COURSE DESCRIPTIONS
Most of the courses listed in this section are taught at Panola College at some time during the academic year. Some of these courses are taught during the fall semester only, while others are taught in the spring semester only. The student should consult the Schedule of Classes online at http://www.panola.edu prior to each semester or summer session to determine specific course offerings for a given enrollment period. The College reserves the right to withdraw any course from the schedule if enrollment figures do not make the presentation of the class economically or educationally feasible.

This catalog features the courses numbered in the Texas Common Course Numbering System (TCCN) and Workforce Education Course Manual (WECM). By using the TCCN and WECM, Panola College simplified the transfer process for students by making transfer evaluation at the receiving school more standardized. Individuals who took courses prior to the initiation of this system, may, if needed, consult the Admissions/Records Office for the number of the equivalent course.

The course descriptions which follow may indicate prerequisites and co-requisites. A prerequisite is a course that must be satisfactorily completed before enrollment in a course. A co-requisite for a course should be taken before, but may be taken at the same time as another course. Students who fail to meet these department requirements may find themselves unable to perform successfully in a course for which they have not met the prerequisites. Prerequisites tell the student what skills and/or knowledge he or she must have to succeed in the course. If the student feels that he or she is qualified and wants to avoid a prerequisite, the student or high school counselor (in the case of dual credit students) must obtain an exception from the Vice President of Instruction.

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<tr>
<th>EXPLANATION OF ITEMS IN COURSE DESCRIPTION</th>
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<tbody>
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Panola College uses the Texas Common Course Numbering System (TCCN) and Workforce Education Course Manual (WECM)

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<td>*WECM courses are underlined in the course descriptions.</td>
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ACCT 2401
Principles of Accounting I (Financial)
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnership and corporations.
Lecture hrs = 3, lab hrs = 3
Lab fee

ACCT 2402
Principles of Accounting II (Managerial)
Introduction to cost behavior, budgeting, responsibility accounting, cost control and product costing.
Prerequisite: ACCT 2401
Lecture hrs = 3; lab hrs = 3
Lab fee

ACNT 1303
Intro to Accounting I
A study of analyzing, classifying and recording business transactions in a manual and in a computerized environment. Emphasis is placed on understanding the complete accounting cycle and preparing financial statements, bank reconciliations and payroll. The student will define accounting terminology; analyze and record business transactions in a manual and in a computerized environment; complete the accounting cycle; prepare financial statements; and apply accounting concepts related to cash and payroll.
Lecture hrs = 2; lab hrs = 4
Lab fee

ACNT 1304
Intro to Accounting II
A study of accounting for merchandising, notes payable, notes receivable, valuation of receivables and equipment and valuation of inventories in a manual and in a computerized environment. The student will define related accounting terminology; analyze and record business transactions for a merchandising operation in a manual and computerized environment; calculate interest and apply valuation methods for receivables and payables; and utilize various inventory and depreciation valuation methods.
Prerequisite: ACNT 1303
Lecture hrs = 2; lab hrs = 4
Lab fee

AGCR 1397
Natural Resource Communication
A comprehensive study of communication skills for business and industry, including techniques in reading, writing, listening and speaking. Emphasis on clear, concise written and spoken communication in terms of business letter, memos and reports, as well as oral presentations. Topics include counseling techniques such as intake interviewing, relationship building, problem identification and resolution. Emphasis on importance of effective oral communications.
Lecture hrs = 3; lab hrs = 0

AGRI 1231
The Agricultural Industry
Overview of world agriculture, nature of the industry, resource conservation and the American agricultural system, including production, distribution and marketing.
Lecture hrs = 2; lab hrs = 0

AGRI 1307
Agronomy (Crop Science)
Principles and practices in the development, production and management of field crops including plant breeding, plant diseases, soils, insect control and weed control.
Lecture hrs = 2; lab hrs = 2

AGRI 1309
Computers in Agriculture
Use of computers in agricultural applications. Introduction to programming languages, word processing, electronic spreadsheets and agricultural software.
Lecture hrs = 3; lab hrs = 0

AGRI 1315
Horticulture
Structure and growth of horticultural plants, selection, propagation, fertilization, care, harvesting of fruits, nuts, and vegetables together with the care and use of ornamentals in home landscape.
Lecture hrs = 2; lab hrs = 2
AGRI 1325  
Marketing of Agricultural Products  
Operations in the movement of agricultural commodities from producer to consumer, including the essential marketing functions of buying, selling, transporting, storing, financing, standardizing, pricing and risk bearing.  
*Lecture hrs = 3; lab hrs = 0*  

AGRI 1327  
Poultry Science  
Introduction to the poultry industry. Practices and principles in the production and marketing of turkey, layers, broilers and specialized fowl. Management, automated equipment, product technology, incubation and production economics.  
*Lecture hrs = 2; lab hrs = 2*  

AGRI 1329  
Principles of Food Science  
Biological and scientific aspects of modern industrial food supply systems. Food classification, modern processing, and quality control.  
*Lecture hrs = 2; lab hrs = 2*  

AGRI 1413  
Plant Protection  
Principles and practices of controlling and preventing economic loss caused by plant pests. Includes instruction in entomology, plant pathology, weed science, crop science, environmental toxicology and related environmental protection measures.  
*Lecture hrs = 3; lab hrs = 3*  

AGRI 1419  
Introductory Animal Science  
Livestock and livestock industry, reproduction, nutrition, management and marketing of beef cattle, horses, swine and sheep; with labs that include breeds, market classes and judging.  
*Lecture hrs = 3; lab hrs = 3*  

AGRI 2317  
Introduction to Agricultural Economics  
Fundamental economic principles and their applications to the problems of the industry of agriculture.  
*Lecture hrs = 3; lab hrs = 0*  

AGRI 2330  
Wildlife Conservation & Management  
Principles and practices used in the production and improvement of wildlife resources. Aesthetic, ecological and recreational uses of public and private lands.  
*Lecture hrs = 3; lab hrs = 0*  

ARTS 1301  
Art Appreciation  
Exploration of purposes and processes in the visual arts including evaluation of selected works.  
*Lecture hrs = 3; lab hrs = 0*  

ARTS 1311  
Design I  
Exploratory studies in drawing, perspective, color and design. Six hours of studio work and three hours of assigned independent study per week.  
*Lecture hrs = 3; lab hrs = 3*  

Lab fee  

ARTS 1313  
Foundations of Art  
Created specifically for students who need the art class but not the structured lab. Emphasis will be placed on process and self-awareness. Lab will consist of independent study. This course is a study of the history, organization, evaluation and function of the creative arts in the elementary curriculum. Includes opportunity for the student to work with various media with an emphasis on aesthetic judgment and growth.  
*Lecture hrs = 3; lab hrs = 0*  

ARTS 1316  
Drawing I  
Introduction to the basic discipline of drawing through the use of still-life, landscape, architecture and conceptual ideas. Six hours of studio work and three hours of assigned independent study per week.  
*Lecture hrs = 3; lab hrs = 3*  

Lab fee  

ARTS 1317  
Drawing II  
Investigation of drawing media and techniques including descriptive and expressive possibilities.  
Prerequisite: ARTS 1316 or permission of instructor  
*Lecture hrs = 3; lab hrs = 3*  

Lab fee
ARTS 1413
Foundations of Art (Art for the Elementary Teacher)
Introduction to the creative media designed to enhance artistic awareness and sensitivity through the creative and imaginative use of art materials and tools. Includes art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgment and growth.
Lecture hrs = 4; lab hrs = 0

ARTS 2316
Painting I
An introduction to the basic principles of mixing and application of opaque painting media on various painted surfaces. Included are the studies of properties of the medium with various subject matters and various styles of painting. Six hours of studio work and three hours of assigned independent study per week.
Prerequisite: ARTS 1311 and ARTS 1316 or permission of instructor
Lecture hrs = 3; lab hrs = 3
Lab fee

ARTS 2317
Painting II
Exploration of ideas using painting media and techniques.
Prerequisite: ARTS 2316
Lecture hrs = 3; lab hrs = 3
Lab fee

ARTS 2346
Ceramics I
An introduction to ceramic processes and their basic materials and techniques. Hand building, glazing and firing procedures are covered.
Lecture hrs = 3; lab hrs = 3
Lab fee

ARTS 2347
Ceramics II
Exploration of ideas using basic ceramic processes.
Lecture hrs = 3; lab hrs = 3
Lab fee

ARTS 2356
Photography I
Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry and presentation skills. Emphasis on design, history and contemporary trends as a means of developing an understanding of photographic aesthetics.
Cross-listed with journalism emphasis as COMM 1318
Lecture hrs = 3; lab hrs = 0

ARTS 2357
Photography II
 Extends the students' knowledge of technique and guides them in developing personal outlooks toward specific applications of the photographic process.
Cross-listed with journalism emphasis as COMM 1319
Prerequisite: ARTS 2356
Lecture hrs = 3; lab hrs = 0

ARTS 2366
Water Color
Problems and instruction in the use of water color, tempera and gouache are included in this course.
Lecture hrs = 3; lab hrs = 3
Lab fee

ARTS 2367
Water Color II
Exploration of ideas using water-based painting media and techniques.
Lecture hrs = 3; lab hrs = 3

BCIS 1305
Business Computer Applications
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 = 0
Lab fee

BIOL 1322
Nutrition & Diet Therapy
This course introduces general nutritional concepts in health and disease and includes practical applications of that knowledge. Special emphasis is given to nutrients and nutritional processes including functions, food sources, digestion, absorption, and metabolism. Food safety, availability, and nutritional information including food labels, advertising, and nationally established guidelines are addressed.
Lecture hrs = 3; lab hrs = 0
BIOL 1406
Biology I
May be taken by non-science majors as well as science majors. May be taken out of sequence. Fundamental principles of living organisms will be studied including physical and chemical properties of life, organization, function, evolutionary adaptation and classification. Concepts of cytology, reproduction, genetics, ecology and scientific reasoning are included. Laboratory activities will reinforce the above concepts.
*Must register for both lecture and lab*
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 1407
Biology II
May be taken by non-science majors as well as science majors. May be taken out of sequence. The diversity and classification of life will be studied, including animals, plants, protists, fungi and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology and evolution of plants and animals. Laboratory activities will reinforce the above concepts.
*Must register for both lecture and lab*
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 1408
General Biology I (Non-Major)
Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function and reproduction. Laboratory activities will reinforce the above concepts. BIOL 1408 and BIOL 1409 may be taken out of sequence. Recommended for non-science majors.
*Must register for both lecture and lab*
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 1409
General Biology II (Non-Major)
This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity and physiology. Laboratory activities will reinforce the above concepts. BIOL 1408 and BIOL 1409 may be taken out of sequence. Recommended for non-science majors.
*Must register for both lecture and lab*
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 1411
General Botany
Fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function and cellular and molecular metabolism. The role of plants in the environment, evolution and phylogeny of major plant groups, algae and fungi. Laboratory activities will reinforce the above concepts. May be taken by non-science majors as well as science majors.
*Must register for both lecture and lab*
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 1413
General Zoology
Fundamental biological concepts relevant to animals, including systematics, evolution, structure and function, cellular and molecular metabolism, reproduction, development, diversity phylogeny and ecology. Laboratory activities will reinforce the above concepts.
*Must register for both lecture and lab*
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 2401
Anatomy and Physiology I
Anatomy and Physiology I is the first part of a two course sequence. It is a study of the structure and function of the human body including cells, tissues, and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.
One semester from the following is recommended: CHEM 1405, CHEM 1411, BIOL 1406, BIOL 1407, BIOL 1408, BIOL 1409, BIOL 1411, BIOL 1413, or BIOL 2404.
Prerequisite: TSI Reading complete
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 2402
Anatomy and Physiology II
Anatomy and Physiology II is the second part of a two course sequence. It is a study of the structure and function of the human body including cells, tissues, and organs of the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on
interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

Prerequisite: TSI Reading complete and must have passed BIOL 2401 with at least a grade of “C”
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 2404
Anatomy and Physiology
A single-semester course. This course is not acceptable in the ADN, HIT, or OTA programs. Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive and circulatory systems.
Must register for both lecture and lab
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 2406
Environmental Biology
A single-semester course. Human interaction with and effect upon plant and animal communities. Conservation, pollution, energy and other contemporary ecological problems.
Must register for both lecture and lab
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 2420
Microbiology for Non-Science Majors
This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and asexual agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health. The lab covers basics of culture and identification of bacteria and microbial ecology and covers basics of microbiology.
Recommended: A four-hour chemistry or biology course; TSI Reading complete
Must register for both lecture and lab
Lecture hrs = 3; lab hrs = 3
Lab fee

BIOL 2421
Microbiology for Science Majors
Principles of microbiology, including metabolism, structure, function, genetics and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts and the environment. Laboratory activities will reinforce principles of microbiology, including metabolism, structure, function, genetics and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts and the environment.
Prerequisites: CHEM 1411 and a biology course from the following: BIOL 1406, BIOL 1407, BIOL 1411 or BIOL 1413; TSI Reading complete
Must register for both lecture and lab
Lecture hrs = 3; lab hrs = 3
Lab fee

BMGT 1301
Supervision
The role of the supervisor. Includes managerial functions as applied to leadership, counseling, motivation and human relations skills.
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 development of a business vocabulary.
Lecture hrs = 3; lab hrs = 0

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

BUSI 2301
Business Law
Principles of law which form the legal framework for business activity.
Lecture hrs = 3; lab hrs = 0
CDEC 1313  
Curriculum Resources for Early Childhood Programs  
A study of the fundamentals developmentally appropriate curriculum design and implementation in early care and education programs for children birth through age eight.  
Lecture hrs = 3; lab hrs = 0

CDEC 1319  
Child Guidance  
An exploration of guidance strategies for promoting prosocial behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement and cultural influences.  
Lecture hrs = 3; lab hrs = 0

