

SECTION 10

COURSE DESCRIPTIONS

The following pages contain brief descriptions of all courses currently offered by West Virginia University at Parkersburg. Course numbering helps to identify courses into one of the following categories:

Numbers 100 - 199 Freshman level courses.

Numbers 200 - 299 Sophomore level courses.

Most courses in this group have pre-requisites and should normally not be taken by entering students.

Numbers 300 - 499 Junior and Senior level courses.

Applicable to baccalaureate degrees.

In addition to the listed offering of courses by subject matter areas, each department or division is authorized to offer the following courses:

293*	Cooperative Work Experience	1-8 hours
393*	Cooperative Work Experience	1-12 hours
197	Special Topics	1-6 hours
297	Special Topics	1-6 hours
397	Special Topics	1-6 hours
497	Special Topics	1-6 hours
299	Independent Study	1-6 hours
399	Independent Study	1-6 hours
499	Independent Study	1-6 hours

*The division chairperson must approve all cooperative work experience placements.

TRANSFER OF COURSES

Many of the courses described are designed for transfer to other colleges and universities to meet specific requirements for a bachelor's degree. Other courses, however, are not so designed.

Students who seek to transfer credit to another institution are cautioned to work closely with their academic advisors or to carefully follow the catalog requirements set forth by the institution to which they plan to transfer. Caution: In all matters relating to transfer of credit, students must recognize two levels of transfer:

First, general transfer. This means simply that the receiving college will note on the student's transcript that a course was taken at WVU Parkersburg and yielded a given amount of credit. The credit may or may not apply to a degree at the receiving institution.

Second, transfer and apply to degree. This means that the course taken at WVU Parkersburg will appear on the student's transcript at the receiving institution and that the credit earned will apply toward the degree that the student seeks at the receiving institution.

In case of any questions regarding transfer of credit, students should consult with an Academic Advisor, a Counselor, the Registrar, or the Vice President for Academic Affairs.

All courses are, regardless of pre-requisites, subject to instructor's consent.

Please Note: All CDEV courses with field experience require the completion of paper work listed in Child Development Requirement for Admission and Retention.

ACCOUNTING (ACCT)

ACCT 123. OFFICE ACCOUNTING.

3 Hrs.

Fundamentals of accounting and the accounting cycle for both service and merchandise businesses. Special emphasis is put on payroll procedures, cash accounting, and accounts payable and accounts receivable record keeping. This course is not available for students working toward the BSBA degree. It is particularly suited for students in the two-year AAS in Business Technology. Offered on demand.

ACCT 200. ACCOUNTING FOR MANAGERS.

3 Hrs.

Accounting information is examined from the perspective of effective management decision-making with special emphasis on the planning and control responsibilities of practicing managers.

ACCT 201. PRINCIPLES OF ACCOUNTING I.

3 Hrs.

Covers the fundamentals of accounting; the accounting cycle; journals and ledgers; working papers; financial statements; types of accounts; analysis of financial statements; fundamentals of budgeting; and an introduction to internal controls. (Pre-requisite: MATH 120 or higher) [Common Professional Component Course]

ACCT 202. PRINCIPLES OF ACCOUNTING II.

3 Hrs.

Continuation of ACCT 201. Introduction to Partnership accounting procedures; Corporation accounting procedures; bond accounting; capital stock accounts; asset accounting procedures and introduction to manufacturing accounting. (Pre-requisite: ACCT 201) [Common Professional Component Course]

ACCT 301. MANAGERIAL ACCOUNTING FOR MANAGERS.

3 Hrs.

Accounting and budgeting techniques for non-business majors. This course will not count toward any business program at WVU Parkersburg and is not intended for transfer. (Pre-Requisites: ACCT 200 Accounting for Non-Business Majors [WVU Parkersburg] or approved transfer course from home institution.)

ACCT 310. ACCOUNTING INFORMATION SYSTEMS.

3 Hrs.

This course is an examination of accounting information systems within a context of computerized technology. The course focuses on accounting terms, concepts, and technology found within the accounting information systems environment; accounting cycles and control of accounting information systems; theory and practices relating to systems development; and reporting practices related to accounting information systems. (Pre-requisite: ACCT 201)

ACCT 311. INTERMEDIATE ACCOUNTING I.

3 Hrs.

Analysis of accounting principles and procedures at the intermediate level. Addresses the theory and practices of accounting that are tested at the CPA level. Asset valuation, continued study of liabilities, and income determination are several topics covered. (Pre-requisites: Grade of B or higher in ACCT 201 and 202, and MATH 120 or higher)

ACCT 312. INTERMEDIATE ACCOUNTING II.

3 Hrs.

Continuation of ACCT 311. Topics covered include noncurrent assets, equity, flow of funds, and ratio analysis. (Pre-requisite: ACCT 311)

ACCT 331. MANAGERIAL ACCOUNTING.

3 Hrs.

Accounting and budgeting techniques for management planning and control. The use of accounting data in management decision making. (Pre-requisites: ACCT 202 and MATH 120 or higher)

ACCT 353. FEDERAL INCOME TAX ACCOUNTING I.

3 Hrs.

Tax theory and practice with special emphasis on individual income taxation; the federal tax code and regulations; and federal tax forms. (Pre-requisites: B or higher in ACCT 201 and 202, and MATH 120 or higher)

ACCT 354. FEDERAL INCOME TAX ACCOUNTING II.

3 Hrs.

This course focuses on income taxation of corporations, estates, trusts, and partnerships. Tax considerations in establishing business organizations, reorganizations, and liquidations. (Pre-requisites: ACCT 202)

ACCT 360. FRAUD EXAMINATION.

3 Hrs.

Delve into the world of white-collar crime and forensic accounting. Study methods of detection, prevention, and investigation.

ACCT 401. ADVANCED ACCOUNTING.**3 Hrs.**

Accounting practices and procedures for business combinations and consolidations, introduction to not-for-profit accounting theories, and advanced partnership accounting theories. (Pre-requisite: ACCT 312)

ACCT 405. AUDITING.**3 Hrs.**

Study of auditing theory and practice; generally accepted auditing standards; the audit plan; internal control evaluation; statistical sampling and testing procedures; and auditor's reports. (Pre-requisite: ACCT 312)

ACCT 410. GOVERNMENT/NOTFORPROFIT ACCOUNTING.**3 Hrs.**

Covers the techniques and principles of fund accounting as generally encountered in government agencies, charities, and other not-for-profit organizations. (Pre-requisite: ACCT 312)

ACCT 432. COST ACCOUNTING.**3 Hrs.**

Determination of costs in manufacturing entities; interpretation of cost data; study of job order costs, process costs, and standard costs. (Pre-requisites: ACCT 202 and MATH 120 or higher, and Admission to BSBA or BASBA Program)

APPLIED TECHNOLOGY/PROCESS TECHNOLOGY (ATPT)
Course descriptions are provided under Process Technology.

ART

ART 101. ART APPRECIATION.**3 Hrs.**

History of visual arts and artists, periods, societies, cultures; design and composition; media, materials, and techniques.

ART 105. SURVEY OF ART HISTORY 1.**3 Hrs.**

History of painting, sculpture, architecture, and minor arts of the Western world from prehistory to Renaissance; the relationship between art, artists (artisans, craftsmen) and developing society in Western civilization.

