BCIS 2390 Systems Analysis & Design
3 Hours (3-0)
Analysis of business information needs and preparation of specifications and requirements for appropriate data system solutions. Includes instruction in information requirements analysis, specification development and writing, prototype evaluation, and network application interfaces.

BIOL 1322 Nutrition & Diet Therapy
3 Hours (3-0)
Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications. May not be used as a core science requirement.

BIOL 1406 Biology for Science Majors I
4 Hours (3-3)
This general biology course (first semester) is devoted to principles shared by all organisms. These principles are cell biology, energy, genetics, evolution, and ecology.

BIOL 1407 Biology for Science Majors II
4 Hours (3-3)
This general biology course (second semester) is devoted to particular organisms. Much of the emphasis is on vertebrate biology. The principles studied are diversity, plant biology, animal biology, and behavior. Dissection required. Prerequisite: BIOL 1406.

BIOL 1408 Introduction to Biology I
4 Hours (3-3)
Fundamental principles of living organisms including physical and chemical properties of life, organization, and function. Concepts of reproduction, genetics, and the scientific method are included. This course is suitable as a required lab sciences for non-biology majors and may not be substituted for BIOL 1406.

BIOL 1409 Introduction to Biology II
4 Hours (3-3)
Fundamental principles of living organisms including evolutionary adaptation and classification. Concepts of evolution, ecology, and the scientific method are included. This course is suitable as a required lab science for non-biology majors and may not be substituted for BIOL 1407. Prerequisite: BIOL 1408

BIOL 1424 Systematic Botany
4 Hours (3-3)
Introduction to the identification, classification, and evolutionary relationships of vascular plants with emphasis on flowering plants. Includes the importance of herbaria, collection techniques, and the construction and use of taxonomic keys.

BIOL 2289 Academic Cooperative
2 Hours (2-3)
An instructional program designed to integrate on-campus study with practical hands-on work experience in the biological sciences/life sciences. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of living organisms and their systems. Prerequisite: BIOL 1406 and 1407 or BIOL 2401 and 2402.

BIOL 2106 Environmental Biology Lab
1 Hour (0-3)
This course is designed to enable students to become proficient in human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems. Co-requisite: BIOL 2306.

BIOL 2306 Environmental Biology
3 Hours (3-0)
This course is designed to enable students to become proficient in human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems. Co-requisite: BIOL 2106.

BIOL 2401 Anatomy and Physiology I
4 Hours (3-4)
This course is designed to produce student proficiency in body organization, the skeletal system, the muscular system, and the nervous system. Laboratory work will include dissection of a mammal. Dissection required. Prerequisite: BIOL 1406 highly recommended.

BIOL 2402 Anatomy and Physiology II
4 Hours (3-4)
This course is designed to enable students to become proficient in the following biological systems: the circulatory system with special emphasis on the blood and heart, the respiratory system, the digestive system, and the reproductive system. Laboratory work will include dissection of a mammal. Dissection required. Prerequisite: Requires “C” or greater in BIOL 2401.

BIOL 2416 Genetics
4 Hours (3-4)
This course is designed to enable students to become familiar with the following topics in genetics: the physical basis and the chemical basis of heredity, the laws of heredity and variation, mitotic and meiotic cell division, and the study of human diseases that are caused by genetic defects. Prerequisite: BIOL 1406 and 1407 or BIOL 2401 and 1402.

BIOL 2421 Microbiology for Science Majors
4 Hours (3-4)
The study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology. Prerequisite: BIOL 1406 or BIOL 2401 or CHEM 1405 or CHEM 1411 or permission of instructor.

BMGT 1301 Supervision
3 Hours (3-0)
The role of the supervisor. Includes managerial functions as applied to leadership, counseling, motivation, and human relations skills. Students will explain the role, characteristics, and skills of a supervisor; identify the principles of management at the supervisory level; identify and discuss the human relations skills necessary for supervision; explain motivational techniques; and cite examples of how motivational techniques can be used by a supervisor in a working environment.

BMGT 1305 Communications in Management
3 Hours (3-0)
Basic theory and processes of communication skills necessary for the management of an organization’s workforce. Students will explain the communication process; identify and remedy major communication barriers; describe how communication contributes to effective management.
DFTG 2319 Intermediate Computer Aided Drafting
3 Hours (2-4)
A continuation of practices and techniques used in basic computer-aided drafting including the development and use of prototype drawings, construction of pictorial drawings, extracting data, and basics of 3D. Produce 2D and 3D drawings, pictorial drawings; use external referencing of multiple drawings to construct a composite drawing; and import and extract data utilizing attributes. Prerequisite: DFTG 1309. Software: AutoCAD.