CDEC 1321  
The Infant and Toddler  
A study of appropriate infant and toddler programs (birth to age 3), including an overview of development, quality routines, learning environments, materials and activities and teaching/guidance techniques.  
Lecture hrs = 3; lab hrs = 0

CDEC 1358  
Creative Arts for Early Childhood  
An exploration of principles, methods and materials for teaching children music, movement, visual arts and dramatic play through process-oriented experiences to support divergent thinking for children birth through age eight.  
Lecture hrs = 3; lab hrs = 0

CDEC 2326  
Administration of Programs for Children I  
Application of management procedures for early care and education programs. Includes planning, operating, supervising and evaluating programs. Topics cover philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation and communication.  
Lecture hrs = 3; lab hrs = 0

CDEC 2341  
The School-Age Child  
A study of programs for the school age child, including an overview of development, learning environments, materials, activities and guidance techniques.  
Lecture hrs = 3; lab hrs = 0

CDEC 2374  
Preschool Children: Learning Environments, Activities and Materials  
A course focusing on developmentally-appropriate practice during the preschool years. This course includes developing and designing interest areas and environments for discovery learning, scheduling, and planning age-appropriate activities, and writing daily and weekly activities and objectives. Participation in an early childhood setting is required for this course.  
Lecture hrs = 3; lab hrs = 0

CHEM 1405  
Introductory Chemistry I  
An introductory course in inorganic chemistry relating the principles and concepts of chemistry to man and his environment. This course is a basic introduction to chemistry, with chemical calculations making it appropriate for health science students.  
Lecture hrs = 3; lab hrs = 3  
Lab fee

CHEM 1407  
Introductory Chemistry II  
A continuation of Chemistry 1405 that focuses on organic chemistry and biochemistry.  
Prerequisite: CHEM 1405  
Lecture hrs = 3; lab hrs = 3  
Lab fee

CHEM 1411  
General Chemistry I  
This course is for students majoring in the sciences, pre-medicine, pre-dentistry or pre-engineering. It covers the fundamental laws and theories of general chemistry and their applications which are necessary for further work in science and related subjects. Modern concepts of atomic and molecular structure and chemical bonding are stressed in interpreting the chemical and physical properties of matter. The laboratory is devoted primarily to quantitative analysis and techniques.  
Prerequisite: TSI Math and Reading complete, MATH 1314 or concurrent enrollment  
Lecture hrs = 3; lab hrs = 4  
Lab fee
CHEM 1412
General Chemistry II
A continuation of Chemistry 1411. Laboratory work
includes qualitative analysis.
Prerequisite: CHEM 1411
Lecture hrs = 3; lab hrs = 4
Lab fee

CHEM 2423
Organic Chemistry I
A study of the general principles of the chemistry of
carbon. Designed for students in science and pre-
professional programs. Course of study focuses on the
alkanes including the structure, bonding, nomenclature, geometric and optical isomerism,
functional group derivatives, typical and significant
reaction mechanisms and instrumental analysis.
Prerequisite: CHEM 1411 and 1412
Lecture hrs = 3; lab hrs = 3
Lab fee

CHEM 2425
Organic Chemistry II
A study of the general principles of the chemistry of
carbon. Designed for students in science and preprofessional programs. Course of study includes a
study of alkanes, alkynes, aromatic compounds,
aldehydes, ketones, carboxylic acids and their
derivatives, polycyclic and heterocyclic compounds,
carbohydrates, amino acids and proteins.
Prerequisite: CHEM 2423
Lecture hrs = 3; lab hrs = 3
Lab fee

CNBT 1270
Concrete I
Various techniques for concrete utilization in
residential and light commercial construction.
Lecture hrs = 1; lab hrs = 3
Lab fee

CNBT 1302
Mechanical, Plumbing & Electrical Systems in
Construction I
A presentation of the basic mechanical, plumbing,
and electrical components in construction and their
relationship to residential and light commercial
buildings.
Lecture hrs = 2; lab hrs = 3

CNBT 1311
Construction Methods and Materials I
Introduction to construction materials and methods
and their application.
Lecture hrs = 2; lab hrs = 3

CNBT 2340
Mechanical, Plumbing & Electrical Systems in
Construction II
Processes and methods used in design, selection of
equipment, and installation of mechanical, plumbing,
and electrical systems in commercial buildings.
Includes heating and cooling systems, duct work,
mechanical and electrical control systems, lighting
requirements, and design of water supply and
sanitary sewer systems.
Lecture hrs = 2; lab hrs = 3

COLS 0101
First Year Experience
This course is designed to instruct the student in basic
skills for college success, including note taking, test
preparation, time and money management. The
course will facilitate the student’s transition to college
life by developing skills to meet the challenges of
higher education and self-awareness and
understanding of others. The course will also
encourage the student to enter into the community
of lifelong learners.
Lecture hrs = 3; lab hrs = 0

COMM 1129, 1130, 2129, 2130
News Publications
Work on the staff of the College newspaper. Students
work at prescribed periods under supervision.
Students are required to be on the staff of The Pony
Express.
Lecture hrs = 0; lab hrs = 3

COMM 1136, 1137, 1138
Television Production
Practical experience in the operation of television
studio and control room equipment, including both
pre- and post-production needs.
Lecture hrs = 0; lab hrs = 3
COMM 1307
Introduction to Mass Communication
Provides an overview of the traditional mass media - print, broadcast, film, as well as the related institutions of advertising, public relations and photography - their structure, support and influence. A must for communication majors.
Lecture hrs = 3; lab hrs = 0

COMM 1316
News Photography
Problems and practices of photography for newspapers. Includes instruction in camera and equipment operation and maintenance, film and plate developing, and printing media.
Lecture hrs = 3; lab hrs = 3
Lab fee

COMM 1318
Photography I
Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry and presentation skills. Emphasis on design, history and contemporary trends as a means of developing an understanding of photographic aesthetics.
Cross-listed with fine arts emphasis as ARTS 2356
Lecture hrs = 3; lab hrs = 3
Lab fee

COMM 1319
Photography II
Photography II extends the students’ knowledge of technique and guides them in developing personal outlooks toward specific applications of the photographic process.
Cross-listed with fine arts emphasis as ARTS 2357
Lecture hrs = 3; lab hrs = 3
Lab fee

COMM 1335
Survey of Radio/Television
Study of the development, regulation, economics, social impact and industry practices in broadcasting and cable communication. Includes non-broadcast television, new technologies and other communication systems.
Lecture hrs = 3; lab hrs = 0

COMM/SPCH 2301
Introduction to Technology and Human Communication
A survey of emerging interactive communication technologies and how they influence human communication, including interpersonal, group decision-making and public and private contexts.
Lecture hrs = 3; lab hrs = 0

COMM 2305
Editing and Layout
Designed to acquaint students with the fundamental principles of editing material for publication and layout techniques. Attention is given to page layout, headline writing, grammar and story content. Class members serve as staff members of The Pony Express, the College newspaper. Work is done in a laboratory.
Lecture hrs = 3; lab hrs = 3
Lab fee

COMM 2311
News Gathering and Writing I
A study of the fundamental principles of gathering and writing news, with emphasis on the practical problems of the reporters. Class members serve as staff members of The Pony Express, the College newspaper. Work is done in a laboratory.
Lecture hrs = 3; lab hrs = 3
Lab fee

COMM 2315
News Gathering and Writing II
An intensive study of methods used in gathering the news and writing. More in depth than COMM 2311. Field trips to study various media. Class members serve as staff members of The Pony Express, the College newspaper.
Prerequisite: COMM 2311 or permission of instructor
Lecture hrs = 3; lab hrs = 3
Lab fee

COMM 2331
Radio/Television Announcing
Principles of announcing: study of voice, diction, pronunciation, and delivery. Experience in various types of announcing. Study of phonetics is recommended.
Lecture hrs = 3; lab hrs = 0
COMM 2339
Writing for Radio, Television and Film
Introduction to basic script formats, terminology and writing techniques, including the writing of commercials, public service announcements, promotions, news, documentary and fictional materials.
Lecture hrs = 3; lab hrs = 0

COMM 2366
Intro to Cinema
Survey and analyze cinema including history, film techniques, production, procedures, selected motion pictures, and cinema’s impact on and reflection of society.
Cross-listed as COMM 2366
Lecture hrs = 3; lab hrs = 0

COMM 2389
Academic Cooperative (3 SCH Version)
An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of communication.
Lecture hrs = 0; lab hrs = 0

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.
Lecture hrs = 3; lab hrs = 3
Lab fee

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.
Prerequisite: COSC 1436
Lecture hrs = 3; lab hrs = 3
Lab fee

CRIJ 1301
Introduction to Criminal Justice
This course provides a historical and philosophical overview of the American criminal justice system, including the nature, extent, and impact of crime; criminal law; and justice agencies and processes.
Lecture hrs = 3; lab hrs = 0

CRIJ 1306
Court Systems & Practices
This course is a study of the court system as it applies to the structures, procedures, practices and sources of law in American courts, using federal and Texas statutes and case law.
Lecture hrs = 3; lab hrs = 0

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 = 0

CRIJ 1310
Fundamentals of Criminal Law
This course is the study of criminal law including application of definitions, statutory elements, defenses and penalties using Texas statutes, the Model Penal Code, and case law. The course also analyzes the philosophical and historical development of criminal law and criminal culpability.
Lecture hrs = 3; lab hrs = 0

CRIJ 2313
Correctional Systems & Practices
This course is a survey of institutional and non-institutional corrections. Emphasis will be placed on the organization and operation of correctional systems; treatment and rehabilitation; populations served; Constitutional issues; and current and future issues.
Lecture hrs = 3; lab hrs = 0

CRIJ 2314
Criminal Investigation
Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation.
Lecture hrs = 3; lab hrs = 0
CRIJ 2328
Police Systems & Practice
This course examines the establishment, role and
function of police in a democratic society. It will focus
on types of police agencies and their organizational
structure, police-community interaction, police
ethics, and use of authority.
Lecture hrs = 3; lab hrs = 0

CSME 1401
Orientation
An overview of the skills and the knowledge
necessary for the field of cosmetology.
Lecture hrs = 2; lab hrs = 6
Lab fee

CSME 1405
Fundamentals of Cosmetology
A course in the basic fundamentals of cosmetology.
Topics include safety and sanitation, service
preparation, manicure, facial, chemical services,
shampoo, haircut, wet styling, and comb out.
Lecture hrs = 2; lab hrs = 8
Lab fee

CSME 1430
Orientation to Nail Technology
An overview of the fundamental skills and knowledge
necessary for the field of nail technology.
Lecture hrs = 2; lab hrs = 6
Lab fee

CSME 1431
Principles of Nail Technology I
A course in the principles of nail technology. Topics
include anatomy, physiology, theory and related skills
of nail technology.
Lecture hrs = 2; lab hrs = 8
Lab fee

CSME 1434
Cosmetology Instructor I
The fundamentals of instructing cosmetology
students.
Prerequisite: Valid Texas Department of Licensing and
Regulation license and high school diploma or GED &
CSME 1435
Lecture hrs = 2; lab hrs = 8
Lab fee

CSME 1435
Orientation to the Instruction of Cosmetology,
An overview of the skills necessary for the instruction
of cosmetology students.
Prerequisite: Valid Texas Department of Licensing and
Regulation license and high school diploma or GED
Lecture hrs = 2; lab hrs = 6
Lab fee

CSME 1441
Principles of Nail Technology II
A continuation of the concepts and principles of nail
technology.
Prerequisite: CSME 1431
Lecture hrs = 2; lab hrs = 8
Lab fee

CSME 1443
Manicuring and Related Theory
Presentation of the theory and practice of nail
services. Topics include terminology, application and
workplace competencies related to nail services.
Lecture hrs = 2; lab hrs = 6
Lab fee

CSME 1447
Skin Care/Facials/Related Theory
In-depth coverage of the theory and practice of skin
care, facials and cosmetics.
Lecture hrs = 2; lab hrs = 6
Lab fee

CSME 1451
Artistry of Hair: Theory and Practice
Instruction in the artistry of hair design. Topics include
tory, techniques and application of hair design.
Lecture hrs = 2; lab hrs = 6
Lab fee

CSME 1453
Chemical Reformation
Presentation of the theory and practice of chemical
reformation including terminology, application and
workplace competencies.
Lecture hrs = 2; lab hrs = 8
Lab fee
CSME 2237  
Advanced Cosmetology Techniques  
Mastery of advanced cosmetology techniques including hair designs, professional cosmetology services, and workplace competencies.  
Lecture hrs = 0; lab hrs = 8  
Lab fee

CSME 2343  
Salon Development  
Procedures necessary for salon development. Topics include professional ethics and goals, salon operation and record keeping.  
Lecture hrs = 2; lab hrs = 4  
Lab fee

CSME 2401  
Principles of Hair Coloring  
Presentation of the theory, practice, and chemistry of hair color. Topics include terminology, application and workplace competencies related to hair color and chemistry.  
Lecture hrs = 2; lab hrs = 8  
Lab fee

CSME 2414  
Cosmetology Instructor II  
A continuation of the fundamentals of instructing cosmetology students.  
Lecture hrs = 2; lab hrs = 8  
Lab fee

CSME 2415  
Cosmetology Instructor III  
Presentation of lesson plan assignments and evaluation techniques.  
Prerequisite: Valid Texas Department of Licensing and Regulation license and high school diploma or GED & CSME 2414  
Lecture hrs = 2; lab hrs = 8  
Lab fee

CSME 2430  
Nail Enhancement  
A course in theory, application, related technology of artificial nails.  
Prerequisite: CSME 1441  
Lecture hrs = 2; lab hrs = 8  
Lab fee