ART 106. SURVEY OF ART HISTORY 2.**3 Hrs.**

Continuation of ART 105. History of painting, sculpture, architecture, and minor arts of Western civilization from Renaissance to Twentieth Century. (Pre-requisite: ART 105)

ART 109. DRAWING**3 Hrs.**

This course provides the foundation for drawing and the elements of art and principles of design used to analyze and interpret works of art. The course will cover drawing methods and materials and various media.

ART 111. DRAWING 1.**3 Hrs.**

This course provides the foundation for observational drawing and the basic elements of art and design. Emphasis will be placed on value, form, line, composition, and perspective. Various black and white media and techniques will be introduced.

ART 112. DRAWING 2.**3 Hrs.**

Continuation of ART 111. Expressive drawing in both color and black and white media. (6 studio hours per week) (Pre-requisite: ART 111)

ART 121. FUNDAMENTALS OF TWO DIMENSIONAL DESIGN.**3 Hrs.**

Manipulation of picture plane; abstract elements of line, shape, form, texture, value, space, and color. (6 studio hours per week) Offered on demand.

ART 122. FUNDAMENTALS OF THREE DIMENSIONAL DESIGN.**3 Hrs.**

Continuation of ART 121. Three dimensional arts concerns using wire, plaster, wood, clay, cardboard, and metals to investigate functional and sculptural problems. (Pre-requisite: ART 121)

ART 162. WATERCOLOR.**3 Hrs.**

Introduction to materials and techniques used in watercolor; composition, color theory, and personal expression. (6 studio hours per week) (Pre-requisite: ART 111 or ART 121)

- ART 213. PAINTING 1.** **3 Hrs.**
Procedures, techniques, and concepts of painting and color theory; use of oils or acrylics. (6 studio hours per week) (Pre-requisite: ART 111 or ART 121)
- ART 214. PAINTING 2.** **3 Hrs.**
Continuation of ART 213. Building increased skill in technical and personal expression using either oils or acrylics. (6 studio hours per week) (Pre-requisite: ART 213)
- ART 221. ADVANCED DRAWING.** **3 Hrs.**
Continuation of ART 112. Emphasis on in-depth exploration of media and personal expression. (6 studio hours per week) (Pre-requisite: ART 112 and ART 121)
- ART 225. LIFE DRAWING.** **3 Hrs.**
Human anatomy; foreshortening; light and shading; form; and expression. (6 studio hours per week) (Pre-requisite: ART 111 and ART 121) Offered on demand.
- ART 230. PRINTMAKING 1.** **3 Hrs.**
Introductory printmaking using planographic, relief, stencil, and intaglio to execute original prints; print and paper aesthetics and printmaking ethics. (6 studio hours per week.) (Pre-requisite: ART 111 and ART 121) Offered on demand.
- ART 231. PRINTMAKING 2.** **3 Hrs.**
Continuation of ART 230. Exploration, craftsmanship, and personal expression in one of four print media. (6 studio hours per week) (Pre-requisite: ART 230) Offered on demand.
- ART 240. CERAMICS 1.** **3 Hrs.**
Techniques of hand building, clay and glaze formulation and gas and electric kiln use; introduction to throwing on potter's wheel. (6 studio hours per week)
- ART 241. CERAMICS 2.** **1-3 Hrs.**
Continuation of ART 240. Development of personal aesthetics; acquisition of throwing skills for functional and sculptural purposes; gas and electric kiln use; and glaze chemistry. (6 studio hours per week) (Pre-requisite: ART 240) Offered on demand.
- ART 242. WOODCARVING.** **3 Hrs.**
Sculpturing in wood; direct carving, assemblage, lamination, wood bending, joints, and finishes. (6 studio hours per week) (Pre-requisite: ART 240)
- ART 251. ART WELDING.** **3 Hrs.**
Students will learn basic welding and cutting techniques in the creation of welded steel sculptures using stock steel and found steel objects.
- ART 314. ADVANCED PAINTING.** **3 Hrs.**
Continuation of Art 214. Emphasis on the creation of a body of work through exploration, contemporary media, and an individual voice. (Pre-requisites: Art 111 and Art 214)
- ART 315. ART SKILLS AND INSTRUCTIONAL STRATEGIES K-6.** **3 Hrs.**
Provides experience in two and three-dimensional media employed in public school (K6); background in Discipline-Based Art Education (curriculum content, visual learning development, art classroom management, evaluation procedures, and art education philosophy.
- ART 340. ADVANCED CERAMICS.** **3 Hrs.**
Continuation of ART 241. Refine and increase skills in throwing functional pottery; glazing wares; fire both electric and gas kilns; and increase sensitivity to design elements as they relate to ceramics.
- ART 351. FOUND OBJECT WELDED SCULPTURE.** **3 Hrs.**
Continuation of ART 251. Students will use steel-found objects to fabricate free standing sculptures using a flux core MIG welder.
- ART 360. CONTEMPORARY ART HISTORY.** **3 Hrs.**
This course explores the various artistic movements from 1945 to the present. Emphasis will be placed on critical theory, historical context, and familiarity with images and artists.

ASTRONOMY (ASTR)

ASTR 106. INTRODUCTION TO ASTRONOMY.

4 Hrs.

Introduction to the study of the Universe, including the latest theories on the origin of the Universe, the solar system, and Earth. Covered will be the origin of galaxies, stars, planets, asteroids, meteoroids, comets, etc., stressing modern techniques of gathering information about the Universe. The lab portion of the course will include observations of the sky, use of telescopes, and use of the celestial sphere and star charts. May also include planetarium visits and other astronomy related field trips. (3 lecture hours and 2 lab hours per week)

BIOLOGY (BIOL)

BIOL 101. GENERAL BIOLOGY 1.

3 Hrs.

An introduction to biological principles including the chemistry, structure, and energetics of the cell (photosynthesis and respiration); membrane transport; molecular biology (RNA and DNA) and cell reproduction (mitosis and meiosis); molecular genetics to include Mendelian and human genetics; evolution (natural selection and population genetics); and ecology (biodiversity, communities, and populations of living organisms.) (3 lecture hours and 2 lab hours per week) (Co-requisite: BIOL 103)

BIOL 102. GENERAL BIOLOGY 2.

3 Hrs.

An application of basic biological principles to plant and animal organisms. Plant evolution and taxonomy; structure; transport; reproduction; growth; and development are included. Animal evolution and taxonomy; organ systems and homeostasis, and reproduction complete the course. (3 lecture hours and 2 lab hours per week) (Co-requisite: BIOL 104; Pre-requisite: Grade of D or higher in BIOL 101 or BIOL 115)

BIOL 103. GENERAL BIOLOGY 1 LAB.

1 Hr.

Introductory exercises and experiments in general biology to include microscopy and cell structure; organic compounds; osmosis and diffusion; photosynthesis, cell respiration, hydrolysis of carbohydrates, cell reproduction and genetics. (2 hours per week) (Co-requisite: BIOL 101)

BIOL 104. GENERAL BIOLOGY 2 LAB.

1 Hr.

Laboratory studies in general biology that includes evolution and systematics, a survey of organism diversity, and basic plant and animal anatomy. (2 hours per week) (Co-requisite: BIOL 102)

BIOL 107. ANATOMY AND PHYSIOLOGY 1.

