Desktop Publishing for the Office**

In-depth coverage of desktop publishing terminology, text editing, and use of design principles to create publishing material using word processing desktop publishing features. Emphasis on layout techniques, graphics, multiple page displays, and business applications. Lecture Hrs = 3, Lab Hrs = 1 Note: This course requires keyboarding proficiency.

Prerequisite: READ 301 or equivalent

#### POFI 2340

### **Advanced Word Processing**

Advanced applications in merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. Emphasis on business applications. Lecture Hrs=3,  $Lab\ Hrs=1$ 

Prerequisite: POFI 2301, READ 301 or equivalent

#### POFT 1127

### Introduction to Keyboarding

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.

Lecture Hrs = 0,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

#### POFT 1132

## **Workplace Diversity**

Gender, cultural background, age, and other factors affecting coworker / client relationships. Includes behavioral expectations and standards in the business environment. An overview of workplace diversity.

Lecture Hrs = 1, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## POFT 1301

## **Business English**

Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## POFT 1309

## Administrative Office Procedures I

Study of current office procedures, duties, and responsibilities applicable to an office environment.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## POFT 1321

#### **Business Math**

Instruction in the fundamentals of business mathematics including analytical and problem-solving skills for critical thinking in business applications.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## POFT 1329

#### **Beginning Keyboarding**

Skill development in the operation of the keyboard by touch applying proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents.

Lecture Hrs = 3, Lab Hrs = 1 Prerequisite: READ 301 or equivalent

#### POFT 1349

#### Administrative Office Procedures II

In-depth coverage of office applications with special emphasis on decision making, goal setting, managment theories, and critical thinking.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: POFT 1309, READ 301 or equivalent

#### POFT 1364

# Practicum (or Field Experience) - Administrative Assistant and Secretarial Science, General

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 21 Prerequisite: READ 301 or equivalent

#### POFT 1365

# Practicum (or Field Experience) - Administrative Assistant and Secretarial Science, General

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 21 Prerequisite: READ 301 or equivalent

#### POFT 2301

## Intermediate Keyboarding

A continuation of keyboarding skills in document formatting, emphasizing speed, and accuracy. Emphasis on proofreading, editing, and following instructions, and keying documents from various copy.

Lecture Hrs = 3, Lab Hrs = 1 Note: This course requires keyboarding proficiency.

Prerequisite: READ 301 or equivalent

### POFT 2312

## **Business Correspondence & Communication**

Development of writing and presentation skills to produce effective business communications. Skill development in practical applications which emphasize the improvement of writing skills necessary for effective business communication. Emphasis is given to developing business letters, reports, memos, and employment communications; improving writing, speaking, and listening skills; and to preparing attractive business documents.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent Pre/Corequisite: POFT 1301 or ENGL 1301

#### POFT 2331

## Administrative Systems

Advanced concepts of project management and office procedures utilizing integration of previously learned office skills. (Spring only)

Lecture Hrs = 3, Lab Hrs = 1

Prerequisite: Completion of Office Assistant and Administrative Assistant Certificates, READ 301 or equivalent

#### POFT 2364

# Practicum (or Field Experience) - Administrative Assistant and Secretarial Science, General

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture Hrs = 0, Lab Hrs = 0, External Hrs = 21 Prerequisite: READ 301 or equivalent

#### PSYC 2301

### Introduction to Psychology

A survey of the fields of general psychology; the biological and psychological basis of human behavior, intelligence, motivation, emotion, learning, personality, memory, and psychopathology.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## PSYC 2308 **Ω**

## Child Psychology

A study of the physical, mental, and emotional development of the individual from birth through adolescence. Emphasis on the nature of individual differences and the correct integration of behavior patterns into a socially desirable and well-adjusted personality.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: PSYC 2301, READ 302 or equivalent, ENGL 301 or equivalent

#### PSYC 2314 Ω

## Life Span Growth and Development

The study of the relationship of the physical, emotional, social, and mental factors of growth and development throughout the life span from birth to death.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: PSYC 2301, READ 302 or equivalent, ENGL 301 or equivalent

## PSYC 2316 **Ω**

## Psychology of Personality

Personality psychology deals with the struggle to understand human nature and its determinants. The complexity of human nature demands investigation of a number of points of view. This course will expose students to the major personality theories (e.g., psychodynamic, humanistic, existential, cognitive, behavioral) and their underlying philosophical assumptions.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: PSYC 2301, READ 302 or equivalent, ENGL 301 or equivalent