CSME 2439  
Advanced Hair Design  
Advanced concepts in the theory and practice of hair design.  
Lecture hrs = 2; lab hrs = 6  
Lab fee

CSME 2441  
Preparation for State Exam  
Preparation for the state licensing examination.  
Lecture hrs = 2; lab hrs = 8  
Lab fee

CSME 2444  
Cosmetology Instructor IV  
Advanced concepts of instruction in a cosmetology program. Topics include demonstration, development, and implementation of advanced evaluation techniques.  
Prerequisite: Valid Texas Department of Licensing and Regulation license and high school diploma or GED & CSME 2415  
Lecture hrs = 2; lab hrs = 8  
Lab fee

DEMR 1316  
Basic Hydraulics  
Fundamentals of hydraulics including components and related systems.  
Lecture hrs = 2; lab hrs = 3  
Lab fee

DEMR 2335  
Advanced Principles of Hydraulics  
Advanced study of hydraulic systems and components including diagnostics and testing of hydraulic systems.  
Lecture hrs = 2; lab hrs = 2

DEV 0301  
College Study Skills  
Designed for the improvement of study systems. Emphasis is placed on high-level study skills and the improvement of time management, effective listening and note taking. Learning through media, concentration, retention of information and taking examinations will be stressed. This course will not meet graduation requirements.  
Lecture hrs = 3; lab hrs = 0
**DFTG 1325**
**Blueprint Reading and Sketching**
An introduction to reading and interpreting working drawings for fabrication processes and associated traders. Use of sketching techniques to create pictorial and multiple-view drawings.
*Lecture hrs = 2; lab hrs = 3*
*Lab fee*

**DRAM 1161**
**Musical Theatre I**
Study and performance of works from the musical theatre repertoire.
*Lecture hrs = 0; lab hrs = 3*
*Lab fee*

**DRAM 1162**
**Musical Theatre II**
Study and performance of works from the musical theatre repertoire.
*Lecture hrs = 0; lab hrs = 3*
*Lab fee*

**DRAM 1220, 2221, 2220, 2121**
**Theatre Practicum**
Open to all students interested in theatre. Practical experience in a minimum of two productions each semester.
*Lecture hrs = 0; lab hrs = 6*

**DRAM 1310**
**Introduction to Theatre**
This is a survey course covering all areas of theatre arts. Includes lectures, class discussions, demonstrations and readings in dramatic literature. Fulfills the fine arts requirement for many degree plans.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1322**
**Stage Movement**
Principles, practices, and exercises in body techniques and stage movement; emphasis on character movement and body control.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1323**
**Basic Theatre Practice**
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1330**
**Stagecraft I**
This is a lecture-laboratory course with emphasis on the craft of set construction, painting techniques and the technical mounting of a production for the stage. Practical experience on technical crews.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1341**
**Make-Up**
The principles of straight and character makeup. Practical application and experience in stage productions are provided to the students.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1342**
**Intro to Costume**
Principles and techniques of costume design and construction for theatrical productions.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1351**
**Acting I**
Basic acting techniques of characterization, role analysis, stage movement, voice and body control.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 1352**
**Acting II**
Basic acting techniques of characterization, role analysis, stage movement, voice and body control.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 2331**
**Stagecraft II**
Continued study and application of the methods and components of theatrical production which may include one or more of the following: theater facilities, scenery construction and painting, properties, lighting, costume, makeup, sound and theatrical management.
*Lecture hrs = 3; lab hrs = 0*

**DRAM 2336**
**Voice for the Theater**
Application of the performer's use of the voice as a creative instrument of effective communication. Encourages an awareness of the need for vocal proficiency and employs techniques designed to improve the performer's speaking abilities.
*Lecture hrs = 3; lab hrs = 0*
DRAM 2351  
Acting III  
Development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis on the mechanics of voice, body, emotion, and analysis as tools for the actor.  
Lecture hrs = 3; lab hrs = 0

DRAM 2352  
Acting IV  
Development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis on the mechanics of voice, body, emotion, and analysis as tools for the actor.  
Lecture hrs = 3; lab hrs = 0

DRAM 2366  
Intro to Cinema  
Survey and analyze cinema including history, film techniques, production, procedures, selected motion pictures, and cinema’s impact on and reflection of society.  
Cross listed as COMM 2366  
Lecture hrs = 3; lab hrs = 0

ECON 2301  
Principles of Macroeconomics  
An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation and unemployment. Other topics include international trade, economic growth, business cycles and fiscal policy and monetary policy.  
Lecture hrs = 3; lab hrs = 0

ECON 2302  
Principles of Microeconomics  
Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures and international trade.  
Lecture hrs = 3; lab hrs = 0

EDTC 1341  
Instructional Technology and Computer Applications  
A course in specialized computer utilization for educators. Topics include the integration of educational computer terminology, system operations, software and multimedia in the contemporary classroom environment.  
Lecture hrs = 3; lab hrs = 1  
Lab fee

EDUC 1100  
Learning Framework  
A study of the research and theory in the psychology of learning, cognition, and motivation; factors that impact learning, and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned.  
Lecture hrs = 1; lab hrs = 0

EDUC 1300  
Learning Framework  
A study of the research and theory in the psychology of learning, cognition, and motivation; factors that impact learning, and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned.  
Lecture hrs = 3; lab hrs = 0

EDUC 1301  
Introduction to the Teaching Profession  
An enriched, integrated pre-service course and content experience that provides active recruitment and institutional support of students interested in a teaching career, especially in high need fields. The course provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations and provides students with support from college and school faculty, preferably in small cohort
EDUC 2301
Introduction to Special Populations
An enriched, integrated pre-service course and 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 factors that facilitate learning. The course provides students with opportunities to participate in early field observations of P-12 special populations and should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Must include a minimum of 16 contact hours of field experience in P-12 classrooms with special populations.
Prerequisite: EDUC 1301
Lecture hrs = 3; lab hrs = 1

ELMT 2339
Advanced Programmable Logic Controllers
Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing to equipment.
Lecture hrs = 2; lab hrs = 3
Lab fee

ELPT 1311
Basic Electrical Theory
Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.
Lecture hrs = 2; lab hrs = 3
Lab fee

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

ELPT 1341
Motor Control
Operating principles of solid-state and conventional controls along with their practical applications. Includes braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations.
Prerequisite: ELPT 1311
Lecture hrs = 2; lab hrs = 3
Lab fee

ELPT 1345
Commercial Wiring
Commercial wiring methods. Includes overcurrent protection, raceway panel board installation, proper grounding techniques, and associated safety procedures.
Lecture hrs = 2; lab hrs = 3
Lab fee
ELPT 1370
Advanced Electricity
Introduction to advanced electrical theory and circuitry including, power factor, induction, capacitance, apparent power, sine wave analysis, and complex circuitry. Power distribution calculations and circuits are also included.
*Lecture hrs = 2; lab hrs = 3
Lab fee

ELPT 2305
Motors and Transformers
Operation of single- and three-phase motors and transformers. Includes transformer banking, power factor correction, and protective devices.
*Lecture hrs = 2; lab hrs = 4
Lab fee

EMSP 1338
Introduction to Advanced Practice
An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital.
*Lecture hrs = 3; lab hrs = 1
Lab fee

EMSP 1355
Trauma Management
A detailed study of the knowledge and skills in the assessment and management of patients with traumatic injuries.
*Lecture hrs = 2; lab hrs = 2
Lab fee

EMSP 1356
Patient Assessment and Airway Management
A detailed study of the knowledge and skills required to perform patient assessment and airway management.
*Lecture hrs = 2; lab hrs = 3
Lab fee

EMSP 1361
Clinical - Emergency Medical 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
Lab fee

EMSP 1501
Emergency Medical Technician - Basic
Preparation for certification as an Emergency Medical Technician (EMT) - Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an emergency service or other specialized services.
*Lecture hrs = 4; lab hrs = 6
Lab fee

EMSP 2143
Assessment Based Management
A capstone course covering comprehensive assessment based patient care management. Includes specific care when dealing with pediatric, adult, geriatric and special-needs patients.
*Lecture hrs = 1; lab hrs = 1
Lab fee

EMSP 2260
Clinical - Emergency Medical EMT Paramedic
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
Lab fee

EMSP 2261
Clinical - Emergency Medical EMT Paramedic
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
Lab fee

EMSP 2262
Clinical - Emergency Medical EMT Paramedic
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
Lab fee

EMSP 2330
Special Populations
A detailed study of the knowledge and skills necessary to assess and manage ill or injured patients in diverse populations.
*Lecture hrs = 2; lab hrs = 3
Lab fee
**EMSP 2338**
EMS Operations
A detailed study of the knowledge and skills to safely manage the scene of an emergency.
*Lecture hrs = 2; lab hrs = 2*
*Lab fee*

**EMSP 2348**
Emergency Pharmacology
A comprehensive course covering the utilization of medications in treating emergency situations.
*Lecture hrs = 3; lab hrs = 1*
*Lab fee*

**EMSP 2434**
Medical Emergencies
A detailed study of the knowledge and skills in the assessment and management of patients with medical emergencies.
*Lecture hrs = 3; lab hrs = 2*
*Lab fee*

**EMSP 2444**
Cardiology
Assessment and management of patients with cardiac emergencies. Includes single and multi-lead ECG interpretation.
*Lecture hrs = 3; lab hrs = 3*
*Lab fee*

**ENER 1270**
Employment Success Energy Industry
A comprehensive study of basic communication skills necessary for business and industry; included are techniques in reading, writing, listening, and speaking. Emphasis is placed upon written and spoken communication as they relate to correspondence and oral presentations in a business environment. Topics include communication skills such as listening, writing, verbal and non-verbal communication, conflict resolution and interviewing skills with emphasis on the importance of effective oral communications.
*Lecture hrs = 1; lab hrs = 3*
*Lab fee*

**ENER 1330**
Basic Mechanical Skills for Energy
Basic mechanical skills using hand and power tools in an industrial environment. Topics include tool use and maintenance, lubrication, measuring, threads and fasteners, bench works, basic mechanical drawings and basic shop calculations (standard and metric). Also addresses rigging procedures to include chain falls, jacks, cable, fulcrum, port-a-power and come-alongs. Introduction to combustion engines and components.
*Lecture hrs = 2; lab hrs = 3*

**ENER 1350**
Overview of Energy Industry
Introduction to the major sectors of the energy industry. Includes a comparison of energy industry careers.
*Lecture hrs = 2; lab hrs = 3*

**ENER 1370**
Employment Success Energy Industry
A study of successful employee characteristics and employer expectations in the energy industry. The course will provide the student with basic communication skills required to be a productive employee. The students will be instructed on the proper behavior to become an effective member of a team and how to become a leader of their peers. Students will learn to create an effective resume and proper interview skills along with how to deal with cultural diversity and conflict resolution.
*Lecture hrs = 3; lab hrs = 1*

**ENER 1375**
Introduction to Mechanical Engines
Fundamentals of engine operation, engine diagnosis and engine repair. Emphasis on identification, inspection, measurements and disassembly, repair, and reassembly of the engine. Course may be taught manufacturer specific. Will cover gasoline, diesel and natural gas engine theory as used in the energy industry.
*Lecture hrs = 2; lab hrs = 3*
*Lab fee*

**ENER 2370**
Advanced Mechanical Engines
Continuation of ENER 1375 “Introduction to Mechanical Engines”. Coverage of testing and repairing diesel, gasoline, and natural gas engines including related systems and specialized tools. Emphasis on energy industry related uses of these components.
*Lecture hrs = 2; lab hrs = 3*
*Lab fee*
ENGL 1301
Composition I
Intensive study of and practice in writing processes, from invention and researching to drafting, revising and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement and style. Focus on writing the academic essay as a vehicle for learning, communicating and critical analysis.
Prerequisite: TSI Reading and Writing complete
Lecture hrs = 3; lab hrs = 0

ENGL 1302
Composition II
Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual and multimedia texts; systematic evaluation, synthesis and documentation of information sources; and critical thinking about evidence and conclusions.
Prerequisite: TSI Reading and Writing complete and ENGL 1301
Lecture hrs = 3; lab hrs = 0

ENGL 2311
Technical & Business Writing
Intensive study of and practice in professional settings. Focus on the types of documents necessary to make decisions and take action on the job, such as proposals, reports, instructions, policies and procedures, email messages, letters and descriptions of products and services. Practice individual and collaborative processes involved in the creation of ethical and efficient documents.
Lecture hrs = 3; lab hrs = 0

ENGL 2322
British Literature I
A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama and fiction in relation to their historical, linguistic and cultural contexts. Texts will be selected from a diverse group of authors and traditions.
Prerequisite: TSI Reading Complete and ENGL 1301 and 1302
Lecture hrs = 3; lab hrs = 0

ENGL 2323
British Literature II
A survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.
Prerequisite: TSI Reading complete and ENGL 1301 and 1302
Lecture hrs = 3; lab hrs = 0

ENGL 2332
World Literature I
A survey of world literature from the ancient world through the sixteenth century. Students will study works of prose, poetry, drama and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.
Lecture hrs = 3; lab hrs = 0

ENGL 2333
World Literature II
A survey of world literature from the seventeenth century to the present. Students will study works of prose, poetry, drama and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.
Lecture hrs = 3; lab hrs = 0

FORE 1301
Introduction to Forestry
Introduction to forest plant and animal communities and the importance of forest resource management.
Field trips required
Lecture hrs = 2; lab hrs = 2

FORE 2309
Forest Ecology
Climate, edaphic and biotic factors and their relation to woody plant growth and development.
Field trips required
Lecture hrs = 2; lab hrs = 3

GEOG 1303
World Regional Geography
Study of major world regions with emphasis on prevailing 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*

**GEOL 1403**  
*Physical Geology*  
Designed for both science and non-science majors. An introduction to the study of rocks and minerals and of the processes which shape and modify the earth’s surface features. Volcanism, earthquakes, mineral and water resources and other practical aspects of geology are discussed.  