4 Hrs.

An introduction to normal structure and function of the human body. The course covers principles of the chemistry compounds (biochemistry), cellular, tissue, organs of the body. Four systems are studied for gross and microscopic anatomy and normal functioning; these are integumentary, skeletal, muscular, and nervous systems. The lab work emphasizes microscopic work on cells and tissues, study of bones and muscles, and dissections of brain and eyeball. (3 lecture hours and 2 lab hours per week)

BIOL 108. ANATOMY AND PHYSIOLOGY 2.

4 Hrs.

Continuation of Biology 107. This class includes study of the respiratory, circulatory (blood, heart, vessels) lymphatic, urinary, digestive, endocrine, and reproductive systems. Normal anatomy and physiology is emphasized, but some pathology is included. Lab work includes dissection of the body systems, plus selected physiology experiments in respiratory volumes, blood and blood genetics, urinalysis, and digestion rates. Critical thinking is developed using clinical examples. The students do research as group projects, such as nutrition, development of science events for teens, or clinical interviews. (3 lecture hours and 2 lab hours per week)

BIOL 109. ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH.

4 Hrs.

This class is a survey class in human anatomy and physiology. The course will have special emphasis on problems requiring surgery, emergency treatments, and drug interventions. Prevention of disease is discussed and the pathology associated with normal aging and common problems for each system. All systems of the body will be discussed. (3 lecture hours and 2 lab hours per week).

BIOL 110. INTRO TO MICROBIOLOGY FOR SURGICAL TECH.**3 Hrs.**

Overview of the structure, physiology, and human health implications of microorganisms in relation to human health and disease will be presented. Topics include the relationship between pathogens and the body's defense system; structure and function of cells; process of infection and the immunologic defense mechanisms; and principles of sanitation, sterilization, and disinfection. Laboratory sessions will include growth and identification of various pathogens as well as methods to control their spread. (2 lecture hours and 2 laboratory hours per week) (Pre-requisites: BIOL 109, ST 101 and ST 114) Does not meet biology requirement for Nursing.

BIOL 115. PRINCIPLES OF BIOLOGY.**4 Hrs.**

An introductory biology course that presents basic principles of modern biology. In combination with the accompanying laboratory (BIOL 115L), the course represents the first in an integrated sequence required of biology major transfer students; students who elect biology as a minor in the Multidisciplinary studies BA degree program; or to fulfill the general education requirement in science. Students must register for both a lecture section and a laboratory section. (3 lecture hours and 2 lab hours per week) (Pre or Co-requisite: CHEM 115)

BIOL 117. INTRODUCTORY PHYSIOLOGY.**4 Hrs.**

Continuation of BIOL 115. The course focuses on the structure, function, and diversity of reproductive, developmental, functional, and integrative mechanisms in plants and animals. In combination with the accompanying laboratory (BIOL 117L), the course represents the second in an integrated sequence required of biology major transfer students; students who elect biology as a minor in the Multidisciplinary studies BA degree program; or to fulfill the general education requirement in science. Students must register for both a lecture section and a laboratory section. (3 lecture hours and 2 lab hours per week) (Pre-requisite: BIOL 115; and CHEM 115; Pre or Co-requisite: CHEM 116)

BIOL 171. NUTRITION AND HEALTH.**3 Hrs.**

This course will cover basic nutrients needed for human health; nutritional changes and adaptations during various stages of the life cycle will be discussed. Some consideration will be included regarding nutrition for common disorders such as excess weight, athletic training, and diseases such as hypertension and diabetes. (3 lecture hours per week)

BIOL 200. MICROBIOLOGY.**3 Hrs.**

Designed for students requiring a basic medical microbiology course to meet program requirements or as a science elective. Topics include types of microorganisms; microbial growth and metabolism; control of microbial populations; microbial resistance; and principles of infection and immunity. (3 lecture hours and 2 lab hours per week) (Pre-requisites: BIOL 115, 115L, or 117, 117L)

BIOL 201. MICROBIOLOGY LABORATORY.**1 Hr.**

Biology 201 is designed to accompany Biology 200 (Microbiology) lecture to practical laboratory experiences for students requiring a basic medical microbiology course to meet program requirements or as a science elective. Topics include staining procedures; observations and study of fixed specimens using the microscope; and culturing and identifying living microorganisms. (2 laboratory hours per week) (Pre-requisites: BIOL 107 and 108; or BIOL 101/103 and 102/104) (Pre-requisite/Co-requisite: BIOL 200) Offered in spring semester only.

BIOL 211. ZOOLOGY: ANIMALS AS ORGANISMS.**4 Hrs.**

Anatomical and physiological study of invertebrate and vertebrate body systems and processes including taxonomy and evolution. (3 lecture hours and 2 lab hours per week) (Pre-requisites: BIOL 101/103 and 102/104) Offered only in the fall semester of odd numbered years.

BIOL 212. BOTANY: PLANTS AS ORGANISMS.**4 Hrs.**

Development, structure, function, and evolution of vascular and nonvascular plants; physiological and ecological relationships. (3 lecture hours and 2 lab hours per week) (Pre-requisites: BIOL 101/103 and 102/104) Offered only in the fall semester of even numbered years.

BIOL 219. THE LIVING CELL.**4 Hrs.**

A more in-depth study of prokaryotic and eukaryotic cells that builds on material covered in BIOL 115 and BIOL 117. The course represents the third in an integrated sequence required of biology transfer students; students who elect biology as a minor in the Multidisciplinary studies BA degree program; or to fulfill the general education requirement in science. Students must register for both a lecture section and a laboratory section. (3 lecture hours and 2 lab hours per week) (Pre-requisites: BIOL 101/103/102/104 or BIOL 115 and BIOL 117; CHEM 115; CHEM 116; Co-requisites: BIOL 219L (laboratory); CHEM 233; CHEM 235)

BIOL 312. MEDICAL BOTANY.**3 Hrs.**

Survey of the medicinal properties of plants, fungi, algae (protists), and cyanobacteria. The impact of plants and their role in both traditional and modern medicine; toxins and nutrients, will be studied. The history of herbal medicine, and alternative medicinal practices around the world will be observed. This course is not designed to teach anyone to become a practitioner of medicine, pharmacy, or any other profession requiring explicit medical knowledge. (Pre-requisite: BIOL 101/103 or BIOL 115/115L or instructor permission)

BIOL 371. PRINCIPLES OF GENETICS.**4 Hrs.**

Introduction to genetics principles, including common terms used in genetics; basic concepts (DNA structure and function; Mendelian genetics; genetics of eukaryotes and prokaryotes; recombinant DNA technology; and practical experience in techniques used in genetics research. (3 lecture hours and 3 lab hours per week) (Pre-requisites: BIOL 115/15L or 117/117L and MATH 126)

BIOL 436. GENERAL ANIMAL PHYSIOLOGY.**3 Hrs.**

In-depth current treatment of physiological principles which operate at various levels of biological organization in animals of diverse taxonomic relationships, with emphasis on vertebrate physiology. (3 lecture hours per week) (Pre-requisites: 115/115L or 117/117L and MATH 126) Offered in spring semester of even numbered years.

BIOL 461. PRINCIPLES OF EVOLUTION.**3 Hrs.**

Introduction to biologic evolution, including genetic change; the history and diversity of life; natural selection and other mechanisms of evolution; population studies; speciation, extinction; co-evolution; group behavior; and human evolution. (3 lecture hours per week) (Pre-requisites: 115, 115L, or 117, 117L and MATH 126) Offered in the spring semester of odd numbered years.