DFTG 2321 Topographical Drafting
3 Hours (2-4)
Plotting of surveyor’s field notes, plotting elevations, contour drawings, plan and profiles, and laying out traverses. Develop map data using specific software. Prerequisite: DFTG 1309 Software: AutoCAD Civil.

DFTG 2323 Pipe Drafting
3 Hours (2-4)
A study of pipe fittings, symbols, specifications and their applications to a piping process system. This application will be demonstrated through the creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. Prerequisite: DFTG 1309 Software: AutoCAD, CADWorx Plant, P & ID, & Equipment.

DFTG 2331 Advanced Technology In Architectural Design
& Drafting
3 Hours (2-4)
Use of Architectural specific software to execute the elements required in designing standard architecture exhibits utilizing custom features to create walls, windows and specific design requirements for construction in residential and light commercial architecture. Prerequisite: DFTG 1317 Software: Google Sketchup Pro, Autodesk Revit.

DFTG 2338 Final Project - Advanced Drafting
3 Hours (1-4)
A comprehensive project course in which the student will develop a project from conception to conclusion. Prerequisite: ARTV 1302. Capstone course.

DFTG 2340 Solid Modeling/Design
3 Hours (2-4)
A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. Prerequisite: DFTG 1309 Software: Autodesk Inventor.

DFTG 2345 Advanced Pipe Drafting
3 Hours (2-4)
A continuation of pipe drafting concepts building on the basic principles acquired in pipe drafting, process flow diagrams; solve design implementation problems; apply appropriate codes and standards. Prerequisite DFTG 2323 and DFTG 2340. Software: AutoCAD, CADWorx Plant, P & ID, & Equipment.

DFTG 2371 Exploration Graphics
3 Hours (2-4)
An advanced course dealing with the techniques involved in plotting surveyor’s notes, traverses, profiles, isometric sections, advanced projections, cross sections, and subsurface contours. The student will have the skill and knowledge to properly reproduce and display exploration data on a map while using a CAD system. Prerequisite: DFTG 1309 and 2321. Software: AutoCad Civil 3D.

DFTG 2380 & 2381 Cooperative Work Experience, I, II
3 Hours (1-0-20)
This course is a study of the basic career-related activities encountered in the area of Drafting. The individual is required to work for wages in a Drafting trade area for at least 20 hours per week under the supervision of the college and employer. Seminar meets one hour per week. Prerequisites: Approval of Dean and concurrent enrollment in a Drafting-related course.

DMSO 1302 Basic Ultrasound Physics
3 Hours (3-0-0)
This course covers basic acoustical physics and acoustical waves in human tissue with an emphasis on ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission, and resolution of sound beams.

DMSO 1360 Clinical I
3 Hours (0-0-15)
This course is 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. Clinical education is an unpaid learning experience. Prerequisite: Admission into the program.

DMSO 1361 Clinical II
3 Hours (0-0-18)
This course is 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. Clinical education is an unpaid learning experience. Prerequisite: DMSO 1360.

DMSO 1405 Sonography of Abdominopelvic Cavity
4 Hours (3-2-0)
This course is a detailed study of normal and pathological abdominal and pelvic structures as related to scanning techniques, patient history, and laboratory data, transducer selection, and scanning protocols.

DMSO 1442 Intermediate Ultrasound Physics
4 Hours (3-3-0)
This course is a continuation of the study of acoustical physics. Topics include interaction of ultrasound with tissues, the mechanics of ultrasound production and display, various transducer designs and construction, quality assurance, bioeffects and image artifacts. Methods of Doppler flow analysis may be introduced. Prerequisite: DMSO 1302.

DMSO 2351 Doppler Physics
3 Hours (3-0-0)
This course emphasizes Doppler and hemodynamic principles relating to arterial and venous imaging and testing.

DMSO 2353 Sonography of Superficial Structures
3 Hours (3-0-0)
This course is a detailed study of normal and pathological superficial structures as related to scanning techniques, patient history, and laboratory data, transducer selection, and scanning protocols. Prerequisite: DMSO 1405.

DMSO 2354 Neurosonology
3 Hours (3-0-0)
This course is a detailed study of normal and pathological neonatal head structure. Vascular methodology will be discussed. Prerequisite: DMSO 2353.
DMSO 2357 Advanced Ultrasound Professionalism and Registry Review
3 Hours (3-1-0)
This capstone course covers the Sonographic profession principles and the scope of practice including legal and ethical issues for the sonographer. The following topics will also be covered in the course: department management procedures; application of advanced techniques and instrumentation; ergonomic of scanning and injury prevention; and essential concepts of registry preparation.