*Lecture hrs = 3; lab hrs = 3*

*Lab fee*

**GEOL 1404**  
*Historical Geology*  
Principles of physical and historical geology. Study of the earth’s composition, structure and internal and external processes. Includes the geologic history of the earth and the evolution of life.  

*Lecture hrs = 3; lab hrs = 3*

*Lab fee*

**GISC 1270**  
*Introduction to Geographic Information Systems (GIS)*  
Introduction to basic concepts of vector GIS using several industry specific software programs including nomenclature of cartography and geography.  

*Lecture hrs = 1; lab hrs = 4*

*Lab fee*

**GISC 1311**  
*Introduction to Geographic Information Systems (GIS)*  
Introduction to basic concepts of vector GIS using several industry specific software programs including nomenclature of cartography and geography.  

*Lecture hrs = 2; lab hrs = 3*

**GOVT 2304**  
*Introduction to Political Science*  
Introductory survey of the discipline of political science focusing on the scope, and methods of the field, and the substantive topics in the discipline including the theoretical foundations of politics, political interaction, political institutions and how political systems function.  

*Lecture hrs = 3; lab hrs = 0*

**GOVT 2305**  
*Federal Government*  
Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights.  

*Prerequisite: TSI Reading complete*  

*Lecture hrs = 3; lab hrs = 0*

**GOVT 2306**  
*Texas Government*  
Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy and the political culture of Texas.  

*Prerequisite: TSI Reading complete*  

*Lecture hrs = 3; lab hrs = 0*

**GOVT 2311**  
*Mexican-American Politics*  
The study of Mexican-American/Chicano/a politics within the American political experience.  

*Lecture hrs = 3; lab hrs = 0*

**HART 1307**  
*Refrigeration Principles*  
An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components, and safety.  

*Lecture hrs = 2; lab hrs = 3*

*Lab fee*

**HART 2336**  
*Air Conditioning Troubleshooting*  
An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests.  

*Lecture hrs = 2; lab hrs = 3*

*Lab fee*
HART 2342
Commercial Refrigeration
Theory and practical application in the maintenance of commercial refrigeration; medium and low temperature applications and ice machines.
Lecture hrs = 2; lab hrs = 2
Lab fee

HEMR 1304
Natural Gas Compression
An introductory course in the principles of operation of gas compressors and natural gas engines.
Lecture hrs = 2; lab hrs = 4

HEMR 1370
Natural Gas Compression II
Continuation of HEMR 1304: Natural Gas Compression; includes principles of operation for natural gas compressors and natural gas engines. Startup and shutdown of a natural gas compressor skid. Troubleshooting procedures and the required tools used.
Lecture hrs = 3; lab hrs = 1
Lab fee

HEMR 1371
Natural Gas Maintenance and Troubleshooting
Introduction into CNG compression and pumps, valves, snap controllers, compressor maintenance and repair. Including the diagnostics and troubleshooting of natural gas compressors, and engines.
Lecture hrs = 2; lab hrs = 3
Lab fee

HIST 1301
U.S. History I
A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed in United States History I include: American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and creation of the federal government.
Prerequisite: TSI Reading complete
Lecture hrs = 3; lab hrs = 0

HIST 1302
U.S. History II
A survey of the social, political, economic, cultural and intellectual history of the United States from the Civil War/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in United States History II include: American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government and the study of U.S. foreign policy.
Prerequisite: TSI Reading complete
Lecture hrs = 3; lab hrs = 0

HIST 2301
Texas History
A survey of the political, social, economic, cultural and intellectual history of Texas from the pre-Columbian era to the present. Themes that may be addressed in Texas History include: Spanish colonization and Spanish Texas; Mexican Texas; the Republic of Texas; statehood and secession; oil, industrialization and urbanization; civil rights and modern Texas. May be substituted for HIST 1301 or 1302.
Lecture hrs = 3; lab hrs = 0

HIST 2311
Western Civilization I
A survey of the social, political, economic, cultural, religious and intellectual history of Europe and the Mediterranean world from human origins to the 17th century. Themes that should be addressed in Western Civilization I include the cultural legacies of Mesopotamia, Egypt, Greece, Rome, Byzantium, Islamic civilizations and Europe through the Middle Ages, Renaissance and Reformation.
Lecture hrs = 3; lab hrs = 0

HIST 2312
Western Civilization II
A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from the 17th century to the modern era. Themes that should be addressed in Western Civilization II include absolutism and constitutionalism, growth of nation states, the Enlightenment, revolutions, classical liberalism, industrialization, imperialism, global conflict, the Cold War and globalism.
Lecture hrs = 3; lab hrs = 0
HITT 1211
Health Information Systems
Introduction to health IT standards, health-related data structures, software applications, and enterprise architecture in health care and public health.
Lecture hrs = 1; lab hrs = 3

HITT 1303
Medical Terminology II
A continuation of the study of medical terms through work origin and structure, abbreviations and symbols, surgical and diagnostic procedures, and medical specialties.
Prerequisite: HITT 1305
Lecture hrs = 3; lab hrs = 0

HITT 1305
Medical Terminology I
Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties.
Lecture hrs = 3; lab hrs = 0

HITT 1341
Coding and Classification Systems
Fundamentals of coding rules, conventions, and guidelines using clinical classification systems.
Prerequisite or co-requisite: BIOL 2404
Lecture hrs = 3; lab hrs = 3
Fall semester only

HITT 1342
Ambulatory Coding
Fundamentals of ambulatory coding rules, conventions, and guidelines.
Co-requisite: HITT 1305
Lecture hrs = 3; lab hrs = 0
Spring semester only

HITT 1345
Health Care Delivery Systems
Examination of delivery systems including organization, financing, accreditation, licensure, and regulatory agencies.
Lecture hrs = 3; lab hrs = 0
Fall semester only

HITT 1353
Legal and Ethical Aspects of Health Information
Concepts of privacy, security, confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information.
Lecture hrs = 3; lab hrs = 0

HITT 1361
Clinical-Health Information 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.
Prerequisites or co-requisites: HITT 1401, 1345, 1353
Lecture hrs = 0; lab hrs = 160

HITT 1401
Health Data Content and Structure
Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.
Lecture hrs = 3; lab hrs = 3
Fall semester only

HITT 2240
Advanced Medical Billing and Reimbursement
Skill development in coding to prepare reimbursement forms in various health care settings for submission to payors.
Prerequisites: HITT 1345, 1341
Prerequisite or co-requisite: HITT 2346
Lecture hrs = 2; lab hrs = 1
Spring semester only

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.
Prerequisite: HITT 1361
Prerequisites or co-requisites: HITT 2240, 2343, 2346
Lecture hrs = 0; lab hrs = 100
HITT 2343
Quality Assessment and Performance Improvement
Study of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality management and performance improvement functions, utilization management, risk management, and medical staff data quality issues. Approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems and approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems.
Prerequisites: HITT 1345, 1401
Lecture hrs = 3; lab hrs = 0
Spring semester only

HITT 2346
Advanced Medical Coding
Advanced concepts of ICD and CPT coding rules, conventions, and guidelines in complex case studies. Investigation of government regulations and changes in health care reporting.
Prerequisites: HITT 1305, 1341
Co-requisite HITT 1342
Lecture hrs = 2; lab hrs = 3
Lab fee
Spring semester only

HPRS 2301
Pathophysiology
Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries.
Prerequisites or co-requisites: HITT 1305; BIOL 2404
Lecture hrs = 3; lab hrs = 0

HUMA 1301
Introduction to the Humanities I
An interdisciplinary, multi-perspective assessment of cultural, political, philosophical and aesthetic factors critical to the formulation of values and the historical development of the individual and of society.
Lecture hrs = 3; lab hrs = 0

HUMA 1302
Introduction to the Humanities II
An interdisciplinary, multi-perspective assessment of cultural, political, philosophical, and aesthetic factors critical to the formulation of values and the historical development of the individual and of society.
Spring semester only
Lecture hrs = 3; lab hrs = 0

HUMA 2323
World Cultures
This course is a general study of diverse world cultures. Topics include cultural practices, social structures, religions, arts, and languages.
Lecture hrs = 3; lab hrs = 0

IMED 1401
Introduction to Digital Media
This course is a survey of the theories, elements, and hardware/software components of digital media. Emphasis is on conceptualizing and producing digital media presentations.
Lecture hrs = 3; lab hrs = 3

IMED 1416
Web Design I
Instruction in web design and related graphic design issues including mark-up languages, websites, and browsers.
Lecture hrs = 3; lab hrs = 3
Lab fee

INMT 1317
Industrial Automation
A study of the applications of industrial automation systems, including identification of system requirements, equipment integration, motors, controllers and sensors. Coverage of set-up, maintenance and testing of the automated system.
Lecture hrs = 2; lab hrs = 2
Lab fee

INMT 2303
Pumps, Compressors & Mechanical Drives
A study of the theory and operations of various types of pumps and compressors. Topics include mechanical power transmission systems including gears, v-belts and chain drives.
Lecture hrs = 2; lab hrs = 3
Lab fee
INMT 2388
Internship-Manufacturing Tech
A work-based learning experience that enables the student to apply specialized occupations theory, skills and concepts. A learning plan is developed by the college and the employer.
Lecture hrs = 0; lab hrs = 9

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. Students will use and configure web browsers; use the Internet to locate, transfer and publish information; create a basic HTML document; use e-mail services; and explain issues in choosing an Internet service provider.
Lecture hrs = 3; lab hrs = 1
Lab fee

INRW 0302
Integrated Reading and Writing
Integration of critical reading and academic writing skills. The course fulfills TSI requirements for reading and/or writing. Will not meet graduation requirements.
Prerequisite: READ 0301, WRIT 0301 or placement examination
Lecture hrs = 3; lab hrs = 1

ITSC 2435
Application Problem Solving
This course focuses on the utilization of appropriate application software to solve advanced problems and generate customized solutions.
Prerequisites: ITSW 1401, ITSW 1404, ITSW 1407, ITSW 1410, and IMED 1416 and instructor approval
Lecture hrs = 3; lab hrs = 3
Lab fee

ITSC 2439
Personal Computer Help Desk Support
Diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects.
Lecture hrs = 3; lab hrs = 3
Lab fee

ITSW 1401
Introduction to Word Processing
An overview of the production of documents, tables and graphics. Students will identify word processing terminology and concepts; create technical documents; format and edit documents; use simple tools and utilities; and print documents.
Lecture hrs = 3; lab hrs = 3
Lab fee

ITSC 1404
Introduction to Spreadsheets
Instruction in the concepts, procedures and application of electronic spreadsheets. Students will identify spreadsheet terminology and concepts; create formulas and functions; use formatting features and generate charts, graphs and reports.
Lecture hrs = 3; lab hrs = 3
Lab fee

ITSW 1407
Introduction to Database
This course is an introduction to database theory and the practical applications of a database.
Lecture hrs = 3; lab hrs = 3
Lab fee
ITSW 1410
Introduction to Presentation Graphics Software
This course provides instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development.
Lecture hrs = 3; lab hrs = 3
Lab fee

KINE 1100
Varsity Basketball I (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1130
Varsity Basketball II (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Prerequisite: KINE 1100
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2100
Varsity Basketball III (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Prerequisites: KINE 1100, 1130
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2130
Varsity Basketball IV (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Prerequisites: KINE 1100, 1130, 2100
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1101
Varsity Baseball I (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1131
Varsity Baseball II (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Prerequisite: KINE 1101
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2101
Varsity Baseball III (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Prerequisites: KINE 1101, 1131
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2131
Varsity Baseball IV (Activity)
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.
Prerequisites: KINE 1101, 1131, 2100
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1102
Cheerleading (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1103
Weight Training I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1104
Beginning Racquetball (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2104
Intermediate Racquetball (Activity)
Three hours per week.
Prerequisite: KINE 1104
Lecture hrs = 0; lab hrs = 3
Lab fee
KINE 1105  
Bowling I (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2105  
Bowling II (Activity)  
Three hours per week.  
Prerequisite: KINE 1105  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1106  
Beginning Aerobics (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2106  
Intermediate Aerobics (Activity)  
Three hours per week.  
Prerequisite: KINE 1106  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1107  
Athletic Training Practicum I  
This course consists of directed practical experiences for working with athletes and the physically active population. First semester students will work toward mastery of specific competencies and proficiencies in the areas of Athletic Training: Game Preparation and Management, Taping/Wrapping and Bandaging, Athletic Training Clinic Operations, Acute Care of Injuries and Illnesses and Risk Management. Skills will be instructed under the supervision of a Licensed Athletic Trainer. Students will be required to work all home athletic events and required practices.  
Lecture hrs = 0; lab hrs = 3

KINE 1108  
Varsity Volleyball I (Activity)  
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1137  
Athletic Training Practicum II  
This course consists of directed practical experiences for working with athletes and the physically active population. Second semester students will work toward mastery of specific competencies and proficiencies in the areas of Athletic Care and Prevention of Injuries, Acute Care of Injuries and Illnesses, Risk Management, Specific Injury Management and Game Preparation and Management. Students will be required to work all home athletic events and required practices.  
Lecture hrs = 0; lab hrs = 3

KINE 2107  
Athletic Training Practicum III  
This course consists of directed practical experiences for working with athletes and the physically active population. Third semester students will work toward mastery of specific competencies and proficiencies in the areas of Basic Assessment and Evaluation, Nutrition, Specific Injury Management/Rehabilitation and Game Preparation and Management. Students will be required to work all home athletic events and required practices.  
Lecture hrs = 0; lab hrs = 3