**BROADCAST
(PLEASE SEE COMMUNICATION AND MEDIA STUDIES)**

BUSINESS TECHNOLOGY (BTEC)

BTEC 115. BEGINNING KEYBOARDING.**3 Hrs.**

Using Microsoft Word, students are taught keyboard touch control and techniques to build basic speed and accuracy. Emphasis is on formatting e-mails, reports, letters, memos, tables, and other kinds of personal and business communications. (EDGE credit available)

BTEC 116. INTERMEDIATE KEYBOARDING.**3 Hrs.**

Continuation of BTEC 115. This course uses Microsoft Word and continues the development of basic keyboarding skills. The course focuses on formatting various kinds of business correspondence, reports, tables, electronic forms; and desktop publishing projects from arranged, unarranged, handwritten, and rough-draft sources with an emphasis on speed and accuracy. International formatting, legal, medical, and employment documents are covered. (Co-requisite: CS 101)

BTEC 204. ADVANCED EXCEL.**3 Hrs.**

Using Microsoft Excel, students are taught Excel advanced spreadsheet formatting. Topics include advanced formulas and logical functions; mathematical computations; data analysis; lookups; scenarios; goal seek; chart presentations; pivot tables and charts; data imports; exporting; and linking multiple workbooks, with an emphasis on critical thinking, problem solving, and decision making for marketing, finance, accounting, economics, and management. (Pre-requisite: CS 101)

BTEC 206. ADVANCED ACCESS.**3 Hrs.**

Using Microsoft Access, students are taught advanced Access data management to create fields, tables, queries, calculations, charts, forms and reports, data imports, exporting, and relationship databases, with an emphasis on critical thinking, problem solving, and decision making for marketing, finance, accounting, economics, and management. (Pre-requisite: CS 101)

BTEC 210. COMPUTERIZED ACCOUNTING.**3 Hrs.**

This course covers small business accounting using computerized software. Topics include creating a chart of accounts, recording customer and vendor transactions, processing payroll, and printing reports. Setting up a new company as well as advanced topics such as exporting to Excel software, ratios, and using the audit trail with an emphasis on analysis of business transactions and accounting reports is covered.

(Pre-requisite: CS 101)

BTEC 235. MICROSOFT WORD/WINDOWS.**3 Hrs.**

Using Microsoft Word, students are taught how to create and customize documents; format text and paragraphs; use themes, SmartArt and styles, manipulate text; control pagination; work with visual content; structure and organize content using Quick Parts, tables and lists; calculate with equations; modify tables and charts; insert and format references and captions; merge documents and data sources; compare and merge document versions; insert, modify, and delete comments; prepare documents for sharing, control document security, and create web pages. (Pre-requisite: CS 101)

BTEC 253. MEDICAL TERMINOLOGY.**3 Hrs.**

This course provides an introduction to, and working knowledge of, the spelling, pronunciation, and meaning of terms commonly used in the medical field.

BTEC 254. MEDICAL TRANSCRIPTION.**3 Hrs.**

This course is designed to prepare students in developing medical transcription skills through a building block format. Students will be exposed to medical reports that are fundamental to ambulatory care, related medical terminology, formatting styles, and specialized rules of grammar and punctuation characteristic to dictated medical reports. Students will apply these principles as they transcribe medical reports relating to outpatient health care. (Pre-requisite: Grade of C or better in BTEC 253)

BTEC 255. MEDICAL BILLING.**3 Hrs.**

This microcomputer software course provides an introduction and working knowledge of medical billing procedures used in the medical field and in medical insurance operations. (Pre-requisite: CS 101)

BTEC 256. MEDICAL CODING.**3 Hrs.**

This course provides an introduction and working knowledge of medical coding procedures used in the medical field and in medical insurance operations. (Pre-requisite: CS 101)

BTEC 265. MULTIMEDIA PRESENTATIONS.**3 Hrs.**

This course is designed to provide students with the use of multimedia information and communication capabilities available via the Internet. Students learn how to locate, access, and retrieve a variety of media including text, images, audio, and video, as well as how to develop web resources including social networking. (Pre-requisite: CS 101)

BTEC 270. INTRODUCTION TO WEB PAGE DESIGN.**3 Hrs.**

This course introduces students to the fundamentals of web development with an emphasis on good design practices and effective troubleshooting techniques. Web design software tools are used to create and manage dynamic web sites. Topics include formatting text with CSS; working with images; hyperlinks; using tables and forms; creating web page layouts; publishing a web site; and social networking tools. (Pre-requisite: CS 101)

BTEC 275. ADVANCED MICROCOMPUTER APPLICATIONS FOR BUSINESS.**3 Hrs.**

This course is an advanced integration of Microsoft Office 2013 using Excel, Access, Word, PowerPoint, the Internet and social networking with an emphasis on advanced business applications using critical thinking, problem solving, and decision making. [Common Professional Component Course] (Pre-requisite: CS 101)

BTEC 295. PROFESSIONAL DEVELOPMENT SEMINAR.**3 Hrs.**

Capstone for AAS Business Technology. Requires proctored Major Fields Test and capstone assessment project. 9Co or Pre-requisite: BTEC 275)

CHEMICAL TECH (CTEC)

CTEC 211. SPECIAL TOPICS IN ANALYTIC CHEMISTRY.

4 Hrs.

Includes a study of the gravimetric and volumetric methods of analysis. Laboratory experiments are designed to illustrate and reinforce the concepts discussed in the lecture. (Pre-requisite: CTEC 104; Co-requisite: CTEC 211L)

CTEC 212. INSTRUMENTAL ANALYSIS LABORATORY.

3 Hrs.

The study of the theory, design, and uses of modern electrochemical, spectrochemical, chromatographic, and other instruments. The laboratory includes practice in the techniques of instrumental analysis. (Pre-requisite: CTEC 211)

CHEMISTRY (CHEM)

CHEM 111. INTRODUCTION TO GENERAL CHEMISTRY.

4 Hrs.

Elementary introduction to concepts of chemistry including metric measurement; periodic properties; atomic and molecular structure; bonding; formulas and nomenclature; redox chemistry; stoichiometry; states of matter and gas laws; solutions; equilibria; and acid-base chemistry. Designed for students with no background in chemistry. Co-requisite laboratory coordinates exercises with lecture topics. (3 lecture hours and 2 lab hours per week)

CHEM 112. INTRO TO ORGANIC & BIOLOGICAL CHEMISTRY.

4 Hrs.

Introductory survey of organic and biological chemistry for students in health sciences as well as those desiring a laboratory science elective to satisfy general education requirements or as a preparation for CHEM 223. Includes nomenclature and the basic physical and chemical properties of the major classes of aliphatic and aromatic organic compounds as well as the major classes of biomolecules. The major metabolic pathways of carbohydrate, lipid and protein metabolism of eucaryotes will also be discussed. (3 lecture hours and 2 lab hours per week) (Pre-requisite: CHEM 111 or CHEM 115)

CHEM 115. FUNDAMENTALS OF CHEMISTRY 1.

4 Hrs.

Terminology and quantitative relationship; atomic structure, periodic law, chemical bonding, states of matter; and solutions. (3 lecture hours and 2 lab hours per week)

CHEM 116. FUNDAMENTALS OF CHEMISTRY 2.

4 Hrs.

Continuation of CHEM 115. Chemical equilibrium, Ionic equilibrium, electrochemistry, and organic chemistry. (3 lecture hours and 2 lab hours per week) (Pre-requisite: CHEM 115)

CHEM 231. ORGANIC CHEMISTRY.