## PSYC 2317

## **Statistics for Behavioral Sciences**

A course designed to provide a background in statistics for students in psychology and the social sciences. Includes elementary probability theory, measures of central tendency, variability, correlation and regression, the normal curve of probability, and statistical inference. Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: PSYC 2301, READ 302 or equivalent, ENGL 301 or equivalent

## PSYC 2318

## Juvenile Delinquency

Nature and extent of delinquency; comparison of explanatory models and theories; evaluation of prevention, control, and treatment programs. Same as SOCI 2339.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: PSYC 2301, READ 302 or equivalent, ENGL 301 or equivalent

## PSYC 1325

## Death and Dying

Study of the cultural and social norms, values, beliefs, and activities associated with the dying and their survivors. Topics include theories, communication skills, and activities to assist with coping for the dying and their survivors.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ 

#### PTAC 1302

### Introduction to Process Technology

Introduction to chemical and refinery plant operations. Topics include process technician duties, responsibilities and expectations; plant organizations; plant process and utility systems; and the physical and mental requirements of the process technician.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

#### PTAC 1308

#### Safety, Health, and Environment I

Development of knowledge and skills to reinforce the attitudes and behaviors required for safe and environmentally sound work habits. Emphasis on safety, health, and environmental issues in the performance of all job tasks and regulatory compliance issues.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: READ 301 or equivalent

#### PTAC 1332

### Process Instumentation I

Study of the instruments and instrument systems used in the process industry including terminology, primary variables, symbology, control loops, and basic troubleshooting.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

#### PTAC 1410

#### Process Technology I - Equipment

Instruction in the use of common process equipment. Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: READ 301 or equivalent

#### PTAC 2314

#### Principles of Quality

Study of the background and application of quality concepts. Topics include team skills, quality tools, statistics, economics and continuous improvement.

 $Lecture\ Hrs=3,\ Lab\ Hrs=0$ Prerequisite: READ 301 or equivalent

#### PTAC 2346

## **Process Troubleshooting**

Instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: PTAC 1410, READ 301 or equivalent

#### PTAC 2420

## Process Technology II - Systems

Study of the interrelation of process equipment as process systems including related scientific principles. Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Prerequisite: PTAC 1410, READ 301 or equivalent

## PTAC 2438

### **Process Technology III Operations**

This course combines systems into operational processes with emphasis on operations under various con-

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: PTAC 2420, READ 301 or equivalent

### READ 300

### Beginning College Reading Skills

A course designed for individuals whose reading development has been delayed. Emphasis is on vocabulary development, interpretation, and evaluation of basic sentence and paragraph patterns, articulative training, and concept development necessary for effective reading. It is required of all students whose Computerized Placement Test score is below 46.

Lecture Hrs = 3, Lab Hrs = 0

## Intermediate College Reading Skills

Improvement of reading habits and skills. Includes a study of the theory and mechanics of good reading. Emphasis is on developing vocabulary and improving comprehension through computer assisted instruction and classroom discussion. It is required of all students whose Computerized Placement Test score is between

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 300 or equivalent

#### READ 302

## Advanced College Reading Skills

This course is designed to improve reading effectiveness at the adult level. Emphasis is placed on skills relating to vocabulary, comprehension, and reading speed. It is suggested for college students, business and professional people, and other adults who recognize a need for greater efficiency in reading and required for those students whose Computerized Placement Test score is between 62-81

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 301 or equivalent

### RNSG 1146

### Legal and Ethical Issues for Nurses

Study of the laws and regulations related to the provision of safe and effective professional nursing care; attention given to the development of a framework for addressing ethical issues; and topics to include confidentiality, the Nursing Practice Act, professional boundaries, ethics and health care legislation. This course lends itself to a blocked approach.

Lecture Hrs = 1, Lab Hrs = 0, HIPPA Fee

Prerequisite: Admission to RN or RNT Program, RNSG 1162, RNSG 1251, RNSG 2160, RNSG 2213, SPNL 1301 Corequisite: RNSG 2121, RNSG 2331, RNSG 2362

#### RNSG 1162

## Clinical-Nursing-Registered Nurse Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Progression: student must pass RNSG 1251 and RNSG 1162 concurrently to progress to next nursing level.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 6, Insurance

Prerequisite: Admission to RN or RNT Program, RNSG 1343, RNSG 1362, RNSG 2161, RNSG 2201, BIOL 2421, RN Only: ENGL 1302, Humanities, Oral Communication, and Computer Literacy electives

Pre/Corequisite: SPNL 1301

Corequisite: RNSG 1251, RNSG 2160, RNSG 2213

 $\Omega$  indicates courses taught with optional honors

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

### RNSG 1205

### Nursing Skills I

Study of the concepts and principles essential for demonstrating competence in the performance of nursing procedures. Topics include knowledge, judgement, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Progression: student must pass RNSG 1209 and RNSG 1205 concurrently to progress.