KINE 2137  
Athletic Training Practicum IV  
This course consists of directed practical experiences for working with athletes and the physically active population. Fourth semester students will work toward mastery of specific competencies and proficiencies in the areas of Basic Assessment and Evaluation, Specific Injury Management/Rehabilitation, and Game Preparation and management. Students will be required to work all home athletic events and required practices.  
Lecture hrs = 0; lab hrs = 3

KINE 1138  
Varsity Volleyball II (Activity)  
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.  
Prerequisite: KINE 1108  
Lecture hrs = 0; lab hrs = 3  
Lab fee
KINE 2108  
Varsity Volleyball III (Activity)  
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.  
Prerequisites: KINE 1108, 1138  
Lab fee

KINE 2138  
Varsity Volleyball IV (Activity)  
Participation as a member of an intercollegiate athletic team. Approval for enrollment must be obtained from coach prior to registration.  
Prerequisites: KINE 1108, 1138, 2108.  
Lab fee

KINE 1109  
Physical Activities I (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2109  
Physical Activities II (Activity)  
Three hours per week.  
Prerequisite: KINE 1109  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1110  
Badminton (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1111  
Body Conditioning I (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2111  
Body Conditioning II (Activity)  
Three hours per week.  
Prerequisite: KINE 1111  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1112  
Recreational Games I (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2112  
Recreational Games II (Activity)  
Three hours per week.  
Prerequisite: KINE 1112  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1113  
Weight Training II (Activity)  
Three hours per week.  
Prerequisite: KINE 1103  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2103  
Weight Training III (Activity)  
Three hours per week.  
Prerequisites: KINE 1103, 1113  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2133  
Weight Training IV (Activity)  
Three hours per week.  
Prerequisites: KINE 1103, 1113, 2103  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1114  
Golf I (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 2114  
Golf II (Activity)  
Three hours per week.  
Prerequisite: KINE 1114  
Lecture hrs = 0; lab hrs = 3  
Lab fee

KINE 1115  
Self Defense (Activity)  
Three hours per week.  
Lecture hrs = 0; lab hrs = 3  
Lab fee
KINE 1116
Zumba Fitness I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2116
Zumba Fitness II (Activity)
Three hours per week.
Prerequisite: KINE 1116
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1117
Jazz - Dancercise (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1118
Dance Improvisation Techniques I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2118
Dance Improvisation Techniques II (Activity)
Three hours per week.
Prerequisite: KINE 1118
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1119
Fitness Through Walking I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2119
Fitness Through Walking II (Activity)
Three hours per week.
Prerequisite: KINE 1119
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1120
Individual & Dual Sports I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2120
Individual & Dual Sports II (Activity)
Three hours per week.
Prerequisite: KINE 1120
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1121
Archery (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1122
Outdoor Recreation I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2122
Outdoor Recreation II (Activity)
Three hours per week.
Prerequisite: KINE 1122
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1123
Snow Skiing (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1124
Karate I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2124
Karate II (Activity)
Three hours per week.
Prerequisite: KINE 1124
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1125
Horsemanship I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee
KINE 2125
Horsemanship II (Activity)
Three hours per week.
Prerequisite: KINE 1125
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1126
Shooting/Firearms I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2126
Shooting/Firearms II (Activity)
Three hours per week.
Prerequisite: KINE 1126
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1127
Casting/Angling I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2127
Casting/Angling II (Activity)
Three hours per week.
Prerequisite: KINE 1127
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1128
Running/Jogging (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1129
Physical Education Boot Camp (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1140
Jump Rope I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2140
Jump Rope II (Activity)
Three hours per week.
Prerequisite: KINE 1140
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1142
Rock Climbing I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2142
Rock Climbing II (Activity)
Three hours per week.
Prerequisite: KINE 1142
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1143
Outdoor Adventure Programs (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1144
Canoeing/Kayaking I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2144
Canoeing/Kayaking II (Activity)
Three hours per week.
Prerequisite: KINE 1144
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1145
Backcountry Expeditioning I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 2145
Backcountry Expeditioning II (Activity)
Three hours per week.
Prerequisite: KINE 1145
Lecture hrs = 0; lab hrs = 3
Lab fee
KINE 1146
Western Activities I
Physical education for students in rodeo-related activities including steer wrestling, calf roping, barrel racing and bareback riding. Enrollment may be limited by facilities and availability of stock.
Lecture hrs = 0; lab hrs = 3

KINE 1147
Western Activities II
Physical education for students in rodeo-related activities including steer wrestling, calf roping, barrel racing and bareback riding. Enrollment may be limited by facilities and availability of stock.
Prerequisite: KINE 1146
Lecture hrs = 0; lab hrs = 3

KINE 2146
Western Activities III
Physical education for students in rodeo-related activities including steer wrestling, calf roping, barrel racing and bareback riding. Enrollment may be limited by facilities and availability of stock.
Prerequisites: KINE 1146, 1147
Lecture hrs = 0; lab hrs = 3

KINE 2147
Western Activities IV
Physical education for students in rodeo-related activities including steer wrestling, calf roping, barrel racing and bareback riding. Enrollment may be limited by facilities and availability of stock.
Prerequisites: KINE 1146, 1147, 2146
Lecture hrs = 0; lab hrs = 3

KINE 1148
Yoga/Pilates I (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3

KINE 2148
Yoga/Pilates II (Activity)
Three hours per week.
Prerequisite: KINE 1148
Lecture hrs = 0; lab hrs = 3

KINE 1149
Taekwondo (Activity)
Three hours per week.
Lecture hrs = 0; lab hrs = 3
Lab fee

KINE 1164
Introduction to Physical Fitness & Sport
Cross-listed as KINE 1238 and KINE 1301
Lecture hrs = 0; lab hrs = 3

KINE 1238
Introduction to Physical Fitness & Sport
Cross-listed as KINE 1164 and KINE 1301
Lecture hrs = 0; lab hrs = 3

KINE 1301
Introduction to Physical Fitness & Sport
Orientation to the field of physical fitness and sport.
Includes the study and practice of activities and principles that promote physical fitness.
Cross-listed as KINE 1164 and KINE 1238
Lecture hrs = 3; lab hrs = 0

KINE 1304
Personal/Community Health
Investigation of the principles and practices in relation to personal and community health.
Lecture hrs = 3; lab hrs = 0

KINE 1306
First Aid
Lecture hrs = 3; lab hrs = 0

KINE 1308
Sports Officiating I
Designed to give instruction in the officiating of selected sports. The major sports covered in this course are basketball, volleyball, baseball, softball and football. Standards for officiating and rules for each sport will be included. Opportunities for student experience in officiating are provided in the college intramural program.
Lecture hrs = 3; lab hrs = 0

KINE 1336
Introduction to Recreation I
Fundamental theory and concepts of recreational activities with emphasis on programs, planning and leadership.
Lecture hrs = 3; lab hrs = 0
KINE 1337  
Introduction to Recreation II  
Fundamental theory and concepts of recreational activities with emphasis on programs, planning and leadership.  
Prerequisite: KINE 1336  
Lecture hrs = 3; lab hrs = 0

KINE 2156  
Taping and Bandaging  
This course provides the fundamental taping and bandaging techniques used in the prevention and care of athletic related injuries.  
Lecture hrs = 3; lab hrs = 0

KINE 2356  
Care and Prevention of Athletic Injuries  
Prevention and care of athletic injuries with emphasis on qualities of a good athletic trainer avoiding accidents and injuries, recognizing signs and symptoms of specific sports injuries and conditions, immediate and long-term care of injuries and administration procedures in athletic training.  
Lecture hrs = 3; lab hrs = 0

MATH 0301  
Math Skills  
Topics in mathematics such as arithmetic operations, basic algebraic concepts and notation, geometry, and real and complex number systems. Will not meet graduation requirements.  
Lecture hrs = 3; lab hrs = 2  
Lab fee

MATH 0302  
Fundamentals of Algebra  
Topics in mathematics such as arithmetic operations, basic algebraic concepts and notation, geometry, and real and complex number systems. Will not meet graduation requirements.  
Prerequisite: MATH 0301 or placement examination  
Lecture hrs = 3; lab hrs = 1  
Lab fee

MATH 0303  
Intermediate Algebra  
A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. Will not meet graduation requirements.  
Prerequisite: MATH 0302 or placement examination  
Lecture hrs = 3; lab hrs = 1  
Lab fee

MATH 1314  
College Algebra  
In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions and systems of equations using matrices. Additional topics such as sequences, series, probability and conics may be included.  
Prerequisites: TSI Math complete and high school Algebra II and geometry or MATH 0303  
Lecture hrs = 3; lab hrs = 0

MATH 1316  
Plane Trigonometry  
In-depth study and applications of trigonometry including definitions, identities, inverse functions, solutions of equations, graphing and solving triangles. Additional topics such as vectors, polar coordinates and parametric equations may be included.  
Delivered via distance learning  
Prerequisites: TSI Math complete and high school Algebra II and geometry or MATH 1314  
Lecture hrs = 3; lab hrs = 0

MATH 1324  
Mathematics for Business & Social Sciences I (Finite Math)  
The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. (The content level of MATH 1324 is expected to be at or above the level of college algebra, MATH 1314.)  
Prerequisites: TSI Math complete and 2 years of high school algebra and 1 year of geometry or MATH 1314  
Lecture hrs = 3; lab hrs = 0  
Lab fee
MATH 1325
Mathematics for Business & Social Sciences II
(Business Calculus)
This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413 - Calculus I. (The content level of MATH 1325 is expected to be below the content level of Calculus I, MATH 2413.)
Prerequisite: MATH 1314 - College Algebra or MATH 1324 - Mathematics for Business and Social Sciences.
Lecture hrs = 3; lab hrs = 0

MATH 1332
Contemporary Mathematics I
Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included.
Prerequisite: TSI Math complete
Lecture hrs = 3; lab hrs = 0

MATH 1342
Elementary Statistical Methods
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.
Prerequisite: TSI Math complete
Lecture hrs = 3; lab hrs = 0

MATH 1350
Fundamentals of Math I
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.
Recommended for Elementary Education majors
Prerequisite: Math 1314 - College Algebra or equivalent
Lecture hrs = 3; lab hrs = 0

MATH 1351
Fundamentals of Math II
Concepts of geometry, probability and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed for students who seek middle grade (4 through 8) teacher certification.
Prerequisite: Math 1350, Math 1314 - College Algebra or equivalent
Lecture hrs = 3; lab hrs = 0

MATH 2312
Pre-Calculus Math
In-depth combined study of algebra, trigonometry and other topics for calculus readiness. Fall semester only.
Prerequisites: TSI Math complete and high school Pre-Calculus or MATH 1314
Lecture hrs = 3; lab hrs = 0

MATH 2320
Differential Equations
Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, and boundary value problems; application of differential equations to real-world problems.
Prerequisite: MATH 2414
Co-requisite: MATH 2415
Lecture hrs = 3; lab hrs = 0

MATH 2413
Calculus I
Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric and transcendental functions, with an application to calculation of areas. Spring semester only
Prerequisites: TSI Math complete and high school Pre-Calculus or MATH 2312 or permission of instructor
Lecture hrs = 3; lab hrs = 3
Lab fee
MATH 2414
Calculus II
Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals.
Fall semester only
Prerequisites: TSI Math Complete and high school calculus or MATH 2413
Lecture hrs = 3; lab hrs = 3
Lab fee

MATH 2415
Calculus III
Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals and Jacobians; application of the line integral, including Green’s Theorem, Divergence Theorem and Stokes’ Theorem.
Spring semester only
Prerequisite: MATH 2414
Lecture hrs = 3; lab hrs = 3
Lab fee

MDCA 1254
Medical Assisting Credentialing Exam Review
A preparation for one of the National Commission for Certifying Agencies (NCCA) recognized credentialing exams.
Lecture hrs = 2; lab hrs = 0

MDCA 1291
Special Topics in Medical Assistant
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 designed to be repeated multiple times to improve student proficiency.
Lecture hrs = 1; lab hrs = 3

MDCA 1302
Human Disease & Pathophysiology
A study of anatomy and physiology with emphasis on human pathophysiology, including etiology, prognosis, medical treatment, signs and symptoms of common diseases of all body systems.
Lecture hrs = 3; lab hrs = 0

MDCA 1305
Medical Law and Ethics
Instruction in principles, procedures, and regulations involving legal and ethical relationships among physicians, patients, and medical assistants in ambulatory care settings.
Lecture hrs = 3; lab hrs = 0

MDCA 1310
Medical Assistant Interpersonal & Communication Skills
Emphasis on the application of basic psychological principles and the study of behavior as they apply to special populations. Topics include procedures for self-understanding and social adaptability in interpersonal communication with patients and coworkers in an ambulatory care setting.
Lecture hrs = 3; lab hrs = 0

MDCA 1317
Procedures in a Clinical Setting
Emphasis on patient assessment, examination, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, office clinical procedures, and other treatments as appropriate for ambulatory care settings.
Lecture hrs = 2; lab hrs = 2

MDCA 1343
Medical Insurance
Emphasizes medical office coding for payment and reimbursement by patient or third party payers for ambulatory care settings.
Lecture hrs = 3; lab hrs = 0

MDCA 1360
Clinical-Medical/Clinical Assistant
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 = 1; lab hrs = 8

MDCA 1421
Administrative Procedures
Medical office procedures including appointment scheduling, medical records creation and maintenance, interpersonal communications, bookkeeping tasks, coding, billing, collecting, third
party reimbursement, credit arrangements, and computer use in the medical office.

Lecture hrs = 4; lab hrs = 0

**MDCA 1448**
Pharmacology & Administration of Medications
Instruction in concepts and application of pharmacological principles. Focuses on drug classifications, principles and procedures of medication administration, mathematical systems and conversions, calculation of drug problems, and medico-legal responsibilities of the medical assistant.