DMSO 2405 Sonography of Obstetrics/Gynecology
4 Hours (4-1-0)
This course is a detailed study of the pelvis and obstetrics/gynecology as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Prerequisite: DMSO 1405.

DMSO 2460 Clinical III
4 Hours (0-0-23)
This course is 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. Clinical education is an unpaid learning experience. Prerequisite: DMSO 1361.

DMSO 2461 Clinical IV
4 Hours (0-0-22)
This course is 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. Clinical education is an unpaid learning experience. Prerequisite: DMSO 2460.

DRAM 1120, 1121, 2120, 2121 Rehearsal and Performance I, II, III, IV
1 Hour (0-3)
This is a practicum course that is designed to provide students with hands-on practical experience in theatre. Students will be assigned to specific duties as either a cast or crew member for productions at Midland College and Midland Community Theatre. Work hours can be tailored to an individual’s particular schedule. Students may repeat this course for up to four hours’ credit.

DRAM 1310 Theatre Appreciation
3 Hours (3-0)
This course is an introduction to theatre, designed to give students an understanding and appreciation for theatre as an art form and career choice. Students will study theatre practice and dramatic literature from various genres and periods and view at least one live performance.

DRAM 1330 Stagecraft I
3 Hours (3-0)
This course covers all basic areas of the art of stagecraft, including elementary drafting, scenic construction, carpentry, lighting, material selection and application, properties, costumes, sound, and elementary design.

DRAM 1351 Acting I
3 Hours (3-0)
Students are introduced to the basic skills and techniques of acting that are developed with individual work in the use of mind, body, and voice. Exercises in improvisation, relaxation, and open scenes illustrate and stress the importance of the working process.

DRAM 1352 Acting II
3 Hours (3-0)
This course is a continuation of Acting I with further development of mind, body, and voice. Students will also learn the process of character analysis through the preparation and performance of scenes from plays. Prerequisite: DRAM 1351 or permission of the instructor.

DRAM 2331 Stagecraft II
3 Hours (3-0)
Study and application of visual aesthetics of design which may include the physical theater, scenery construction and painting, properties, lighting, costume, makeup, and backstage organization.

DRAM 2336 Voice and Movement
3 Hours (3-0)
This course focuses on understanding the application of the performer’s use of the voice and body as effective creative instruments of effective communication. It encourages an awareness of the need for vocal proficiency and teaches techniques to improve speaking and mobility on stage.

DRAM 2361 History of the Theatre I
3 Hours (3-0)
This course covers the history of the theatre from the earliest times through the Renaissance, examining different aspects of the theatre such as historical staging and techniques, styles of acting, social and cultural context of drama, and themes and genres of plays produced.

DRAM 2362 History of the Theatre II
3 Hours (3-0)
This course is a continuation of History of the Theatre I, covering the time period from the Renaissance to the present.

DRAM 2366 Introduction to Film
3 Hours (3-1)
This course is an introduction to cinema, designed to give students an understanding and appreciation for cinema as an art form. Students will study the visual, aural, dramatic narrative, sociological, and historical elements of cinema. Students will study the terminology and techniques of filmmaking and will study various genres by viewing films.

DVLP 0190 Strategic Studies, non-course based remediation
1 Hour (1-0)

DVLP 0290 Strategic Studies, non-course based remediation
2 Hours (2-0)

DVLP 0390 Strategic Studies non-course based remediation
3 Hours (3-0)
These one, two, or three-credit hour courses above are designed to teach students how to enhance their prospects of being successful in college. The techniques that are taught include general-purpose learning strategies and content specific strategies. Computer related activities and instruction complement traditional methods of instruction.

ECON 2301 Principles of Macroeconomics
3 Hours (3-0)
The student will study macroeconomic concepts as they relate to the aggregate economy. Topics will include the public sector, GDP measurements, the Federal Reserve System, inflation and unemployment, and the different approaches to public policy.
ENGL 1302 Composition and Literature
3 Hours (3-0)
A course designed to enable students to analyze, discuss, and write two or more of the following: narrative essays, poems, short stories, and researched reviews/abstracts. Course assignments will include a minimum of 6000 words of writing. Credit will be given only once for ENGL 2307.