Lecture Hrs = 1, Lab Hrs = 4

Prerequisite: Admission to RN Program Pre/Corequisite: BIOL 2402, PSYC 2314, Corequisite: RNSG 1209, RNSG 1341, RNSG 1361

#### RNSG 1209

## Introduction to Nursing

Overview of nursing and the role of the professional nurse as a provider of care, coordinator of care, and member of a profession. Topics include knowledge, judgment, skills and professional values with a legal/ ethical framework. This course lends itself to a blocked approach. Progression: student must pass RNSG 1209 and RNSG 1205 concurrently to progress.

Lecture Hrs = 2,  $Lab\ Hrs = 0$ ,  $NLN\ Testing\ Fee$ Prerequisite: Admission to RN Program Pre/Corequisite: BIOL 2402, PSYC 2314

Corequisite: RNSG 1205, RNSG 1341, RNSG 1361

#### RNSG 1251

## Care of the Childbearing Family

Study of concepts related to the provision of nursing care for childbearing families. Topics may include selected complications. Topics include knowledge, judgement, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Progression: student must pass RNSG 1251 and RNSG 1162 concurrently to progress to next nursing level. Lecture Hrs = 2, Lab Hrs = 0, NLN Testing Fee

Prerequisite: Admission to RN or RNT Program, RNSG 1343, RNSG 1362, RNSG 2161, RNSG 2201, BIOL 2421, RN Only: ENGL 1302; Humanities, Computer Literacy, and Oral Communication electives

Pre/Corequisite: SPNL 1301

Corequisite: RNSG 1162, RNSG 2160, RNSG 2213

## RNSG 1301

## Pharmacology

Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification. Topics include the roles and responsibilities of the nurse in safe administration of medications within a legal/ethical framework. In addition, the course focuses on the basic concepts and terminology used in the study of pharmacology. Pharmacokinetics for major drug classifications is emphasized as well as drug administration routes. Note that the RN Math Requirement that is a prerequisite for this course can be satisfied by (a) passing the math portion of one of the TSI approved tests, (b)successfully completing MATH 320, (c) earning a grade of C or better in MATH 110, or (d) earning a grade of C or better in any college-level math course attempted

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

in the past five years.

Prerequisite: RN Math Requirement, READ 302 or

equivalent

Pre/Corequisite: BIOL 2401 or BIOL 2404

#### RNSG 1341

### Common Concepts of Adult Health

Study of the general principles of caring for selected adult clients and families in structured settings with common medical-surgical health care needs related to each body system. Emphasis on knowledge judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Progression: student must pass RNSG 1341 and RNSG 1361 concurrently to progress to next nursing level.

Lecture Hrs = 3, Lab Hrs = 0, NLN Testing Fee Prerequisite: Admission to RN Program Pre/Corequisite: BIOL 2402, PSYC 2314 Corequisite: RNSG 1205, RNSG 1209, RNSG 1361

#### RNSG 1343 Ω

#### Complex Concepts of Adult Health

Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health care needs associated with each body system. Emphasis on knowlege, judgments, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Progression: student must pass RNSG 1343 and RNSG 1362 concurrently to progress to next nursing level.

Lecture Hrs = 3, Lab Hrs = 0, NLN Testing Fee Prerequisite: Admission to RN Program, RNSG 1205, RNSG 1209, RNSG 1341, RNSG 1361, BIOL 2402, PSYC 2314, or Admission to RNT Prog, RNSG 2207, BIOL 2421 Pre/Corequisite: BIOL 2421

Corequisite: RNSG 1362, RNSG 2161, RNSG 2201

### RNSG 1361

## Clinical-Nursing-Registered Nurse Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Progression: student must pass RNSG 1341 and RNSG 1361 concurrently to progress to next nursing level.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 9, Insurance Fee

Prerequisite: Admission to RN Program Pre/Corequisite: BIOL 2402, PSYC 2314 Corequisite: RNSG 1205, RNSG 1209, RNSG 1341

#### RNSG 1362

## Clinical-Nursing-Registered Nurse Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Progression: student must pass RNSG 1343 and RNSG 1362 concurrently to progress to next level.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 9, Insurance Fee Prerequisite: Admission to RN Program, RNSG 1205, RNSG 1209, RNSG 1341, RNSG 1361, BIOL 2402, PSYC 2314, or Admission to RNT Prog, RNSG 2207, BIOL 2421 Pre/Corequisite: BIOL 2421