Lecture hrs = 4; lab hrs = 1

**MDCA 1452**
Medical Assistant Laboratory Procedures
Application of governmental health care guidelines. Includes specimen collection and handling, quality assurance and quality control in performance of Clinical Laboratory Improvement Amendments (CLIA)-waived laboratory testing.

Lecture hrs = 3; lab hrs = 3

**MDCA 2264**
Practicum – Medical & Clinical Assistant
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

Lecture hrs = 0; lab hrs = 40

**MLAB 1167**
Practicum II (or Field Experience) – Clinical/Medical Laboratory Technician
Practical, general workplace training supported by an individualized learning plan developed by the employer, college and student.

Lecture hrs = 0; lab hrs = 7

**MLAB 1201**
Introduction to Clinical Laboratory Science
An introduction to medical laboratory science, structure, equipment and philosophy.

Lecture hrs = 2; lab hrs = 0

**MLAB 1211**
Urinalysis and Body Fluids
An introduction to the study of urine and body fluid analysis. Includes the anatomy and physiology of the kidney, physical, chemical and microscopic examination of urine, cerebrospinal fluid and other body fluids as well as quality control, quality assurance and safety.

Lecture hrs = 2; lab hrs = 1

**MLAB 1227**
Coagulation
A course in coagulation theory, procedures and practical applications. Includes quality control, quality assurance, safety and laboratory procedures which rely on commonly performed manual and/or semi-automated methods.

Lecture hrs = 2; lab hrs = 1

**MLAB 1231**
Parasitology/Mycology
A study of the taxonomy, morphology and pathogenesis of human parasites and fungi, including the practical application of laboratory procedures, quality control, quality assurance and safety.

Lecture hrs = 2; lab hrs = 1

**MLAB 1235**
Immunology/Serology
An introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions and the principles of serological procedures as well as quality control, quality assurance and safety.

Lecture hrs = 2; lab hrs = 1

**MLAB 1415**
Hematology
The study of blood cells in normal and abnormal conditions. Instruction in the theory and practical application of hematology procedures, including quality control, quality assurance, safety, manual and/or automated methods as well as blood cell maturation sequences, and normal and abnormal morphology with associated diseases.

Lecture hrs = 4; lab hrs = 1

**MLAB 2238**
Advanced Topics in Medical Laboratory Technician/Assistant
This course examines the integration of all areas of the clinical laboratory and correlates laboratory test data with diagnostic applications and pathophysiology using critical thinking skills.

Lecture hrs = 2; lab hrs = 1

**MLAB 2266**
Practicum I (or Field Experience) – Clinical/Medical Laboratory Technician
Practical, general workplace training supported by an individualized learning plan developed by the employer, college and student.

Lecture hrs = 0; lab hrs = 15
MLAB 2401
Clinical Chemistry
An introduction to the principles, procedures, physiological basis, and significance of testing performed in Clinical Chemistry. Includes quality control, reference values and safety.
Lecture hrs = 4; lab hrs = 1

MLAB 2431
Immunohematology
A study of blood antigens and antibodies. Presents quality control, basic laboratory technique and safety. Includes the principles, procedures, and clinical significance of test results in genetics, blood group systems, pre-transfusion testing, adverse effects of transfusions, donor selection, and components and hemolytic disease of the newborn.
Lecture hrs = 4; lab hrs = 1

MLAB 2434
Clinical Microbiology
Instruction in the theory, practical application and pathogenesis of clinical microbiology, including collection, quality control, quality assurance, safety, setup, identification, susceptibility testing and reporting results.
Lecture hrs = 4; lab hrs = 1

MRKG 1311
Principles of Marketing
Introduction to the marketing mix functions and process. Includes identification of consumer and organizational needs and explanation of environmental issues.
Lecture hrs = 3; lab hrs = 0

(MUAP) Applied Music
Students listed as Music Majors are required to take two 1/2-hour lessons per week in their major emphasis (vocal or instrumental). For each lesson per week, the student is required to practice one hour per day. Practice rooms are provided without charge. Students in APPLIED MUSIC wanting transfer credit must participate in one recital per semester and perform for the music faculty as a final examination. The recital will include both vocal and instrumental students. It will be presented for the public on the Panola College Campus. Private lessons will be taught as instructors are available.

MUAP 11__, 21__, 12__, 22__
Applied Music Private Lessons
The first and second digits of the course number determine freshman or sophomore level. Courses beginning with “1” indicate freshman level and courses beginning with “2” indicate sophomore level. The second digit “1” or “2” indicates the number of 1/2-hour lessons per week. The sequencing for the third and fourth digits is:

A. Instrument
   1. Strings
      a. Violin 01-04
      b. Viola 05-08
      c. Cello 09-12
      d. Bass 13-14
      e. Electric Bass 15-16
   2. Woodwind
      a. Flute 17-20
      b. Oboe 21-24
      c. Bassoon 25-28
      d. Clarinet 29-32
      e. Saxophone 33-36
   3. Brass
      a. Trumpet 37-40
      b. Horn 41-44
      c. Trombone 45-48
      d. Euphonium 49-52
      e. Tuba 53-56
   4. Percussion
   5. Guitar

B. Keyboard/Harp
   1. Organ
   2. Piano
   3. Electronic keyboard
   4. Harp
   C. Voice
   D. Improvisation
   E. Other

MUEN 1121, 1122, 2121, 2122
Concert Band
Audition required. Designed to give players an enjoyable and enlightening playing experience. Performs a wide range of music from popular selections to more advanced works for concert band. Presents concerts on campus, plays for athletic events and at various functions in the area. Inquire about college-owned instruments.
Lecture hrs = 0; lab hrs = 3
MUEN 1131, 1132, 2131, 2132
Stage Band
Open to instrumentalists with permission of the band director. Designed to give experience in “pop”, “jazz” and “modern” stage band literature. Travels in the East Texas area performing at high schools, civic functions, etc.
Lecture hrs = 0; lab hrs = 3

MUEN 1141, 1142, 2141, 2142
Chorale
The Chorale performs a wide variety of choral music while emphasizing balanced tonal blend, musical style, vocal techniques and musicianship. Membership is by approval only. The Chorale performs with area symphony orchestras and participates in community events and activities.
Lecture hrs = 0; lab hrs = 3

MUEN 1151, 1152, 2151, 2152
Chamber Singers
A small, auditioned choir specializing in serious choral literature from early Madrigals to 20th century Chamber Music. Emphasis is placed on a cappella singing and performing in languages as well as choral and vocal techniques and musicianship.
Lecture hrs = 0; lab hrs = 3

MUEN 1153, 1154, 2153, 2154
Panola Pipers
A small singing and dancing show choir specializing in entertainment. The Pipers frequently perform for service clubs, schools, hospitals, banquets and other occasions. They tour and travel extensively and are featured annually at the Texas State Fair. Membership is by audition only.
Lecture hrs = 0; lab hrs = 4

MUSI 1116
Elementary Sight Singing & Ear Training I
(Freshman)
This course covers sight singing, rhythmic, melodic and harmonic dictation within diatonic harmony. This course is required for all music majors.
Co-requisite: MUSI 1311
Lecture hrs = 0; lab hrs = 3

MUSI 1117
Elementary Sight Singing & Ear Training II
(Freshman)
This course continues in the study of sight singing, rhythmic and harmonic dictation within diatonic harmony. This course is required of all music majors.
Prerequisite: MUSI 1116
Co-requisite: MUSI 1312
Lecture hrs = 0; lab hrs = 3

MUSI 1159
Musical Theatre I
Study and performance of works from the musical theatre repertoire.
Lecture hrs = 0; lab hrs = 3
Lab fee

MUSI 1181
Piano Class I
This course is primarily for students with no piano background. It develops basic musicianship and piano skills.
Lecture hrs = 0; lab hrs = 3
Lab fee

MUSI 1182
Piano Class II
The study of piano is continued. Included are technique, harmonization, transposition, improvisation, accompanying, sight-reading and performing various styles of repertoire.
Prerequisite: MUSI 1181 or demonstrated competence approved by instructor
Lecture hrs = 0; lab hrs = 3
Lab fee

MUSI 1183
Voice Class I
This course covers basic music skills and vocal technique. It is intended for students with little or no choral experience.
Lecture hrs = 0; lab hrs = 3

MUSI 1184
Voice Class II
This course covers basic music skills and vocal technique. It is intended for students with little or no choral experience.
Lecture hrs = 0; lab hrs = 3
MUSI 1306  
**Music Appreciation**  
Understanding music through the study of cultural periods, major composers and musical elements. Illustrated with audio recordings, videotapes and live performances. This course is designed for the non-music major and is accepted as a “fine arts” requirement for students.  
*Lecture hrs = 3; lab hrs = 0*

MUSI 1307  
**Music Literature**  
This is a course for music majors on the fundamentals of music terminology and the standard instrumental and vocal forms. Works by representative composers of the major music eras are studied by means of recordings. Tools for studying/researching music history are introduced.  
*Lecture hrs = 3; lab hrs = 0*

MUSI 1311  
**Music Theory I (Freshman)**  
This course serves as an introduction to beginning part writing and the harmonic and melodic analysis of tonal music. Students will study diatonic harmony in both root position and inversion. Melodic analysis will include both harmonic and non-harmonic tones. Required of all music majors.  
*Co-requisite: MUSI 1116*  
*Lecture hrs = 3; lab hrs = 0*

MUSI 1312  
**Music Theory II (Freshman)**  
This course is a continuation of MUSI 1311. Part writing and analysis will include secondary dominants and seventh and ninth chords. Required of all music majors.  
*Prerequisite: MUSI 1311*  
*Co-requisite: MUSI 1117*  
*Lecture hrs = 3; lab hrs = 0*

MUSI 2116  
**Advanced Sight Singing & Ear Training I (Sophomore)**  
This course covers sight-singing, rhythmic, melodic, rhythmic and harmonic dictation within diatonic harmony. Chromaticism and twentieth century techniques are introduced. Required of all music majors.  
*Prerequisite: MUSI 1117*  
*Co-requisite: MUSI 2311*  
*Lecture hrs = 0; lab hrs = 3*

MUSI 2117  
**Advanced Sight Singing & Ear Training II (Sophomore)**  
This course continues sight-singing, rhythmic, melodic, rhythmic and harmonic dictation within diatonic harmony. Chromaticism and twentieth century techniques are further explored. Required of all music majors.  
*Prerequisite: MUSI 2116*  
*Co-requisite: MUSI 2312*  
*Lecture hrs = 0; lab hrs = 3*

MUSI 2159  
**Musical Theater II**  
Study and performance of works from the musical theater repertoire.  
*Lecture hrs = 0; lab hrs = 3*  
*Lab fee*

MUSI 2181  
**Piano Class III**  
Course covers functional keyboard skills, including harmonization, sight-reading, accompanying styles, improvisation, technical exercises and ensemble repertoire suitable for the intermediate student. The lab, designated for the music major preparing for the piano proficiency exam, is also open to any interested student.  
*Prerequisite: MUSI 1182 or evidence of intermediate piano skills*  
*Lecture hrs = 0; lab hrs = 3*  
*Lab fee*

MUSI 2182  
**Piano Class IV**  
This course is a continuation of functional keyboard skills in MUSI 2181 with emphasis on advanced harmonization, technical skills and sight-reading.  
*Prerequisite: MUSI 2181 or evidence of intermediate piano skills*  
*Lecture hrs = 0; lab hrs = 3*  
*Lab fee*
MUSI 2311  
Music Theory III (Sophomore) 
Continuation of MUSI 1311 and MUSI 1312 with advanced harmonic part-writing. Study extends to acoustics, transposition, modulation-altered chords, secondary dominants and secondary 7th. Harmonic analysis based on these concepts is added. Two hours per week of ear training lab work will be continued. Required for all music majors.  
Prerequisite: MUSI 1311 & MUSI 1312  
Lecture hrs = 3; lab hrs = 2  
Lab fee 

MUSI 2312  
Music Theory IV (Sophomore)  
Continuation of MUSI 1311 and MUSI 1312 with advanced harmonic part-writing. Study extends to acoustics, transposition, modulation, altered chords, secondary dominants and secondary 7th. Harmonic analysis based on these concepts is added. Two hours per week of ear training lab work will be continued. Required for all music majors.  
Lecture hrs = 3; lab hrs = 2  
Lab fee 

NCBI 0101  
Non-Course Based Integrated Reading and Writing  
Integration of critical reading and academic writing skills. Successful completion of this intervention fulfills TSI requirements for reading and/or writing.  
Prerequisite: Placement examination or permission of instructor  
Lecture hrs = 0; lab hrs = 1 

NCBM 0101  
Non-Course Based Mathematics  
Topics in mathematics such as arithmetic operations, basic algebraic concepts and notation, geometry, and real and complex number systems.  
Prerequisite: Placement examination or permission of instructor  
Lecture hrs = 0; lab hrs = 1 

NCBM 0201  
Non-Course Based Intermediate Algebra  
A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.  
Prerequisite: Placement examination or permission of instructor  
Lecture hrs = 0; lab hrs = 2 

NURA 1301  
Nurse Aide for Health Care  
Preparation for entry level nursing assistants to achieve a level of knowledge, skills and abilities essential to provide basic care to residents of long-term care facilities. Topics include resident’s rights, communication, safety, observation, reporting and assisting residents in maintaining basic comfort and safety. Emphasis on effective interaction with members of the health care team.  
Lecture hrs = 2; lab hrs = 3 

OSHT 1220  
Energy Industrial Safety  
An overview for industrial workers of state/federal regulations and guidelines which require industrial safety training. Topics include the 29 CFR, 1910, 1926 and National Fire Protection Association (NFPA) 70E standards such as confined space entry, emergency action, lock out/tag out, arc flash, and other work related subjects.  
Lecture hrs = 1; lab hrs = 3  
Lab fee 

OSHT 1301  
Introduction to Safety & Health  
An introduction to the basic concepts of safety and health.  
Lecture hrs = 3; lab hrs = 1  
Lab fee 