4 Hrs.

An overview of organic chemistry with emphasis on biological applications for students in medical technology, agriculture, and nutrition. Nomenclature, structure, reactivity, and stereochemistry will be covered. (3 hour lecture and 3 lab hours per week.) (Pre-requisite: CHEM 115 and CHEM 112)

CHEM 233. ORGANIC CHEMISTRY 1.

3 Hrs.

Study of characteristic reactions, synthesis, and stereochemistry of major classes of organic compounds using a mechanistic approach. Classes of compounds studied include alkanes, alkyl halides, alkenes, and alcohols. Mechanisms studied include: free radical halogenation, nucleophilic substitution, nucleophilic addition, and electrophilic addition. (Pre-requisites: CHEM 115 and 116 or equivalent) (Co-requisite: CHEM 235)

CHEM 234. ORGANIC CHEMISTRY 2.

3 Hrs.

Continuation of CHEM 233 to include spectroscopic methods, theory, and interpretation. Classes of compounds studied include alkynes, aromatics, carbonyls, amides, amines, and synthetic polymers. Mechanisms studied include electrophilic aromatic substitution, Aldol condensation, esterification, and polymerization. Lab work includes some computer simulation, unknown analysis, and individual work. (3 lecture hours and 3 lab hours per week) (Co-requisite: CHEM 236) (Pre-requisite: CHEM 233/235)

CHEM 235. ORGANIC CHEMISTRY 1 LAB.**1 Hr.**

An introduction to microscale techniques of organic chemistry preparation and purification, this lab is designed to be taken concurrently with CHEM 233. Techniques studied will be re-crystallization, distillation, extraction, and preparation of simple aliphatic compounds. (3 lab hours per week) (Co-requisite: CHEM 233)

CHEM 236. ORGANIC CHEMISTRY 2 LAB.**1 Hr.**

An introduction to microscale techniques of organic chemistry preparation and purification, this lab is designed to be taken concurrently with CHEM 233. Techniques studied will be re-crystallization, distillation, extraction and preparation of simple aliphatic compounds. (3 lab hours per week) (Co-requisite: CHEM 233)

CHEM 305. SURVEY OF CHEMICAL ANALYSIS.**3 Hrs.**

A survey of analytical methods in chemistry, including volumetric analysis, gravimetric analysis, solution equilibria, spectrophotometry, separations, and electrochemical methods. Chromatographic and spectroscopic methods of instrumental analysis may also be included. (Pre-requisite: CHEM 116)

CHEM 410. INTRODUCTORY BIOCHEMISTRY.**3 Hrs.**

Introduction to chemistry of cellular constituents (proteins, amino acids, carbohydrates, lipids, nucleic acids, enzymes and coenzymes) and their metabolism in animals and plants. (Pre-requisites: CHEM 115 and CHEM 116, or equivalent or instructor permission) Offered in the spring semester of odd numbered years.

CHEM 412. INTRO TO BIOCHEMISTRY WET LABORATORY.**1 Hr.**

Introduction to Biochemistry Wet Laboratory. Classic and modern laboratory techniques in biochemistry. (Co or pre-requisite: CHEM 410 or instructor permission) Offered in the spring semester of odd numbered years.

CHILD DEVELOPMENT (CDEV)**CDEV 105. FAMILY AND THE CHILD.****3 Hrs.**

Examines the relationships between the young child, members of the family, and the early childhood program. Focused on the child during infancy, toddler, and preschool years including the diversity of family lifestyles and cultures. (Co-requisite: 10 hours field experience)

CDEV 155. GUIDING YOUNG CHILDREN.**3 Hrs.**

Study of developmentally appropriate classroom management and guidance. Discusses common misbehavior in early childhood and strategies for addressing the behavior. (Co-requisite: 20 hours Field Experience)

CDEV 205. YOUNG CHILDREN WITH SPECIAL NEEDS.**3 Hrs.**

An introduction to young children with special needs, addressing legal and ethical considerations as well as family and community involvement in meeting the needs of exceptional children. Includes assessment, identification, and planning to meet the needs of all children. (Co-requisite: 20 hours field experience).

CDEV 210. CURRICULUM AND STRATEGIES FOR EARLY CHILDHOOD PROGRAMS. 3 Hrs.

Explores curricula associated with early childhood programs; organizing and preparing experiences for young children including creative play; and integrating experiences in early childhood programs. (Co-requisite: 20 hours field experience)

CDEV 215. HEALTHY ENVIRONMENTS.**4 Hrs.**

Introduction to health and safety requirements and responsibilities for early childhood professionals. Health, nutrition, and safety policies, procedures, and practices are studied. Students meet state requirements for child care providers.

CDEV 220. ETHICS AND ADMINISTRATION 1.**3 Hrs.**

Background and ethics issues related to administering early childhood programs. (Co-requisite: 10 hours field experience)

CDEV 240. OBSERVATION AND ASSESSMENT SKILLS.**3 Hrs.**

Focuses on the various tools and assessments for children ages birth - age 5 years. Includes the role of assessment and documentation in curriculum development and individual learning goals and objectives. (Co-requisite: 10 hours field experience)

CDEV 242. PRESCHOOL DEVELOPMENT.**3 Hrs.**

Explores the social-emotional, cognitive, and physical development of children 3 - 6 years. Examines models and international perspectives. Apply knowledge of preschoolers to curricular choices. Discuss home, school and community connections. (Co-requisite: 20 hours field experience).

CDEV 243. INFANT AND TODDLER DEVELOPMENT.**3 Hrs.**

Explores the social-emotional, cognitive, and physical development of children from prenatal period-age 2. Relates the significance of relationships. Apply knowledge of young children to the guidance and care of infants and toddlers. (Co-requisite: 20 hours field experience)

CDEV 251. CHILD DEVELOPMENT CAPSTONE 1.**4 Hrs.**

Practicum experience in a setting related to professional goals of a child development student. (Co-requisite: 120 hours field experience)

CDEV 255. CHILD DEVELOPMENT SEMINAR.**3 Hrs.**

Weekly seminar focusing on students' practicum experiences and other topics and issues that are timely to the profession. Concurrent enrollment with CDEV 251 required.

CDEV 300. THEORIES OF LEARNING IN EARLY CHILDHOOD EDUCATION.**3 Hrs.**

Focus on psychological learning principles and their classroom applications in early childhood education. Major classical and modern theories of learning are emphasized. (Pre-requisite: Admission to the Child Development BAS Program. Co-requisites: Field experience hours [20 hours] Field experience must be completed to pass this course.)

CDEV 325. ETHICS AND ADMINISTRATION 2.**3 Hrs.**

Background and ethics issues related to administering early childhood programs. Emphasizes managing operations and budget, meeting state regulations, licensing requirements, and building programs. (Pre-requisite: Admission to Child Development BAS Program; Co-requisite: 10 hours field experience)

CDEV 332. SCIENCE EXPLORATION FOR PRE-K.**3 Hrs.**

Developmentally appropriate methods of teaching science for preschoolers, toddlers, and infants. (Pre-requisite: Admission to Child Development BAS Program; Co-requisite: 10 hours field experience).