Corequisite: RNSG 1343, RNSG 2161, RNSG 2201

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

#### RNSG 2121

### Management of Client Care

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. This course lends itself to a blocked approach.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 4, NLN Testing Fee Prerequisite: Admission to RN or RNT Program, RNSG 1162, RNSG 1251, RNSG 2160, RNSG 2213, RNSG 2331, RNSG 2362 SPNL 1301

Corequisite: RNSG 1146

#### RNSG 2160

### Clinical-Nursing-Registered Nurse Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Progression: student must pass RNSG 2213 and RNSG 2160 concurrently to progress to the next nursing level.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 6, Insurance Fee Prerequisite: Admission to RN or RNT Program, RNSG 1343, RNSG 1362, RNSG 2161, RNSG 2201, BIOL 2421 RN Only, ENGL 1302; Humanities, Computer Literacy, and Oral Communication electives

Pre/Corequisite: SPNL 1301

Corequisite: RNSG 1162, RNSG 1251, RNSG 2213

#### RNSG 216

#### Cliinical-Nursing-Registered Nurse Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Progression: student must pass RNSG 2201 and RNSG 2161 concurrently to progress to next nursing level.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 6, Insurance

Prerequisite: Admission to RN Program, RNSG 1205, RNSG 1209, RNSG 1341, RNSG 1361, BIOL 2402, PSYC 2314, or Adm to RNT Prog, RNSG 2207, BIOL 2421 Pre/Corequisite: BIOL 2421

Corequisite: RNSG 1343, RNSG 1362, RNSG 2201

#### RNSG 2201

## Care of Children and Families

Study of concepts related to the provision of nursing care for children and their families, emphasizing judgment, and professional values within legal / ethical framework. This course lends itself to a blocked approach. Progression: student must pass RNSG 2201 and RNSG 2161 concurrently to progress to next nursing level.

Lecture Hrs = 2, Lab Hrs = 0, NLN Testing Fee
Prerequisite: Admission to RN Program, RNSG 1205,
RNSG 1209, RNSG 1341, RNSG 1361, BIOL 2402, PSYC
2314, or Adm to RNT Prog, RNSG 2207, BIOL 2421
Pre/Corequisite: BIOL 2421

Corequisite: RNSG 1343, RNSG 1362, RNSG 2161

#### RNSG 220'

## Transition to Nursing Practice

Introduction to selected concepts related to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. Review of trends and issues impacting nursing and health care today and in the future. Topics include knowledge, judgment, skill, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

Lecture Hrs = 2, Lab Hrs = 0 Prerequisite: Adm to RNT Program

#### RNSG 2213

### Mental Health Nursing

Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. In addition, the student will utilize the nursing process to identify common disruptions in growth and developmental patterns as they relate to the client's optimal levels of health. This course lends itself to a blocked approach. Progression: student must pass RNSG 2213 and RNSG 2160 concurrently to progress to next nursing level.

Lecture Hrs = 2, Lab Hrs = 0, NLN Testing Fee

Prerequisite: Admission to RN or RNT Program, RNSG 1343, RNSG 1362, RNSG 2161, RNSG 2201, BIOL 2421 RN Only: ENGL 1302; Humanities, Computer Literacy, and Oral Communication electives

Pre/Corequisite: SPNL 1301

Corequisite: RNSG 1162, RNSG 1251, RNSG 2160

#### RNSG 2262 Ω

### Clinical-Nursing-Registered Nurse Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Progression: student must pass RNSG 2432 and RNSG 2262 concurrently to progress to next nursing level.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 9, Insurance Fee Prerequisite: Admission to RN or RNT Program, RNSG 1162, RNSG 1251, RNSG 2160, RNSG 2213, SPNL 1301 Corequisite: RNSG 1146, RNSG 2331

#### RNSG 2432

## Enhanced Concepts of Adult Health I

Enhanced concepts and skills for developing professional competencies in complicated nursing care situations involving adult clients/families with multiple body system problems. Emphasizes critical thinking, clinical reasoning, and determining legal/ethical values for optimization of client care in intermediate and acute care settings. This course lends itself to a blocked approach. Progression: student must pass RNSG 2431 and RNSG 2262 concurrently to progress.

Lecture Hrs = 4, Lab Hrs = 0, NLN Testing Fee
Prerequisite: Admission to RN or RNT Program, RNSG
1162, RNSG 1251, RNSG 2160, RNSG 2213, SPNL 1301
Corequisite: RNSG 1146, RNSG 2262

#### SCIT 1318

## Applied Physics I

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.