ENGL 1301 Composition and Rhetoric
3 Hours (3-0)
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 (English and metric). Also addresses rigging procedures to include chain falls, jacks, cable, fulcrum, port-a-power, and come-alongs. Students will use basic hand, hand power, and stationary power tools; select appropriate Bill of Materials (BOM); interpret basic mechanical drawings and perform associated calculations; apply measuring tools; perform bench work including part layout, drilling, reaming, tapping, press fitting, location of hole centers; perform preventative maintenance on tools; describe basic lubrication practices; demonstrate basic rigging procedures; and employ good housekeeping, environmental awareness, safety procedures, sensory skills, and preventative maintenance.

ENGL 0171 Intermediate Writing II
1 Hour (0-1)
Required for student taking ENGL 1301 under the “C” or better option. Student must make a “C” in this course and a “C” in ENGL 1301 to fulfill college writing readiness requirement.

ENGL 0270 Intermediate Writing I
2 Hours (0-2)
A writing-intensive lab course designed to prepare the student for college writing readiness. Prerequisite: ENGL 0371/0371.

ENGL 0370 Developmental Writing I
3 Hours (3-1)
A course designed to assist students to become more proficient in grammar, mechanics, expository writing, vocabulary, and critical reading. Students are required to work on writing, vocabulary, grammar, and punctuation in writing lab.

ENGL 0371 Developmental Writing II
3 Hours (3-1)
A course designed to assist students to become more proficient in grammar, mechanics, expository writing, vocabulary, and critical reading. Students are required to work on writing, vocabulary, grammar, and punctuation in writing lab.

ENGL 1301 Composition and Rhetoric
3 Hours (3-0)
A course designed to help students develop reading and writing skills by studying diction, syntax, paragraph development, grammar, vocabulary and essay organization and by writing expository paragraphs and essays. Course assignments will include a minimum of 6000 words of writing. Prerequisite: 220+ THEA Writing and 230 THEA Reading or 70/6 Compass Writing and 81 Compass Reading or successful completion of developmental education sequence. Co-requisite: ENGL 0181, when taken as culmination of developmental education sequence.

ENGL 1302 Composition and Literature
3 Hours (3-0)
A course designed to enable students to further their composition skills by writing multi-paragraph essays, including a research paper; to write logically; and to read, research, analyze, and discuss the literary genres of poetry, short fiction, and drama. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.
HUMA 1343 Weapons of Mass Destruction
3 Hours (3-0)
This course covers hazard and risk assessment, crime scene preservation, chemical agents, biological agents, radiological agents, explosive devices, detection-sampling and plume models, and personal protection methods. The critical role of first responders in weapons of mass destruction, mitigation, and survival will also be presented. Discussion will include historical events related to the use of weapons of mass destruction. Students will identify weapons of mass destruction and means of dissemination; and compare the different biological, chemical, and radiological materials used in weapons of mass destruction.

HPRS 1106 Essentials of Medical Terminology
1 Hour (1-0-0)
This course is a study of common medical terminology, word origin, structure, and application.

HPRS 2200 Pharmacology for Health Professions
2 Hours (2-0-0)
This course is a study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. Co-requisite: BIOL 2401 or VNSG 1420.

HPRS 2301 Pathophysiology
3 Hours (3-0-0)
This course is a study of the pathology and general health management of diseases and injuries across the life span. Topics will include etiology, symptoms, pharmacology and the physical and psychological reactions to diseases and injuries. Prerequisite: BIOL 2401 or SCIT 1407.

HUMA 1301 Humanities I
3 Hours (3-0)
“Humanities I” invites students to expand their appreciation of the cultural side of human experience on the premise that a complete education should stimulate the intellect as well as provide skills and job training. This course will offer selected, interrelated topics in philosophy, literature, religion, and the arts and sciences from ancient times to about the year 1500. Coverage will be interdisciplinary and multi-cultural, and will include readings, various media, and performance.

HUMA 1302 Humanities II
3 Hours (3-0)
“Humanities II” complements Humanities I by inviting students to expand their appreciation of the cultural side of human experience still further on the premise that a complete education must stimulate the intellect as well as provide skills and job training. This course will offer selected and varying topics in philosophy, literature, religion, and the arts and sciences from about 1500 to the present. Coverage will be interdisciplinary and multi-cultural, and will include readings, various media, and performance. THERE IS NO PREREQUISITE FOR THIS COURSE.

IMED 1316 Web Design I
3 hours (3-1)
Instruction in web design and related graphic design issues including mark-up languages, web sites, and browsers. Students will identify how the Internet functions with specific attention to the World Wide Web and file transfer; apply design techniques in the creation and optimization of graphics and other embedded elements; demonstrate the use of World Wide Web Consortium (W3C) formatting and layout standards; and design, create, test, and maintain a web site.