CDEV 335. CREATIVE EXPERIENCES.**3 Hrs.**

Examines theories of play and creative expression in early childhood education. Study of methods for integrating play, art, construction, music, movement, dance, and drama with content standards throughout the curriculum. (Pre-requisite: Admission to Child Development BAS Program; Co-requisite: 10 hours field experience).

CDEV 336. EARLY SOCIAL STUDIES.**3 Hrs.**

Theories and methods of social studies education in early childhood education. (Pre-requisite: Admission to Child Development BAS Program; Co-requisite: 10 hours field experience).

CDEV 405. PRACTICUM IN EARLY CHILDHOOD.**3 Hrs.**

Advanced practicum experience in a setting related to professional goals of a child development student. Capstone course. Field experience required. (Pre-requisite: Admission to Child Development BAS Program; Co-requisite: 70 hours field experience)

CDEV 406. SEMINAR IN EARLY CHILDHOOD.**4 Hrs.**

Advanced practicum experience in a setting related to professional goals of a child development student. Capstone course. Field experience required. (Pre-requisite: Admission to Child Development BAS Program; Co-requisite: 70 hours field experience).

COLLEGE (COLL)**COLL 101. ORIENTATION TO COLLEGE.****1 Hrs.**

Students develop the skills necessary for success through an integrated curriculum. Content will focus on personal development, interpersonal/academic skills, campus connection and community engagement.

COMMUNICATION AND MEDIA STUDIES

CMS 110. BASIC NEWSWRITING.

3 Hrs.

Introduction to the fundamentals of covering and writing news. Reporters must acquire skills to identify a story and its essential elements, gather information efficiently, place it in a meaningful context, and write concise and compelling accounts, as well as learning the basics of design and layout.

CMS 117. INTRO TO SOCIAL MEDIA MANAGEMENT.

3 Hrs.

Introduction to Social Media is a three-credit survey course that acquaints students with contemporary social media issues by examining the content, theory, and evolution of social media. The course emphasizes the ever changing social media atmosphere and the mass amount of social media outlets available to businesses. The history, development and current structure of social media are all covered.

CMS 215. MEDIA WRITING.

3 Hrs.

Introduction to the fundamental writing and fact-gathering skills of journalism for print and electronic media.

CMS 217. ADVANCED SOCIAL MEDIA MANAGEMENT.

3 Hrs.

Social Media management is a three-credit survey course that engages students in social media and society issues by developing methods of analysis and critical understanding. The class will draw from a range of sources including cultural studies, media anthropology, and communication theory to understand the impact of social media on today's world. Copyright law, social media effectiveness, and the analysis of good and bad types of social communication will be covered. Students will develop guidelines for using social media on personal and professional accounts while cultivating, curating, and monitoring those accounts. Students will further develop basic social media and communication skills while learning the landscape and best practices.

CMS 218. NEWS REPORTING.

3 Hrs.

Essentials of news gathering and writing, beat assignment reporting, interviewing and specialized reporting. Overview of ethics and legal issues. Course focus is print journalism.

CMS 219. FUNDAMENTALS OF BROADCAST PRODUCTION.

3 Hrs.

This course is an introduction to radio broadcasting focusing on development, function, and artistry. It includes studio practices, procedures and demonstrations as related to radio applications. Hands-on production experience reinforces theoretical material.

CMS 220. PHOTOGRAPHY.

3 Hrs.

Cameras, composition, film processing, enlarging, lighting, and finishing; news photography; and picture editing. (Student must provide own camera)

CMS 221. BROADCAST ANNOUNCING.

3 Hrs.

This course is designed to give the student a broad overview of broadcast announcing procedures in a number of different broadcast situations. The student will also practice delivery of a wide range of broadcast copy.

CMS 223. BROADCAST PROGRAMMING.

3 Hrs.

A study and practical use of broadcast equipment, announcing techniques, programming concepts, functions of a disc jockey (DJ), and researching, writing, and producing a newscast.

CMS 225. MEDIA DESIGN 1.

1 Hr.

Photography, reporting, layout, and paste-up of college newspaper in informal lab setting.

CMS 226. MEDIA DESIGN 2.

1 Hr.

Continuation of CMS 225. Students will assume editorial leadership of the college newspaper. (Pre-requisite: CMS 225)

CMS 230. FUNDAMENTALS OF STRATEGIC COMMUNICATION.

3 Hrs.

Discover the relationships between public relations practitioners, advertisers, marketing representatives and the news media, and how all are utilized to shape public perceptions. This course introduces students to the basics of target audiences, messages, special events, and how they all fit into a cohesive program as part of the promotional mix of an organization.

CMS 235. FUNDAMENTALS OF VIDEO PRODUCTION.**3 Hrs.**

This course is designed to teach broadcast students digital video and audio techniques for productions, including field reports, newscasts, and studio-based programs.

CMS 239. BROADCAST NEWSWRITING.**3 Hrs.**

Broadcast Journalism is concerned with HOW meaning is created through pictures and/or sound. Broadcast Journalism is a medium for the ear and/or the eye. Whereas as a print journalist writes for the eye, to be read, the broadcast journalist writes for the ear, to be heard and in television, for the eye, to be seen.

CMS 240. MULTIMEDIA REPORTING.**3 Hrs.**

To build upon the fundamentals of gathering, organizing, evaluating and writing objective reports/broadcasts, and to provide them with an understanding of what a career in the age of digital journalism entails.

CMS 317. SOCIAL MEDIA CAMPAIGNS.**3 Hrs.**

Social Media Campaigns engages students in actual social media by conducting original research, constructing a campaign plan, producing original materials for the campaign, and tracking the campaign's success. (Pre-requisite: CMS 217).

CMS 329. SPORTS NEWS WRITING.**3 Hrs.**

Take me out to the ballgame, but make sure I have a pencil and paper in hand. This course teaches broadcasters how to analyze and write content for covering sporting events.

CMS 339. REPORTING PUBLIC AFFAIRS.**3 Hrs.**

This course is an introduction to public affairs reporting, including coverage of local government, public schools, courts, crime, and social services. Students cover anything from town government and school board meetings to trials and the police beat.

CMS 349. SPORTS REPORTING.**3 Hrs.**

Play ball – not just tell how it is played in this course that demonstrates sports reporting, including trends and philosophies of sports writing, writing for varying styles of sports, interviewing, features, columns, and legal aspects of sports reporting.

CMS 359. BROADCAST REPORTING.**3 Hrs.**

Broadcast presents a unique partnership between the reporter and the listener or viewer – as you describe the scene, the listener must imagine it. Writing for broadcast must be crisp, clear, concise and evocative all at the same time.

CMS 360. DIGITAL IMAGING.**3 Hrs.**

Methodologies and techniques for using both traditional photography and the computer in creating and manipulating digital imagery. Students will explore a variety of creative techniques for producing, editing, and altering images using computers, software, and digital tools. Emphasis will be on using Photoshop as a tool in the process of image creation, manipulation, and enhancement for visual expression and communication.

CMS 410. GRAPHIC DESIGN.**3 Hrs.**

Creative and practical aspects of typography, layout, and design; preparation of comprehensive and camera ready layouts with use of desktop publishing.