Lecture Hrs = 2, Lab Hrs = 2 Prerequisite: READ 301 or equivalent

#### SCIT 1414

#### Applied General Chemistry I

Study of the general concepts of chemistry with an emphasis on industrial applications.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 301 or equivalent

## SGNL 1401

## Beginning American Sign Language

Fingerspelling and basic training skills in sign language with an emphasis on expressive communication. For students with little or no previous experience in sign language.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: READ 300 or equivalent

#### **SGNL 1402**

### Advanced American Sign Language

Continuation of SGNL 1401. Intermediate and advanced skills in sign language with an emphasis on Amesian (American Sign Language) in terms of expressive and receptive communication.

Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: SGNL 1401, READ 300 or equivalent

### American Sign Language III: Conversation, Interpreting, Literature, Folklore

A review and application of conversational skills in American Sign Language. Interpreting from signing to voice and voice to signing. An introduction to American Sign Language literature and folklore.

Lecture Hrs = 3, Lab Hrs = 2

Prerequisite: SGNL 1402, READ 300 or equivalent

#### **SGNL 2302**

### American Sign Language IV: Conversation, Interpreting, Literature, Folklore

A continuation of SGNL 2301. Lecture Hrs = 3, Lab Hrs = 2Prerequisite: SGNL 2301

### SOCI 1301 Ω

#### Introductory Sociology

The principles of social organization including the study of social groups, culture, social change, personality population, rural and urban communities, social class and caste systems, and social institutions such as the family, recreation and religion.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## **SOCI 1306**

#### Social Problems

Social disorganization and reorganization with emphasis on the following topics: mental illness, suicide, drug addiction, alcoholism, sex deviation, crime, gambling, minority groups, divorce, and retirement.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### SOCI 2301 Ω

## Marriage and the Family

A sociological examination of marriage and family life. Problems of courtship, mate selection, divorce, and marriage adjustment in modern American society.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## SOCI 2319 **Q**

#### **Multi-Cultural Studies**

This course focuses on the conflicts, dilemmas, and social problems that arise in multicultural societies. Special emphasis is placed on issues such as racism, sexism, and the 'politics of identity.' The course also examines a variety of remedies for the problems noted above. These include: the expansion of civil rights, affirmative action, and recognition of minority cultures. Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: SOCI 1301, ENGL 301 or equivalent,

READ 302 or equivalent

### SOCI 2336

#### Criminology

Crime as a form of deviant behavior. Nature and extent of crime; past and present theories. Evaluation of prevention, control, and treatment programs.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### SOCI 2339

#### Juvenile Delinquency

Nature and extent of delinquency; competing explanatory models and theories; evaluation of prevention, control, and treatment programs. Same as PSYC 2318. Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### SOCW 2361

#### Introduction to Social Work

Philosophy and techniques of social work, survey of its fields, and the historical development of United States system are discussed.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

#### SOCW 2362

### Social Welfare as a Social Institution

This is an introduction to the study of modern social work, wihin the context of the institution of social welfare, the underlying philosophy and ethics of social work, and the major divisions and types of social work together with their methods and objectives.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: ENGL 301 or equivalent, READ 302 or equivalent

## **SPAN 1411**

## **Beginning Spanish**

For students with little or no previous knowledge of Spanish. Vocabulary and grammar are taught through a variety of cognitive teaching methods including the use of patterned response drills, memorization of minidialogues, and the analysis of contextually related readings. Proper pronunciation is stressed throughout the course. Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: READ 300 or equivalent

## **SPAN 1412**

## Intermediate Spanish

Continuation of SPAN 1411. Lecture Hrs = 3, Lab Hrs = 3

Prerequisite: SPAN 1411, READ 300 or equivalent

#### Spanish - Reading, Conversation, Composition and **Grammar Review**

Emphasis on oral fluency, grammar, composition, and the reading of modern Spanish prose.

Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: SPAN 1412, READ 300 or equivalent

#### SPAN 2312

#### Spanish - Reading, Conversation, Composition and **Grammar Review**

Continuation of SPAN 2311. Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: SPAN 2311 or equivalent transfer credit in Spanish

## SPCH 1145

#### Forensic Workshop

A laboratory course for students wishing to participate in debate, forensic, and interpretation tournaments. All speech tournament activities will be covered. One hour each semester.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

#### **SPCH 1315**

## Principles of Public Speaking

Preparation and delivery of various types of speeches. Emphasis upon such fundamental principles as selfconfidence, poise, directness, posture, stress, voice, and articulation. Speech types considered include announcements and expository, persuasive, after-dinner, and radio speeches.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: READ 300 or equivalent

### **Interpersonal Communication**

Designed for the student who wants to improve communication skills in one-to-one settings in small groups. A study and practice of effective interpersonal concepts and techniques. Includes subjects such as listening, assertive communication and dealing appropriately with conflict. Emphasis on self improvement.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ Prerequisite: READ 300 or equivalent

## **Business and Professional Speech**

Business and Professional Speech applies the techniques of oral communication to business and professional settings that people might encounter in business situations. Discussion and practical application include: methods and theory; problem-solving; the research, organization, and presentation of speeches; trends in media; interviewing.