ITCC 1401 Cisco Exploration 1-Route Fundamentals
4 Hours (3-3)
A course introducing the architecture, structure, functions, components, and models of the internet. Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Students will identify and describe internet architecture, structure, functions, components, and models; describe the use of OSI and TCP layered models; identify and describe the nature and roles of protocols and services at the application, network, data link, and physical layers; describe principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations; and build simple LAN topologies by applying basic principles of cabling, device configuration, and IP sub-netting.

ITCC 1404 Cisco Exploration 2-Routing Protocols and Concepts
4 Hours (3-3)
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. Students will describe the purpose, nature, and operations of a router; describe the purpose and nature of routing tables; describe the purpose and procedure of configuring static routes; design and implement a classless IP addressing scheme for a given network; describe the basis features and concepts of link-state routing protocols; and configure and verify basic RIPv1, RIPv2, single area OSPF, and EIGRP operations in a small routed network. Prerequisite: ITCC 1401.

ITCC 2408 Cisco Exploration 3-LAN Switching and Wireless
4 Hours (3-3)
This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced. Students will identify and correct common network problems at layers 1, 2, 3, and 7 using a layered model approach; select the appropriate media, cables, ports, and connectors to connect switches to other devices and hosts; perform and verify initial switch configuration tasks including remote access management; configure, verify, and troubleshoot VLANs, VLAN Trunking, Inter-VLAN routing, VTP, and RSTP; verify network status and switch operation using basic utilities (ping, traceroute, telnet, SSH, arp, ipconfig); identify and describe the purpose of the components in a small wireless network (SSID, BSS, ESS); and identify the basic parameters to configure on a wireless network to ensure that devices connect to the correct point. Prerequisite: ITCC 1404.
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<tr>
<th>MATH 0372 Intermediate Algebra</th>
<th>3 Hours (3-0)</th>
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<tr>
<td>This course is intermediate in difficulty between the introductory and college algebra courses and is designed to bridge the gap between the courses. This course will enable students to become proficient in factoring, solving quadratic equations and systems of equations, working with conic sections, and functions Co-requisite: MATH 0170. Prerequisite: Requires a “C” or greater in MATH 0371 and a “P” in MATH 0170 or “P” in MATH 0174-0176 (FLEX Introductory Algebra sequence) or a satisfactory score on an algebra placement test or 230 on THEA. Course fee.</td>
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<tr>
<th>MATH 1314 College Algebra</th>
<th>3 Hours (3-0)</th>
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<td>This course is designed to enable students to become proficient in the following algebraic topics: polynomials, rational expressions, exponents, radicals, linear equations and inequalities, quadratic equations, exponential and logarithmic equations, applications systems of equations, and binomial expansion. Prerequisite: Requires a “C” or greater in MATH 0392 and a “P” in MATH 0170 or a “P” in Math 0177-0179 or a satisfactory score on an algebra placement test or 270 on THEA. Course fee.</td>
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<tr>
<th>MATH 1316 Trigonometry</th>
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<td>This course is designed to enable students to become proficient in trigonometric and inverse trigonometric functions, the solution of triangles, identities, trigonometric equations, applications complex numbers, and logarithms. Prerequisite: Requires a “C” or greater in MATH 1314 or a satisfactory score on an algebra placement test. Course fee.</td>
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<tr>
<th>MATH 1324 Mathematics for Business &amp; Social Sciences I</th>
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<td>This course is designed to enable students to solve elementary business problems involving the following topics: sets, linear relations and functions, elementary matrix theory, systems of linear equations and inequalities, linear programming by the simplex method, simple and compound interest, annuities, amortization, and bonds. Requires a “B” or greater in MATH 0391 and a “P” in MATH 0190 or a satisfactory score on an algebra placement test. Course fee.</td>
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<tr>
<th>MATH 1325 Mathematics for Business &amp; Social Sciences II</th>
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<td>This course is designed to enable students to learn quantitative methods for analyzing business problems. The topics to be studied are: Limits and continuity, derivatives, graphing and optimization, exponential and logarithmic functions, antiderivatives, integration, applications to management, economics, and business. Prerequisite: Requires a “C” or greater in MATH 1324. Course fee.</td>
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<tr>
<th>MATH 1342 Statistics</th>
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<td>This course is designed to enable students to learn the introductory techniques of collection, presentation, analysis, and interpretation of data. Correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models, and regression analysis are also studied. Students will become proficient in use of computer technology such as Excel. Prerequisite: Requires a “B” or greater in MATH 0391 and a “P” in MATH 0190 or a higher level math course or a satisfactory score on an Algebra placement test. Course fee.</td>
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<tr>
<th>MATH 1350 Fundamentals of Mathematics I</th>
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<td>This course is designed to enable students to become proficient in concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. Prerequisite: Requires a “C” or greater in MATH 1314 or equivalent. Course fee.</td>
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<tr>
<th>MATH 1351 Fundamentals of Mathematics II</th>
<th>3 Hours (3-0)</th>
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<td>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 specifically for students who seek middle grade (4-8) teacher certification. Prerequisite: Requires a “C” or greater in MATH 1350, or “C” or greater in MATH 1314 or equivalent. Course fee.</td>
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<tr>
<th>MATH 1414 College Algebra</th>
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<td>This course is designed to enable students to become proficient in applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. Some topics from analytical geometry are discussed. Prerequisite: Requires a “C” or greater in MATH 0391 and a “P” in MATH 0190 or a “P” in Math 0196-0199 or a satisfactory score on an algebra placement test or 270 on THEA. This course is designed for students needing more time to successfully complete College Algebra. Course fee.</td>
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<tr>
<th>MATH 2412 Pre-Calculus</th>
<th>4 Hours (4-0)</th>
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<td>This course is designed to enable students to become proficient in introductory analytic geometry, the theory of limits, differential calculus of algebraic and trigonometric functions, applications of differentiation, antiderivatives, and the definite integral. Prerequisite: Requires a “C” or greater in MATH 1316 or a “C” or better in MATH 2412 or a satisfactory score on a precalculus placement test. Course fee.</td>
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<tr>
<th>MATH 2413 Calculus I</th>
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<td>This course is designed to enable students to become proficient in the differentiation and integration of transcendental functions, techniques of integration, and applications of the definite integral, indeterminate forms, and improper integrals. Prerequisite: Requires a “C” or greater in MATH 2413. Course fee.</td>
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<th>MATH 2414 Calculus II</th>
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<td>This course is designed to enable students to become proficient in indeterminate forms, improper integrals, sequences, series, vectors, and the differential and integral calculus of functions of several variables. Prerequisite: Requires a “C” or greater in MATH 2414. Course fee.</td>
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</table>
PHIL 1304 Introduction to World Religions
3 Hours (3-0)
Is a survey of the major belief systems in society today: Judaism, Christianity, Islam, Hinduism, and Buddhism, how they are different from ancient belief systems and how they are influencing new religious movements.