OTHA 1360  
Clinical III  
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.  
Prerequisites: OTHA 2261, 2301  
Co-requisites: OTHA 1349, 2402  
Lecture hrs = 0; lab hrs = 9  
Additional fee 

OTHA 1341  
Occupational Performance from Birth through Adolescence  
Study of the occupational performance of newborns through adolescents. Includes frames of reference, assessment/evaluation tools and techniques and intervention strategies specific to this population.  
Prerequisites: OTHA 1405, 1409, 1415  
Co-requisites: OTHA 2260, 2301  
Lecture hrs = 2; lab hrs = 3  
Lab fee
OTHA 1349
Occupational Performance of Adulthood
Study of occupational performance of adults. Includes frames of reference, assessment/evaluation tools and techniques and intervention strategies specific to this population.
Prerequisites: OTHA 2235, 2261
Co-requisites: OTHA 1360, 2402
Lecture hrs = 2; lab hrs = 2
Additional fee

OTHA 1405
Principles of Occupational Therapy
Introduction to occupational therapy including the historical development and philosophy. Emphasis on the roles of the occupational therapy assistant. Topics include occupation in daily life; education and functions; occupational therapy personnel; current health care environment; and moral, legal and ethical issues.
Co-requisites: OTHA 1409, 1415, PSYC 2314
Lecture hrs = 2; lab hrs = 5
Additional fee

OTHA 1409
Human Structure and Function in Occupational Therapy
Study of the biomechanics of human motion. Emphasis on the musculoskeletal system including skeletal structure, muscles and nerves and biomechanical assessment procedures.
Co-requisites: OTHA 1405, 1415, PSYC 2314
Lecture hrs = 2; lab hrs = 4
Lab fee

OTHA 1415
Therapeutic Use of Occupations or Activities I
Explores various occupations or activities used as therapeutic interventions in Occupational Therapy. Emphasizes awareness of activity demands, contexts, adapting, grading and safe implementation of occupations or activities.
Co-requisites: OTHA 1405, 1409, PSYC 2314
Lecture hrs = 3; lab hrs = 2
Lab fee

OTHA 2235
Health Care Management in Occupational Therapy
Explores the roles of the occupational therapy assistant in health care delivery. Emphasis on documentation, occupational therapy standards and ethics, health care team role delineation and management.
Prerequisites: OTHA 1341, 2260, 2301
Co-requisites: OTHA 2261
Lecture hrs = 2; lab hrs = 0
Additional fee

OTHA 2260
Clinical I
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.
Prerequisite: OTHA 1405, 1409, 1415
Co-requisites: OTHA 1341, 2301
Lecture hrs = 0; lab hrs = 8
Additional fee

OTHA 2261
Clinical II
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.
Prerequisite: OTHA 1341, 2260, 2301
Co-requisite: OTHA 2235
Lecture hrs = 0; lab hrs = 8
Additional fee

OTHA 2301
Pathophysiology in Occupational Therapy
Study of the pathology and general health management of diseases and injuries across the life-span encountered in occupational therapy treatment settings. Topics include etiology, symptoms and the physical and psychological reactions to diseases and injuries.
Prerequisites: OTHA 1405, 1409, 1415
Co-requisites: OTHA 1341, 2260
Lecture hrs = 3; lab hrs = 1
Additional fee

OTHA 2366
Practicum I (8 weeks)
Practical, general, workplace training supported by an individualized learning plan developed by the employer, college and student.
Prerequisite: OTHA 1349, 1360, 2402
Lecture hrs = 0; lab hrs = 21
Additional fee
**OTHA 2367**
Practicum II (8 weeks)
Practical, general, workplace training supported by an individualized learning plan developed by the employer, college and student.
Prerequisite: OTHA 2366
Lecture hrs = 0; lab hrs = 21
Additional fee

**OTHA 2402**
Therapeutic Use of Occupations or Activities II
Continuation of OTHA 1315. Emphasis on advanced techniques and applications used in traditional and non-traditional practice settings.
Prerequisite: OTHA 2235, 2261
Corequisites: OTHA 1349, 1360
Lecture hrs = 3; lab hrs = 2
Lab fee

**PHYS 1401**
College Physics I
An introductory course in physics for all students. Concepts and models are developed to explain topics in mechanics, including motion, force and energy for systems ranging from the microscopic to the astronomical. Appropriate for students studying for pre-medical degrees, for education majors and for students needing background basics for engineering. Not offered every semester
Prerequisite: TSI Math and Reading Complete and a background in algebra and trigonometry required
Lecture hrs = 3; lab hrs = 3
Lab fee

**PHYS 1402**
College Physics II
A second semester of introductory algebra-based physics. Concepts and models are developed to explain topics in electricity, waves, optics and modern physics.
Not offered every semester
Prerequisite: PHYS 1401
Lecture hrs = 3; lab hrs = 3
Lab fee

**PHYS 1403**
Stars and Galaxies (Astronomy)
Study of the solar system, stars and galaxies.
Lecture hrs = 3; lab hrs = 3
Lab fee

**PHYS 1404**
Solar System
Study of the sun and its solar system, including its origin.
Lecture hrs = 3; lab hrs = 3
Lab fee

**PLAB 1223**
Phlebotomy
Skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology.
Lecture hrs = 2; lab hrs = 1

**POFI 1449**
Spreadsheets
Skill development in concepts, procedures and application of spreadsheets. Identify spreadsheet terminology and concepts; calculate data using formulas and functions; create and modify workbooks; insert graphics; generate charts and reports; and create and use special functions.
Lecture hrs = 3; lab hrs = 3
Lab fee

**POFI 2401**
Word Processing
Word processing software focusing on business applications. Apply basic and advanced formatting skills and special functions to produce documents.
Lecture hrs = 3; lab hrs = 3
Lab fee

**POFI 2431**
Desktop Publishing
This course is an in-depth coverage of desktop publishing terminology, text editing and use of design principles. Emphasis on layout techniques, graphics, multiple page displays and business applications.
Prerequisite: POFT 1429 or POFT 2401 or approval of instructor
Lecture hrs = 3; lab hrs = 3
Lab fee
POFT 1301
Business English
Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. The student will apply the basic rules of grammar, spelling, capitalization, number usage and punctuation; utilize terminology applicable to technical and business writing; develop proofreading and editing skills; and write effective sentences and paragraphs for business applications.
Lecture hrs = 3; lab hrs = 0

POFT 1319
Records and Information Management I
Introduction to basic records and information management systems including manual and electronic filing. Student identify the stages in the life cycle of a record; file and retrieve records using filing systems; and differentiate between manual and electronic filing.
Lecture hrs = 3; lab hrs = 0

POFT 1321
Business Math
Fundamentals of business mathematics including analytical and problem-solving skills for critical thinking. Students solve business math problems.
Lecture hrs = 2; lab hrs = 4

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 = 2; lab hrs = 4
Lab fee

POFT 2301
Intermediate Keyboarding
A continuation of keyboarding skills in document formatting, speed and accuracy. Emphasis on proofreading, editing, following instructions and keying documents from various copy.
Prerequisite: POFT 1429 or approval of instructor
Lecture hrs = 2; lab hrs = 4
Lab fee

POFT 2312
Business Correspondence and Communication
Development of writing and presentation skills to produce effective business communications. Students create effective business documents, evaluate business documents, and apply ethical communication practices.
Prerequisite: ENGL 1301 or POFT 1301 and POFT 1429 or POFT 2401
Lecture hrs = 3; lab hrs = 0

PSYC 2301
General Psychology
A study of human behavior with special emphasis on motivation, learning and cognition, personality, human development, individual difference, maladaptive disorder and major psychotherapies.
Prerequisite: TSI Reading complete
Lecture hrs = 3; lab hrs = 0

PSYC 2314
Lifespan Growth & Development
Study of the physical, intellectual, personality and social development of the individual from prenatal and birth through maturity.
Prerequisite: TSI Reading complete and PSYC 2301
Lecture hrs = 3; lab hrs = 0

PSYC 2315
Psychology of Human Adjustment
Discussion of psychological adjustment and its background in personal-social relationships.
Prerequisite: PSYC 2301
Lecture hrs = 3; lab hrs = 0

PSYC 2319
Social Psychology
This is a survey course, focusing on the interrelationships between individuals and the social environment, concentrating on critical assessment of interpersonal behavior and familiarizing students with the psychology of human interaction. Students examine the dynamics of interpersonal influence and critical assessment of social factors in diverse contexts. Topics include: aggression, attitudes, gender, prejudice, interpersonal attraction, romantic love and mate selection, personal relationships, intimacy, commitment and marriage.
Recommended, not required: PSYC 2301, SOCI 1301
Lecture hrs = 3; lab hrs = 0
PSYT 1391
Special Topics in Developmental and Child Psychology
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.
For students interested in a degree at Stephen F. Austin State University in Rehabilitation Services
Lecture hrs = 3; lab hrs = 0

PRT 1270
Energy Sector Math and Computer Skills
Computer and math applications that are used in the petroleum industry will be discussed.
Lecture hrs = 1; lab hrs = 3
Lab fee

PRT 1275
Petroleum Regulations
Regulatory requirements and structures associated with the petroleum industry.
Lecture hrs = 1; lab hrs = 3
Lab fee

PRT 1312
Petroleum Regulations
Regulatory requirements and structures associated with the petroleum industry. This course also serves as the Capstone for the program and will contain material covered in the program along with an end of program exam.
Lecture hrs = 3; lab hrs = 1

PRT 1317
Natural Gas Processing I
An overview of natural gas processing operations. Topics include fundamentals of gas processing, the scientific principles and how they apply to the process, processing equipment, and procedures.
Lecture hrs = 2; lab hrs = 2

PRT 1324
Petroleum Instrumentation
Study of instruments, instrument systems, terminology, process variables, and control loops as used in a petroleum environment.
Lecture hrs = 2; lab hrs = 4
Lab fee

PRT 2170
Natural Gas Production
An overview of the aspects of natural gas and oil production including various aspects of hydrocarbon production, processing equipment, and gas compression/transportation systems.
Lecture hrs = 0; lab hrs = 3
Lab fee

READ 0301
Reading Skills
Development of reading and higher order thinking skills necessary for college readiness. Will not meet graduation requirements.
Lecture hrs = 3; lab hrs = 0

RNSG 1108
Dosage Calculations for Nursing
Read, interpret, and solve dosage calculation problems. This course lends itself to either a blocked or integrated approach.
Lecture hrs = 1; lab hrs = 0

RNSG 1125
Professional Nursing Concepts I
Introduction to professional nursing concepts and exemplars within the professional nursing roles: member of profession, provider of patient-centered care, patient safety advocate, and member of the health care team. Content includes clinical judgment, communication, ethical-legal, evidenced-based practice, health promotion, health information technology, patient-centered care, patient education, professionalism, safety, and team/collaboration. Emphasizes role development of the professional nurse. This course lends itself to a concept-based approach.
Prerequisite: Acceptance into the ADN Program
Co-requisites: RNSG 1430, 1128, 1216, 1160
Lecture hrs = 1; lab hrs = 0

RNSG 1126
Professional Nursing Concepts II
Expanding professional nursing concepts and exemplars within the professional nursing roles. Applying concepts of clinical judgment, ethical-legal, evidence-based practice, patient-centered care, professionalism, safety, and team/collaboration to the exemplars presented in the Health Care Concepts I course. Introduces concepts of leadership and management. Emphasizes role development of the
professional nurse. This course lends itself to a concept-based approach.
Prerequisites: RNSG 1430, 1128, 1216, 1125, 1160
Co-requisites: RNSG 2261, 1533
Lecture hrs = 1; lab hrs = 0

RNSG 1128
Introduction to Health Care Concepts
An introduction to concept-based learning with emphasis on selected pathophysiological concepts with nursing applications. Concepts include acid-base balance, fluid and electrolytes, immunity, gas exchange, perfusion, metabolism, coping, and tissue integrity. This course lends itself to a concept-based approach.
Prerequisite: Acceptance into the ADN Program
Co-requisites: RNSG 1430, 1216, 1125, 1160
Lecture hrs = 1; lab hrs = 0

RNSG 1160
Clinical – Registered Nurse
Expanding professional nursing concepts and exemplars within the professional nursing roles. Applying concepts of clinical judgment, ethical-legal, evidence-based practice, patient-centered care, professionalism, safety, and team/collaboration to the exemplars presented in the Health Care Concepts II course. Introduces concepts of leadership and management. Emphasizes role development of the professional nurse. This course lends itself to a concept-based approach.
Prerequisite: Acceptance into the ADN Program
Co-requisites: RNSG 1430, 1128, 1216, 1125
Lecture hrs = 0; lab hrs = 4

RNSG 1161, 1162
Clinical (RN training) CR H=1
A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement are the responsibility of the College faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.
Additional fees

RNSG 1193
Special Topics in Nursing (Prescribed Elective)
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.
Prerequisite: Good standing in ADN program and/or approval of instructor
Lecture hrs = 1; lab hrs = 0

RNSG 1216
Professional Nursing Competencies
Development of professional nursing competencies in the care of patients throughout the lifespan. Emphasizes psychomotor skills and clinical reasoning in the performance of nursing procedures related to the concepts of: clinical judgment, comfort, elimination, fluid and electrolytes, nutrition, gas exchange, safety, functional ability, immunity, metabolism, mobility, and tissue integrity. Includes health assessment and medication administration. This course lends itself to a concept-based approach.
Prerequisite: Acceptance into the ADN Program
Co-requisites: RNSG 1430, 1128, 1125, 1160
Lecture hrs = 0; lab hrs = 8