 $Lecture\ Hrs = 3$ ,  $Lab\ Hrs = 0$ Prerequisite: READ 300 or equivalent

#### SPCH 1342

## Voice and Diction

Open to all students interested in improving their diction. Development of the voice and proper diction. Coaching of the individual student, with the aid of audio taping and an audio journal. Same as DRAM 2336. Lecture Hrs = 3, Lab Hrs = 0

Prerequisite: READ 300 or equivalent

## SPCH 2341

## **Oral Interpretation**

Introduction to the study and application of the oral performance of literature. Preparation and oral reading of various types of literature, exercises in arranging and adapting literature, choral speaking, practice in phrasing, vocal quality, rhythm and bodily responses. Literature will be analyzed and researched with sensitivity to the sociological, political, and anthropological forces that shaped the literature.

Lecture Hrs = 3, Lab Hrs = 0Prerequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

### SPNL 1301

## **Health Care Spanish**

Development of practical Spanish communication skills for the health care employee including medical terminology, greetings, common expressions, commands, and phrases normally used within a hospital or a physician's office.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 302 or equivalent

#### **TECA 1303**

#### Family, School and Community

A study of the child in relation to the family, school and community. Topics include parent education and participation in the learning process, family and community lifestyles, child abuse, and contemporary family issues. This course includes a minimum of 15 contact hours of field experience with children, infancy through age 12, in varied settings with diverse populations. The course aligns with the State Board for Education Certification Pedagogy and Professsional Responsibilities standards.

Lecture Hrs = 3, Lab Hrs = 2 Prerequisite: READ 301 or equivalent

### TECA 1311

#### **Educating Young Children**

An introduction to the education of young children, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical, and professional responsibilities, and current issues. The course includes a minimum of 15 contact hours of field experience with children, infancy through age 12, in varied settings with diverse populations. The course aligns with the State Board of Education Certification Pedagogy and Professional Responsibilities standards. Lecture Hrs=3,  $Lab\ Hrs=2$ 

Prerequisite: READ 301 or equivalent

## TECA 1318

### Wellness of the Young Child

A study of factors that impact the well-being of the young child, including healthy behavior, food, nutrition, fitness, and safety practices and regulations. The course includes a minimum of 15 contact hours of field experience with children, infancy through age 13, in varied settings with diverse populations. The course aligns with the State Board of Education Certification Pedagogy and Professional Responsibilities standards. Lecture Hrs=3,  $Lab\ Hrs=2$ 

## TECA 1354

## Child Growth and Development

Prerequisite: READ 301 or equivalent

A study of the principles of normal child growth and development from conception to adolescence. Focus on physical, cognitive, social, and emotional domains of development.

Lecture Hrs = 3, Lab Hrs = 0 Prerequisite: READ 301 or equivalent

## TECM 1341 Technical Algebra

Application of algebra to technical occupations. Topics include principles of linear equations, simultaneous equations, quadratic equations, and manipulation of powers and roots. Emphasis on stated word problems relevant to technical and vocational occupations.

 $Lecture\ Hrs=3$ ,  $Lab\ Hrs=0$ 

Prerequisite: MATH 310 or equivalent, READ 300 or equivalent

### TECM 1349

## **Technical Math Applications**

Fundamentals of trigonometry and geometry as used in a variety of technical settings. Topics include the use of plane and solid geometry to solve areas and volumes encountered in industry.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

#### VNSG 1161

## Clinical-Licensed Vocational Nurse (LVN) Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0, Lab Hrs = 0, Clinical Hrs = 6, Insurance Fee Pre/Corequisite: BIOL 2404 (B or Better)

Corequisite: VNSG 1226, VNSG 1304, VNSG 1423, VNSG

#### VNSG 1219

## Leadership and Professional Development

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.

Lecture Hrs = 2, Lab Hrs = 0, NLN Testing Fee Prerequisite: HITT 1305, VNSG 1227, VNSG 1234, VNSG

1331, VNSG 1360, VNSG 1432

Corequisite: VNSG 1330, VNSG 2361, VNSG 2431

## VNSG 1226

## Gerontology

Overview of the normal pysical, psychological, and cultural aspects of the aging process. Addresses common disease processes of aging. Exploration of attitudes of care of the older adult.