PHIL 1316 History of Christianity
3 Hours (3-0)
This course is an historical survey of the development of Christianity and its role in world history, from its origins to the present time covering theological and institutional issues. Course may be taken for either credit or non-credit. Also HIST 1316.

PHIL 2303 Introduction to Logic
3 Hours (3-0)
“Introduction to Logic” introduces the students to the nature and methods of correct reasoning; deductive and inductive proof; fallacies; argumentation.

PHIL 2306 Ethics
3 Hours (3-0)
This course covers the major classic philosophies of life with consideration of some of the value or “goodness” involved in the moral, religious, aesthetic, and scientific points of view.

PHIL 2321 Philosophy of Religion
3 Hours (3-0)
“Philosophy of Religion” is a study of the nature and philosophical implications of religious beliefs, experiences, and practices, and the relation of these to other major human concerns.

PHYS 1401 College Physics I
4 Hours (3-4)
This course will enable students to become familiar with classical mechanics, thermodynamics, and wave motion. This course is designed for students planning to study medicine, dentistry, veterinary medicine, optometry, biology, architecture, and the technical disciplines. A knowledge of algebra and elementary trigonometry is needed.

PHYS 1402 College Physics II
4 Hours (3-4)
This course will enable students to become proficient in optics, electricity, magnetism, and selected topics from modern physics. Prerequisite: PHYS 1401.

PHYS 1403 Stars and Galaxies
4 Hours (3-3)
Study of stars, galaxies, and the universe outside our solar system. Non-majors.

PHYS 1404 Solar System
4 Hours (3-3)
Study of the sun and its solar system, including its origin. Non-majors.

PHYS 1415 Physical Science I
4 Hours (3-3)
This is a survey course in the physical sciences and scientific methods and is intended for non-science majors. The course introduces topics in physics, chemistry, geology, meteorology, and astronomy with an emphasis on physics topics. A lab is included, and basic mathematics is required.