CMS 419. ADVANCED BROADCAST PRODUCTION.**3 Hrs.**

Students learn the theory and techniques of sophisticated audio production, including analog and digital multi-track recording, mixing, signal processing, live remote recording, digital editing, creative sound production, and sound design. (Pre-requisite: CMS 219)

CMS 425. VIDEO PRODUCTION.**3 Hrs.**

Video production, also known as videography, is the process of capturing video by capturing moving images, and creating combinations of parts of the video in live production and post-production. (Pre-requisites: CMS 235)

CMS 428. MEDIA ETHICS AND LAW.**3 Hrs.**

How ethics and law work together to help create and maintain the media environment. Examines ethical paradigms within a legal framework, with special emphasis on morality. (Pre-requisite: PHIL 150)

CMS 437. STRATEGIC COMMUNICATION WRITING/CASE STUDIES.**3 Hrs.**

Discover how to become an effective writer in a variety of formats expected of strategic communication practitioners. This course introduces students to not only writing, but also a study of cases and situations designed to help students develop agility in applying effective strategic communication practices.

CMS 439. STRATEGIC COMMUNICATION CAMPAIGN MANAGEMENT.**3 Hrs.**

Students will conduct original research, construct a comprehensive campaign plan, and produce public relations, advertising, and marketing collateral material that could be used to implement their campaign. This course culminates with the pitching of a campaign to a client.

CMS 440. COMMUNICATION AND MEDIA STUDIES INTERNSHIP**3 Hrs.**

The internship course is designed to provide each student with the opportunity to use classroom knowledge in a practical/real-world setting with the support of both a faculty adviser and a professional in communications.

COMMUNICATION STUDIES (COMM)**COMM 105. INTRODUCTION TO MASS MEDIA.****3 Hrs.**

Critical examination of mass media with special emphasis on ways in which social, economic, and psychological factors influence the structure, functions, and effects of the media.

COMM 111. FUNDAMENTALS OF SPEECH.**3 Hrs.**

Principles of public communication; public speaking.

COMM 112. SMALL GROUP COMMUNICATION.**3 Hrs.**

This course focuses on the theories, concepts and skills necessary to function effectively in a variety of group settings. Topics include group norms, rules, roles, conflict management, leadership, problem solving, decision-making and team building.

COMM 131. ORAL INTERPRETATION.**3 Hrs.**

Theory and practice in interpreting literature orally; selection, analysis, and presentational techniques; poetry, prose, and drama are explored.

COMM 202. INTERPERSONAL COMMUNICATION.**3 Hrs.**

One-to-one communication; strengths and weaknesses of one's own communication skills; approaches to conflict; listening; verbal and nonverbal interactions.

COMM 210. AMERICAN SIGN LANGUAGE 1.**3 Hrs.**

An Introduction to American Sign Language Part 1. Recognize and produce approximated 700 signs, understand basic structure of ASL, and communicate expressively in one to one conversations.

COMM 212. AMERICAN SIGN LANGUAGE 2.**3 Hrs.**

Improve skills needed to communicate in sign language. Includes increasing sign language vocabulary, practicing finger spelling, and communicating with signs. (Pre-requisite: COMM 210)

COMM 281. CONTEST SPEAKING: DEBATE.**1 Hr.**

Concentrates on events that are prepared and memorized in advance.

COMM 282. CONTEST SPEAKING: PLATFORM.**1 Hr.**

Concentrates on the events that are original but which are not completely prepared and memorized in advance: extemporaneous and impromptu.

COMM 283. CONTEST SPEAKING: INTERPRETATION.**1 Hr.**

Concentrates on the interpretation of prose, poetry, and drama in the contest setting. Emphasis upon finding literature, analyzing and interpreting it.

- COMM 287. READERS THEATRE.** **1-3 Hrs.**
The study and practice of the art including script analysis, interpretation, proper use of the expressive voice, staging approaches including both the ensemble and solo performance. Students will participate in a Reader's Theatre Program.
- COMM 295. SEMINARS IN COMMUNICATION.** **1-3 Hrs.**
- COMM 303. BUSINESS & PROFESSIONAL COMMUNICATION.** **3 Hrs.**
This course is an application of the principles of communication. Simulated projects and oral presentations will be used to refine communication skills necessary for entry-level positions within business and other professional settings. (Pre-requisite: COMM 111, COMM 112, or COMM 202)
- COMM 304. HUMAN COMMUNICATION & RATIONAL DECISIONS.** **3 Hrs.**
Argumentation, small group, persuasion, and systems theories application to the process and outcome of rational decision-making in communication. (Pre-requisite: Grade of C or higher in ENGL 101, ENGL 102 and COMM 111)
- COMM 306. HUMAN COMMUNICATION IN ORGANIZATIONS/INSTITUTIONS.** **3 Hrs.**
Communication processes and problems in business and non-business organizations and institutions with attention to practical application.
- COMM 308. NONVERBAL COMMUNICATION.** **3 Hrs.**
A study of nonverbal behavior as it occurs in personal, workplace, and cross-cultural settings.
- COMM 309. HEALTH COMMUNICATION.** **3 Hrs.**
This course will provide an introduction to communication within the healthcare context using an interpersonal and organizational approach. It will examine how individuals construct, exchange and evaluate health care messages.
- COMM 310. ARGUMENTATION AND DEBATE.** **3 Hrs.**
This course provides an overview of the principles of argumentation, logic, reasoning, evidence, forms of debate, and decision making. Application of the principles will take the form of in-class debates. (Pre-requisite: D or better in COMM 111).
- COMM 316. INTERCULTURAL COMMUNICATION.** **3 Hrs.**
A comprehensive overview of communication in various cultures.
- COMM 404. PERSUASION - THEORY AND RESEARCH.** **3 Hrs.**
Theory and research in persuasion, emphasizing a critical understanding and a working knowledge of select principles of speech communication upon changing attitudes, beliefs, values and behavior. (Pre-requisites: ENGL 101, ENGL 102 and COMM 111)
- COMM 460. COMMUNICATION SENIOR CAPSTONE.** **1 Hr.**
This course provides students with an opportunity to demonstrate comprehensive learning and application in communication studies. The course will also focus on final preparation for work and/or graduate school. (Pre-requisite: 15 hours of upper division COMM courses)

COMPUTER AND INFORMATION TECHNOLOGY (CIT)

- CIT 101. PC MANAGEMENT AND MAINTENANCE.** **5 Hrs.**
This is an introductory course on PC management, maintenance and troubleshooting. Topics covered include operating systems, OS architecture, and software/hardware relationships.
- CIT 102. NETWORK MANAGEMENT, MAINTENANCE & ADMIN.** **4 Hrs.**
Course teaches the use, design, and application of Excel spreadsheets from a technician viewpoint. Topics include: creating and using spreadsheets, predefined functions, graphs and charts, filters, and application design and development.
- CIT 105. INTRODUCTION TO NETWORKS (Cisco #1).** **5 Hrs.**
The first of four courses to prepare the student for the Cisco CCNA certification. Topics covered in this semester include the OSI Model, the TCP/IP Model, IP addressing, sub-netting, data encapsulation, basic network design and troubleshooting. (Pre or Co-requisite: MATH 125 or MATH 126 with grade of C or higher)

CIT 106. ROUTING AND SWITCHING ESSENTIALS (Cisco #2).**4 Hrs.**

The second in a series of four courses required to prepare the student for the Cisco CCNA certification. Topics covered in this semester include routing, switching, VLANs, ACLs, DHCP, NAT, and troubleshooting. (Pre-requisite: Grade of C or higher in CIT 105)

CIT 111. NETWORKING INFRASTRUCTURE (MCP #1).**3 Hrs.**

The first in the series of courses required to prepare the student for Microsoft MCSE certification. Topics covered in this semester include all aspects of Windows OS including OS architecture, OS administration of resources, hardware devices/drivers and the OS, optimizing OS performance and reliability, and OS security and troubleshooting. (Co-requisite: CS 101)

CIT 112. SERVER CONFIGURATION & ADMINISTRATION (MCP #2).**3 Hrs.**

The second in the series of courses required to prepare the student for the Microsoft MCSE certification. Topics include all aspects of the Windows Server, network access to servers resources, and network server hardware devices and drivers. Server performance, reliability, and availability. Windows network connections, security and server troubleshooting. (Pre-requisite: Grade of C or better in CIT 111)

CIT 114. WINDOWS OPERATING SYSTEMS.**3 Hrs.**

The second in the series of three courses required to prepare the student for the Microsoft MCP certification. Topics covered in this semester include all aspects of a Windows workstation OS and a Windows Server OS. Network access to server resources. Network server hardware devices and driver. Server performance, reliability, and availability, network connections, security and server troubleshooting. (Pre-requisite: CS 101 or concurrent).