Lecture Hrs = 2,  $Lab\ Hrs = 0$ 

Pre/Corequisite: BIOL 2404 (B or Better)

Corequisite: VNSG 1161, VNSG 1304, VNSG 1429, VNSG 1423

## VNSG 1227

#### **Essentials of Medication Administration**

General principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction includes various systems of measurement. Lecture Hrs = 0, Lab Hrs = 4, Course Fee =\$20.00 Pre/Corequisite: BIOL 2404 (B or Better), HITT 1305 Corequisite: VNSG 1402, VNSG 1329, VNSG 1363

## VNSG 1234

#### **Pediatrics**

Study of childhood diseases and childcare from infancy through adolescence. Focus on the care of the well and the ill child utilizing the nursing process.

 $Lecture\ Hrs=2,\ Lab\ Hrs=0$ 

Prequisite: BIOL 2404 (B or Better), VNSG 1161, VNSG 1226, VNSG 1304, VNSG 1423, VNSG 1429

Pre/Corequisite: HITT 1305, VNSG 1227, VNSG 1331, VNSG 1360, VNSG 1432

#### VNSG 1304

## Foundations of Nursing

Introduction to the nursing profession including history, standards of practice, legal and ethical issues, and role of the vocational nurse. Topics include mental health, therapeutic communication, cultural and spiritual diversity, nursing process, and holistic awareness. This course will also include introduction to the principles of nutrition.

Lecture Hrs = 3, Lab Hrs = 0, HIPPA Fee Pre/Corequisite: BIOL 2404 (B or Better), HITT 1305 Corequisite: VNSG 1161, VNSG 1226, VNSG 1423, VNSG

#### VNSG 1330

## Maternal-Neonatal Nursing

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.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: HITT 1305, VNSG 1227, VNSG 1234, VNSG 1331, VNSG 1360, VNSG 1432

Corequisite: VNSG 1219, VNSG 2361, VNSG 2431

### VNSG 1331

### Pharmacology

Fundamentals of medications and their diagnostic, therapeutic, and curative effects. Includes nursing interventions utilizing the nursing process.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Prerequisite: VNSG 1226, VNSG 1304, VNSG 1423, VNSG 1429, BIOL 2404 (B or Better), VNSG 1161

Corequisite: HITT 1305, VNSG 1227, VNSG 1432, VNSG 1360, VNSG 1234

#### VNSG 1360

### Clinical - Licensed Vocational Nurse (LVN) Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0, Lab Hrs = 0, External Lab = 18, Insurance Fee

Pre/Corequisite: BIOL 2404 (B or Better), HITT 1305 Corequisite: VNSG 1227, VNSG 1234, VNSG 1331, VNSG 1432

#### VNSG 1423

## **Basic Nursing Skills**

Mastery of entry level nursing skills and competencies for a variety of health care settings. Utilization of the nursing process as the foundation for all nursing interventions.

Lecture Hrs = 2, Lab Hrs = 6, Course Fee =\$20.00 Pre/Corequisite: BIOL 2404 (B or Better)

Corequisite: VNSG 1161, VNSG 1226, VNSG 1304, VNSG 1429

## VNSG 1429

## Medical-Surgical Nursing I

Application of the nursing process to the care of adult patients experiencing medical-surgical conditions in the health-illness continuum in a variety of health care settings.

Lecture Hrs = 4, Lab Hrs = 1, NLN Testing Fee Pre/Corequisite: BIOL 2404 (B or Better)

Corequisite: VNSG 1161, VNSG 1226, VNSG 1304, VNSG 1423

## VNSG 1432

1234, VNSG 1360

## Medical-Surgical Nursing II

Continuation of Medical-Surgical Nursing I with application of the nursing process to the care of adult patients experiencing medical-surgical conditions in the health-illness continuum. Includes a variety of health care settings. This course will focus on the health care needs of the adult client with disorders of the endocrine, gastrointestinal, nervous, cardiovascular, eye and ear, and genitourinary systems. Special consideration will be given to the pediatric and geriatric client. Lecture Hrs = 4, Lab Hrs = 1, NLN Testing Fee Prerequisite: VNSG 1423, VNSG 1304, VNSG 1226, VNSG 1429, BIOL 2404 (B or Better), VNSG 1161

Corequisite: HITT 1305, VNSG 1331, VNSG 1227, VNSG

#### VNSG 2361

### Clinical - Licensed Vocational Nurse (LVN) Training

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Lecture Hrs = 0, Lab Hrs = 0, External Lab = 18, Insurance, NLN Testing Fee

Prerequisite: HITT 1305, VNSG 1227, VNSG 1234, VNSG 1331 VNSG 1360, VNSG 1432,

Corequisite: VNSG 1219, VNSG 1330, VNSG 2431

### VNSG 2431

## **Advanced Nursing Skills**

Mastery of advanced level nursing skills and competencies for a variety of health care settings utilizing the nursing process as a problem-solving tool.