PHYS 1417 Physical Science II
4 Hours (3-3)
This is a continuation of PHYS 1415 with an emphasis on topics in chemistry, geology, meteorology, and astronomy. A lab is included, and basic mathematics is required.

PHYS 2425 University Physics I
4 Hours (3-3)
This course will enable students of the physical sciences, engineering, and mathematics to become proficient in classical mechanics and thermodynamics. Prerequisite or Co-requisite: MATH 2413

PHYS 2426 University Physics II
4 Hours (3-3)
This course will enable students to become proficient in classical electricity and magnetism, wave motion, and optics. Prerequisite: PHYS 2425 or Co-requisite: MATH 2414

POFI 1204 Computer Fundamentals
2 Hours (2-1)
Computer applications specific to business-related software. Emphasizes the concurrent development of office skills and computer knowledge. Students will differentiate among systems, applications, and utility software; format, edit, and enhance a document; and manage files and folders.

POFI 1270 Field Reports and Data Transfer
2 Hours (2-0)
Essential computer application, writing, and computational skills required by the energy industry for completion of reports. The student will demonstrate computer applications, writing, and computational skills to produce reports used by the energy industry in various field-related activities.

POFI 2401 Word Processing
4 Hours (3-3)
Word processing software focusing on business applications. Students will produce documents using word processing applications. Prerequisite: POFI 1227 or instructor permission.

POFI 2431 Desktop Publishing for the Office
4 Hours (3-3)
In-depth coverage of desktop publishing terminology, text editing, and use of design principles to create publishing material using word processing desktop publishing features. Emphasis on layout techniques, graphics, and multiple page displays. The student will define desktop publishing terminology; manipulate text and graphics to create a balanced and focused layout; and create flyers, brochures, and multiple-page documents according to specified procedures. Prerequisite: ITSW 1401 or instructor permission.

POFI 2440 Advanced Word Processing
4 Hours (3-3)
Advanced techniques in merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. Emphasis on business applications. Students will implement advanced features; import data; and incorporate graphic, collaborative, and special functions to enhance documents. Prerequisite: ITSW 1401.

POFM 1302 Medical Software Applications
3 Hours (3-0)
Medical software applications for the management and operation of health care information systems. Students will utilize medical software applications; manage patient database; process billing; maintain schedules; and generate reports.
POFT 1227 Introduction to Keyboarding
2 Hours (2-0)
Skill development in keyboarding techniques. Emphasis on the development of acceptable speed and accuracy. Students will demonstrate basic keyboarding techniques, with acceptable accuracy and speed of at least 30 words per minute.

POFT 1301 Business English
3 Hours (3-0)
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. Does not count toward major in “Psychology.”

POFT 1309 Administrative Office Procedure I
3 Hours (3-0)
Study of current office procedures, duties, and responsibilities applicable to an office environment. Students will develop time management techniques; demonstrate communication skills; and identify the basic skills of an office professional.

POFT 1325 Business Mathematics and Machine Applications
3 Hours (3-1)
Business math problem-solving skills using office technology. Students will solve business application problems using office technology.

POFT 2312 Business Correspondence and Communications
3 Hours (3-0)
Development of writing and presentation skills to produce effective business communications. Students will compose, produce, and present effective business documents appropriate to meet industry standards; apply critical evaluation techniques to business documents and demonstrate the importance of coherent, ethical communication principles in business and industry. Prerequisite: POFT 1301 or instructor permission.

POFT 2333 Advanced Document Formatting and Skill Building
3 Hours (2-4)
A continuation of keyboarding skills in advanced document formatting emphasizing speed, accuracy, and decisionmaking. Students will demonstrate proficient keyboarding techniques; apply mailability standards to business documents using word processing software; and implement decision-making skills. Prerequisites: POFT 1227 and POFT 2401.

POFT 2380 Cooperative Education-Administrative/Secretarial, General Science
3 Hours (1-0-20)
Career related activities encountered in the student’s area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through work experience. This course may be repeated if topics and learning outcomes vary. As outlined in the learning plan, the student will master the theory, concepts, and skills involving the tools, materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, and legal systems associated with the particular occupation and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. Prerequisite: Two Business Applications courses or instructor permission.

POFT 2401 Document Formatting and Skill Building
4 Hours (3-3)
A continuation of keyboarding skills emphasizing acceptable speed, and accuracy levels and formatting documents. Students will demonstrate proficient keyboarding techniques; and apply mailability standards to business documents using word processing software. Prerequisites: POFT 1227 and ITSW 1401 or instructor permission.