RNSG 1430
Health Care Concepts I
In-depth coverage of foundational health care concepts with application through selected exemplars. Concepts include comfort, diversity, elimination, functional ability, human development, mobility, nutrition, sensory perception, sleep, thermoregulation, grief, and tissue integrity. Emphasizes development of clinical judgment skills in the beginning nurse. This course lends itself to a concept-based approach.
Prerequisite: Acceptance into the ADN Program
Co-requisites: RNSG 1216, 1128, 1125, 1160
Lecture hrs = 3; lab hrs = 4
Lab fee

RNSG 1533
Health Care Concepts II
In-depth coverage of health care concepts with application through selected exemplars. Concepts include acid-base balance, coping, clotting, cognition, fluid and electrolytes, gas exchange, immunity, metabolism, nutrition, comfort, and perfusion. Provides continuing opportunities for development of clinical judgment skills. This course lends itself to a concept-based approach.
Prerequisites: RNSG 1430, 1128, 1216, 1125, 1160
Co-requisites: RNSG 1126, 2261
Lecture hrs = 4; lab hrs = 4
**RNSG 2230**  
Professional Nursing: Review and Licensure Preparation  
Review of concepts required for licensure examination and entry into the practice of professional nursing. Includes application of National Council Licensure Examination for Registered Nurses (NCLEX-RN) test plan, assessment of knowledge deficits and remediation. This course lends itself to either a blocked or integrated approach.  
Prerequisites: RNSG 1263, 1343, 2208, 2261  
Lecture hrs = 2; lab hrs = 0

**SCIT 1270**  
Petroleum Chemistry  
The overall purpose of this course is to provide students with an understanding of Petroleum Chemistry and the skills needed for successful employment. The course is primarily focused on the oil and gas sector of the petroleum industry. The skills include knowledge of chemical composition, properties of petroleum (oil and gas), petroleum products and alternative fuels. Hands on skills, behaviors and attitudes are demonstrated in the laboratory and/or in the oil-gas field (work site), as testing techniques are taught, developed and mastered. The team oriented learning environment in the laboratory provides further professional development for the student. The course will also review the chemical basis for the most important production processes.  
Lecture hrs = 1; lab hrs = 4

**SGNL 1301**  
Beginning American Sign Language I  
Introduction to American Sign Language covering finger spelling, vocabulary and basic sentence structure in preparing individuals to interpret oral speech for the hearing impaired.  
Lecture hrs = 3; lab hrs = 0

**SGNL 1302**  
Beginning American Sign Language II  
Continuation of SGNL 1301.  
Prerequisite: SGNL 1301  
Lecture hrs = 3; lab hrs = 0

**SOCI 1301**  
Introductory Sociology  
The scientific study of human society, including ways in which groups, social institutions, and individuals affect each other. Causes of social stability and social change are explored through the application of various theoretical perspectives, key concepts, and related research methods of sociology. Analysis of social issues in their institutional context may include topics such as social stratification, gender, race/ethnicity, and deviance.  
Lecture hrs = 3; lab hrs = 0

**SOCI 2301**  
Marriage & the Family  
Sociological and theoretical analysis of the structures and functions of the family, the varied cultural patterns of the American family, and the relationships that exist among the individuals within the family, as well as the relationships that exist between the family and other institutions in society.  
Lecture hrs = 3; lab hrs = 0

**SPAN 1300**  
Beginning Spanish Conversation I  
Basic practice in comprehension and production of the spoken language.  
Lecture hrs = 3; lab hrs = 0

**SPAN 1411**  
Beginning Spanish I  
Basic Spanish language skills in listening, speaking, reading and writing within a cultural framework. Students will acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the beginner level.  
Lecture hrs = 3; lab hrs = 2  
Lab fee

**SPAN 1412**  
Beginning Spanish II  
Continued development of basic Spanish language skills in listening, speaking, reading and writing within a cultural framework. Students acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the high beginner to low intermediate level.  
Prerequisite: SPAN 1411 or high school Spanish  
Lecture hrs = 3; lab hrs = 2  
Lab fee
SPAN 2311  
Intermediate Spanish I  
The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation and interpretation of the cultures of the Spanish-speaking world.  
Prerequisites: SPAN 1411-1412 and/or two years of high school Spanish  
Lecture hrs = 3; lab hrs = 0

SPAN 2312  
Intermediate Spanish II  
The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation and interpretation of the cultures of the Spanish-speaking world.  
Prerequisite: SPAN 2311 or the equivalent  
Lecture hrs = 3; lab hrs = 0

SPCH 1144, 1145, 2144, 2145  
Forensic Activities  
Open to all students in intercollegiate competitive speaking, debate, oral interpretation and interpreter’s theater. Research and practice.  
Lecture hrs = 0; lab hrs = 3

SPCH 1311  
Introduction to Speech Communication  
Theories and practices of communication in interpersonal, small group and public speech.  
Lecture hrs = 3; lab hrs = 0

SPCH 1315  
Public Speaking  
Research, composition, organization, delivery and analysis of speeches for various purposes and occasions.  
Lecture hrs = 3; lab hrs = 0

SPCH 1318  
Interpersonal Communication  
Theories and exercises in verbal and nonverbal communication with focus on interpersonal relationships.  
Lecture hrs = 3; lab hrs = 0

SPCH 1321  
Business and Professional Speaking  
Theories and practice of speech communication as applied to business and professional situations.  
Lecture hrs = 3; lab hrs = 0

SPCH 1342  
Voice and Diction  
Physiology and mechanics of effective voice production with practice in articulation, pronunciation and enunciation.  
Lecture hrs = 3; lab hrs = 0

SPCH 2301  
Introduction to Technology and Human Communication  
A survey of emerging interactive communication technologies and how they influence human communication, including interpersonal, group decision-making and public and private contexts.  
Lecture hrs = 3; lab hrs = 0

SPCH 2333  
Discussion & Small Group Communication  
Discussion and small group theories and techniques as they relate to group process and interaction.  
Lecture hrs = 3; lab hrs = 0

SPCH 2341  
Oral Interpretation  
Theories and techniques in analyzing and interpreting literature. Preparation and presentation of various literary forms.  
Lecture hrs = 3; lab hrs = 0

SPNL 1101  
Health Care Spanish (ADN Majors)  
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 = 1; lab hrs = 0

SPNL 1201  
Health Care Spanish (OTA Majors)  
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 = 2; lab hrs = 0
TECA 1311
Educating Young Children
An introduction to the education of the young child, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Assessment of Educational Progress position statement related to developmentally appropriate practices for children from birth through age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations; and the course includes a minimum of 16 hours of field experiences.
Lecture hrs = 3; lab hrs = 0

TECA 1318
Wellness of the Young Child
A study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness, and safety practices. Focuses on local and national standards and legal implications of relevant policies and regulations. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Assessment of Educational Progress position statement related to developmentally appropriate practices for children from birth to age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. Course includes a minimum of 16 hours of field experiences.
Lecture hrs = 3; lab hrs = 0

TECA 1354
Child Growth and Development
A study of the physical, emotional, social and cognitive factors impacting growth and development of children through adolescence. May not transfer to Teacher Education certification programs—required for Early Childhood Professions Certificate—see advisor.
Contact hours per semester: 48
Lecture hrs = 3; lab hrs = 0

TECM 1301
Industrial Mathematics
Math skills applicable to industry occupations. Includes fractions, decimal manipulations, measurements, percentages and problem solving techniques for equations and ratio/proportion applications.
Lecture hrs = 3; lab hrs = 0

VNSG 1219
Leadership and Professional Development
Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multidisciplinary health care team, professional organizations, and continuing education.
Prerequisites: VNSG 1306, 1409, 1234, 1231, 1261, 1360
Lecture hrs = 2; lab hrs = 0

VNSG 1226
Gerontology
Overview of the physical, psychosocial and cultural aspects of the aging process. Addresses disease processes of aging, exploration of perceptions toward care of the older adult.
Lecture hrs = 2; lab hrs = 0

VNSG 1230
Maternal-Neonatal Nursing
A study of the biological, psychological and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Utilization of the nursing process in the assessment and management of the childbearing family. Topics include physiological changes related to pregnancy, fetal development and nursing care of the family during labor and delivery and the puerperium.
Lecture hrs = 2; lab hrs = 0

VNSG 1231
Pharmacology
Fundamentals of medications and their diagnostic, therapeutic, and curative effects. Includes nursing interventions utilizing the nursing process.
Prerequisites: VNSG 1405, 1423, 1304, 1400, 1160, 1161
Lecture hrs = 2; lab hrs = 1

286
VNSG 1234
Pediatrics
Study of the care of the pediatric patient and family during health and disease. Emphasis on growth and development needs utilizing the nursing process.
Prerequisites: VNSG 1405, 1423, 1304, 1400, 1160, 1161
Lecture hrs = 2; lab hrs = 1

VNSG 1261
Clinical I – Licensed Practical/Vocational 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.
Pre- or co-requisites: VNSG 1231, 1304, 1400
Lecture hrs = 0; lab hrs = 10

VNSG 1304
Foundations in 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.
Lecture hrs = 3; lab hrs = 0

VNSG 1360
Clinical II – Licensed Practical/Vocational 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.
Pre- or co-requisites: VNSG 1234, 1304, 1400
Lecture hrs = 0; lab hrs = 13

VNSG 1400
Nursing in Health and Illness I
Introduction to general principles of growth and development, primary health care needs of the patient across the life span, and therapeutic nursing interventions.
Lecture hrs = 3; lab hrs = 2

VNSG 1409
Nursing in Health and Illness II
Introduction to health problems requiring medical and surgical interventions.
Prerequisites: VNSG 1405, 1423, 1304, 1400, 1160, 1161
Lecture hrs = 2; lab hrs = 6

VNSG 2410
Nursing in Health and Illness III
Continuation of Nursing in Health and Illness II. Further study of medical-surgical health problems of the patient including concepts such as mental illness. Incorporates knowledge necessary to make the transition from student to graduate vocational nurse.
Prerequisites: VNSG 1306, 1409, 1234, 1231, 1261, 1360
Lecture hrs = 1; lab hrs = 5

VNSG 2260
Clinical III – Licensed Practical/Vocational 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.
Pre- or co-requisites: VNSG 1231, 1234, 1261, 1304, 1360, 1400, 1509
Lecture hrs = 0; lab hrs = 10

VNSG 2360
Clinical IV – Licensed Practical/Vocational 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.
Prerequisites: VNSG 1231, 1234, 1261, 1304, 1360, 1400, 1509
Lecture hrs = 0; lab hrs = 14

WDWK 1270
Beginning Woodworking
The first course in a logical sequence of courses in which students learn to build wood projects using dados, rabbets, and tongue & groove joints.
Lecture hrs = 2; lab hrs = 3
Lab fee

WDWK 2270
Intermediate Woodworking
The second course in a sequence of courses that allows students to refine skills required to build quality furniture.
Lecture hrs = 1; lab hrs = 3
Lab fee

WLDG 1170
Welding Safety
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.  
Lecture hrs = 1; lab hrs =3  
Lab fee

**WLDG 1270**  
Basic Layout and Fabrication  
A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction. Instruction on welding symbols, measuring instruments and tools for fabricating projects and fabrication terminology.  
Lecture hrs = 1; lab hrs = 3  
Lab fee

**WLDG 1307**  
Introduction to Welding Using Multiple Processes  
Basic welding processes. Includes oxy-fuel welding (OFW) and cutting, shielded metal arc welding (SMAW), gas metal arc (GMAW) and gas tungsten arc welding (GTAW).  
Lecture hrs = 2; lab hrs = 2

**WLDG 1313**  
Introduction to Blueprint Reading for Welder  
A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production.  
Lecture hrs = 3; lab hrs = 0

**WLDG 1412**  
Introduction to Flux Cored Arc Welding (FCAW)  
An overview of terminology, safety procedures, and equipment set-up. Practice in performing T-joints, lap joints, and butt joints using FLUX Cored Arc Welding (FCAW) equipment.  
Lecture hrs = 3; lab hrs = 2

**WLDG 1417**  
Layout & Fabrication  
A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction.  
Lecture hrs = 3; lab hrs = 0

**WLDG 1421**  
Introduction to Welding Fundamentals  
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 = 2

**WLDG 1423**  
Welding, Safety Tools & 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.  
Lecture hrs = 4; lab hrs = 0

**WLDG 1430**  
Introduction to Gas Metal Arc Welding (GMAW)  
A study of the principles of gas metal arc welding, setup and use of Gas Metal Arc Welding (GMAW) equipment and safe use of tools and equipment. Instruction in various joint designs.  
Lecture hrs = 3; lab hrs = 2

**WLDG 1434**  
Introduction to Gas Tungsten Arc Welding (GTAW)  
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 = 4; lab hrs = 0

**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 = 2

**WLDG 1453**  
Intermediate Layout and Fabrication  
An intermediate course in layout and fabrication. Includes design and production of shop layout and
fabrication. Emphasis placed on symbols, blueprints, and written specifications.

*Lecture hrs = 3; lab hrs = 2*

**WLDG 1457**

**Intermediate Shielded Metal Arc Welding (SMAW)**
A study of the production of various fillets and groove welds. Preparation of specimens for testing in all test positions.

*Lecture hrs = 3; lab hrs = 2*

**WLDG 2406**

**Intermediate Pipe Welding**
A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Welds will be done using various positions. Topics covered include electrode selection, equipment setup, and safe shop practices.

*Lecture hrs = 3; lab hrs = 2*

**WLDG 2443**

**Advanced Shielded Metal Arc Welding (SMAW)**
Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc processes with open V-groove joints in all positions.

*Lecture hrs = 3; lab hrs = 2*

**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 = 2*

**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 = 2*

**WRIT 0301**

**Writing Skills**
Development of college-level writing focusing on idea generation, drafting, organization, revision, and utilization of standard English. Will not meet graduation requirements.

*Lecture hrs = 3; lab hrs = 0*