Lecture Hrs = 4, Lab Hrs = 1, Course Fee \$20.00

 $\label{eq:prerequisite: VNSG 1227, VNSG 1234, VNSG 1331, VNSG 1234, VNSG 1331, VNSG 1234, VNSG 1331, VNSG 1234, VNSG 12344, VNSG 1234, VNSG 1234, VNSG 12344, VNSG 12344, VNSG 12344, VNS$ 

1360, VNSG 1432, HITT 1305

Pre/Corequisite: VNSG 1219, VNSG 1330, VNSG 2361

#### WLDG 1291

## Special Topics in Welder/Welding Technologist: Introduction to Gas Metal Arc (GMAW) Welding

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 was designed to be repeated multiple times to improve student proficiency. A study of the principles of gas metal arc welding, setup and use of GMAW equipment, and safe use of tools/equipment. Instruction in various joint designs.

Lecture Hrs = 1, Lab Hrs = 2

Pre/Corequisite: READ 300 or equivalent

## WLDG 1323

## Welding Safety, Tools, and Equipment

An introduction to welding careers and safety practice, including welding safety; OSHA and the Hazardous Communication Act; Material Safety Data Sheets (MSDS); basic mathematics; measuring systems; shop operations; use and care of precision measuring tools; and the use and care of hand and power tools. Instruction on various types of welding equipment and processes, basic welding gases, fluxes, rods, electrodes, symbols, and blueprints. Also includes metal preparation, joint design and oxy-fuel cutting.

Lecture Hrs = 3,  $Lab\ Hrs = 0$ 

Pre/Corequisite: READ 300 or equivalent

## WLDG 1327

#### **Welding Codes**

An in-depth study of welding codes and their development in accordance with structural standards, welding processes, destructive and nondestructive test methods. Includes API 1104 and ASME Sections V and IX.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

#### WLDG 1337

## Introduction to Metallurgy

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.

*Lecture Hrs* = 3, *Lab Hrs* = 0

Pre/Corequisite: READ 300 or equivalent

#### WLDG 1428

## Introduction to Shielded Metal Arc Welding (SMAW)

An introduction to 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.

Lecture Hrs = 3,  $Lab\ Hrs = 3$ 

Pre/Corequisite: READ 300 or equivalent

#### WLDG 1434

### Introduction to Gas Tungsten Arc (GTAW) Welding

An introduction to the principles of gas tungsten arc welding (GTAW), setup/use of GTAW equipment, and safe use of tools and equipment. Welding instruction in various positions on joint designs.

Lecture Hrs = 3, Lab Hrs = 3

Pre/Corequisite: READ 300 or equivalent

#### WLDG 1435

## Introduction to Pipe Welding

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 and 2G using various electrodes.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: WLDG 2443

Pre/Corequisite: READ 300 or equivalent

#### WLDG 2331

#### Advanced Blueprint Interpretation and Cost Analysis

A continuation in the Blueprints for Welders course. Emphasis placed on inspection, cost analysis, and estimating, including instruction in basic drafting skills.

Lecture Hrs = 3, Lab Hrs = 0

Pre/Corequisite: READ 300 or equivalent

## WLDG 2443

## Advanced Shielded Metal Arc Welding (SMAW)

Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc welding processes with open V-groove joints in all positions.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: WLDG 1428

Pre/Corequisite: READ 300 or equivalent

## WLDG 2451

## Advanced Gas Tungsten Arc Welding (GTAW)

Advanced topics in GTAW welding, including welding in various positions and directions.

*Lecture Hrs* = 3, *Lab Hrs* = 3 *Prerequisite: WLDG 1434* 

Pre/Corequisite: READ 300 or equivalent

## WLDG 2453

## Advanced Pipe Welding

Advanced topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes.

Lecture Hrs = 3, Lab Hrs = 3 Prerequisite: WLDG 1435

Pre/Corequisite: READ 300 or equivalent

 $\Omega$  indicates courses taught with optional honors contracts.

 $\Sigma$  indicates honors courses. See page 31 for additional information on the honors program.