POFT 2431 Administrative Systems
4 Hours (3-3)
Advanced concepts of project management and office procedures integrating software applications. Students will select materials, procedures, and equipment; and manage business projects using technology, critical thinking, and problem-solving skills. Prerequisites: ITSW 1401, ITSW 1404, ITSW 1407 and ITSW 1410.

PSYC 1200 Student Success Seminar
2 Hours (2-1)
Addresses the knowledge necessary for college success; develops the skills necessary to study and learn; and develops competence in finding information and resources. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual bases for this introduction to college-level student academic strategies. Students develop educational plans and use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. (Cross-listed as EDUC 1200)

PSYC 2301 Introduction to Psychology
3 Hours (3-0)
“Introduction to Psychology” deals with the scientific study of the behavior of individuals and their mental processes. The focus is on the perceptions, thoughts, emotions, and social interactions of people in their everyday lives. Psychological theories of mental health, mental disorders, and therapy will be addressed.

PSYC 2302 Applied Psychology
3 Hours (3-0)
This course is the application of psychological principles and methods to the development of the cognitive and social skills of students in the collegiate setting. Does not count toward major in Psychology.

PSYC 2306 Human Sexuality
3 Hours (3-0)
“Human Sexuality” provides a comprehensive introduction to the biological, psychological, behavioral, and cultural aspects of sexuality. Contemporary research addressing such issues as communication, love, relationships, sexual problems, therapies, pregnancy, and childbirth is discussed. Also SOCI 2306.

Students may receive credit for only two of PSYC 2306, PSYC 2311 and PSYC 2314.

PSYC 2308 Child Psychology
3 Hours (3-0)
This course covers the first part of the human development process. It focuses on psychological, cognitive, social, and environmental factors that shape human behavior from prenatal development through adolescence. Prerequisite: PSYC 2301 or permission of instructor.
All degrees with the exception of the AAS require students to complete the Core Curriculum. The Core Curriculum was established by the Texas legislature and the Texas Higher Education Coordinating Board to facilitate the transfer of courses between state supported institutions of higher education in Texas and to provide students with the basis of a liberal education. In order to obtain most degrees from a state supported institution in Texas, a student must complete the Core Curriculum. Thus, once a student has completed the Core Curriculum at one institution, it has been completed at all state supported institutions. Courses are chosen from the following areas. Consult degree programs for specific requirements. The required number of semester credit hours is noted in parenthesis beside each area.

**010 - Communications (9)**
ENGL 1301 and 1302, one course chosen from SPCH 1311, 1315, 1318, or 1321

**020 - Mathematics (3)**
MATH 1314, MATH 1316, MATH 1324, MATH 1414, MATH 2412, MATH 2413, MATH 2414, MATH 2415

**030 - Natural Sciences (8)**
BIOL 1406, BIOL 1407, BIOL 1408, BIOL 1409, BIOL 1424, BIOL 2401, BIOL 2402, BIOL 2421, CHEM 1405, CHEM 1411, CHEM 1412, GEOL 1401, GEOL 1403, GEOL 1404, GEOL 1405, GEOL 1447, PHYS 1401, PHYS 1402, PHYS 1403, PHYS 1404, PHYS 1415, PHYS 1417, PHYS 2425, PHYS 2426

**040 - Humanities (3)**
ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2331, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2311, FREN 2312, GERM 2311, GERM 2312, HUMA 1301, HUMA 1302, LATI 2311, LATI 2312, PHIL 1301, PHIL 2303, PHIL 2306, SPAN 2311, SPAN 2312

**050 - Visual and Performing Arts (3)**
ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, DRAM 2361, DRAM 2362, DRAM 2366, MUSI 1306, MUSI 1308, MUSI 1309, MUSI 1310

**060 - 070 - 080 - Social and Behavioral Sciences (15)**
**U.S. History (6):** HIST 1301, HIST 1302, HIST 2301
**Government/Political Science (6):** GOVT 2301, GOVT 2302
**Other Social/Behavioral Sciences (3):** ANTH 2302, ANTH 2351, COMM 2300, ECON 2301, ECON 2302, GEOG 1303, HIST 2311, HIST 2312, PSYC 2301, SOCI 1301, SOCI 1306

**090 - Fitness and Wellness (1)**
KINE 1100, KINE 1101, KINE 1102, KINE 1103, KINE 1104, KINE 1105, KINE 1106, KINE 1107, KINE 1108, KINE 1109, KINE 1110, KINE 1113, KINE 1117, KINE 1118, KINE 1119, KINE 1120, KINE 1125, KINE 1126

**Total : 42 semester credit hours**