CIT 130. PRINCIPLES OF INFORMATION SYSTEMS.**3 Hrs.**

An introduction to basic computer information systems principles and terminology, offering a broad survey of the discipline and illustration of the importance of determining information system requirements. It will examine the importance of information systems in networked and global business. Topics will include hardware and software selection criteria, scheduling, conversion planning, legal and ethical issues, and security. (Pre-requisite: CS 101 or concurrent).

CIT 140. ELECTRICITY & DIGITAL ELECTRONICS FUNDAMENTALS.**2 Hrs.**

Study of theory and laboratory experiments in basic and advanced direct current circuits as well as networks. Concepts covered include voltage, current, resistance, conductance and power. Topics studied are: Ohms Law, Series Circuits, Parallel Circuits, Complex Circuits and Network Theorems. (Pre-requisites: MATH 125 or 126 or concurrent; Co-requisite: CIT 140L)

CIT 140L. ELECTRICITY & DIGITAL ELECTRONICS FUNDAMENTALS LAB.**1 Hr.**

Application of theory and laboratory experiments in basic and advanced direct circuits as well as networks. Applied concepts from CIT 140 include voltage, current, resistance, conductance and power. Topics studied are: Ohms Law, Series Circuits, Parallel Circuits, Complex Circuits and Network Theorems. (Co-requisite: CIT 140)

CIT 205. SCALING NETWORKS (Cisco #3).**4 Hrs.**

The third of four courses to prepare the student for the Cisco CCNA certification. Topics covered in this course: enhanced switching technologies, redundancy protocols, wireless networking, complex routing protocols, and managing Cisco IOS software. (Pre-requisite: Grade of C or higher in CIT 106)

CIT 206. CONNECTING NETWORKS (Cisco #4).**4 Hrs.**

The last in a series of four courses required to prepare the student for the Cisco CCNA certification. Topics covered in this semester include wide-area network (WAN) technologies and network services for converged applications, data link protocols, and virtual private network (VPN) technologies. (Pre-requisite: Grade of C or higher in CIT 205)

CIT 211. NETWORK INFRASTRUCTURE. (MCP #3).**3 Hrs.**

The third in the series of courses required to prepare the student for the Microsoft MCITP certification. Topics covered include DNA, DHCO, Remote access, network protocols, WINS, IP routing, NAT and troubleshooting. (Pre-requisite: Grade of C or higher in CIT 114)

CIT 240. INTRODUCTION TO LINUX.**3 Hrs.**

Students learn the basics of how to install, configure, and use the Linux operating system; learn the commands and graphical interfaces; and configuration and troubleshooting techniques. (Pre-requisites: Grade of C or higher in CS 101 or concurrent)

CIT 260. CAPSTONE PROJECT.**3 Hrs.**

Students will conduct a semester-long major networking project. The project will include proper network design, documentation and an oral presentation. Students will sit for the CompTIA Network+ industry certification. Capstone course. (Pre-requisite: Grade of C or higher in CIT 206 or concurrent CIT 240 or concurrent and CIT 211 or concurrent)

CIT 280. PRACTICUM IN COMPUTER/NETWORKING APPLICATIONS.**1 Hr.**

This is a course designed to give the student experience in real world computer/networking applications. The student will work at the school a minimum of 5 hours per week. The student will work as requested in computer labs, faculty/staff offices as well as with the university network administrator in a variety of computer related responsibilities. (Co-requisite: CIT 101 and CS 101)

CIT 305. ADVANCED ROUTING (Cisco #5).**5 Hrs.**

This course is the first in a series of four required to prepare the student for a career in networking and the Cisco CCNP certification. Topics covered include scalable networks, advanced IP addressing management, advanced routing, OSPF, multi-area OSPF, EIGRP, route optimization, BGP, scaling BGP, and security. (Pre-requisite: Grade of C or higher in CIT 206)

CIT 306. SECURE CONVERGED WAN's (Cisco #6).**5 Hrs.**

This course is one of four required to prepare the student for a career in networking and the Cisco CCNP certification. Topics include remote network connectivity requirements, teleworker connectivity, IPSec VPN's, Frame Mode MPLS, Cisco device hardening, and Cisco IOS threat defense features. (Pre-requisite: Grade of C or higher in CIT 206)

CIT 310. FUNDAMENTALS OF VOICE AND DATA CABLING.**5 Hrs.**

Hands-on lab oriented course that provides a curriculum on the physical aspects of voice and data cabling and installation.

CIT 320. BUILDING A VIRTUAL INFRASTRUCTURE.**3 Hrs.**

This course will introduce students to the concepts and practices of computer virtualization, especially in the context of enterprise datacenter virtualization.

CIT 330. DIRECTORY SERVICES INFRASTRUCTURE (MCP #4).**3 Hrs.**

Advanced class to help prepare students for the MCITP certification. Topics include active directory, DNS for active directory, network management, components of active directory and troubleshooting active directory security. (Pre-requisite: Grade of C or higher in CIT 211)

CIT 331. DIRECTORY SERVICES DESIGN (MCP #5).**3 Hrs.**

The fifth in the series of courses required to prepare the student for the Microsoft MCSE certification. Topics include analyzing business requirements, analyzing technical requirements, directory services architecture design and service location design. (Pre-requisite: Grade of C or higher in CIT 112; Co-requisite: CIT 211)

CIT 333. MANAGING MS-SQL SERVER.**3 Hrs.**

Managing MS-SQL Server will teach students to install, configure, maintain, and troubleshoot a Microsoft SQL Server. (Pre-requisite: Grade D or higher in CIT 114)

CIT 340. ADVANCED LINUX NETWORKING.**4 Hrs.**

Students learn how to design, configure, and maintain network services with the Linux operating system and learn advanced configuration and troubleshooting techniques. (Pre-requisite: C or higher in CIT 240)

CIT 380. PRACTICUM IN SYSTEM ADMINISTRATION.**3 Hrs.**

Students will experience hands-on operation and maintenance of a computer network, communicating with network users, troubleshooting problems, and documenting network changes. (Pre-requisite: Grade of B or higher in CIT 111, 114; Grade of A in CIT 211; Instructor permission)

CIT 405. MULTI-LAYER SWITCHED NETWORKS (Cisco #7).**5 Hrs.**

This course is the third in a series of four required to prepare the student for a career in networking and the Cisco CCNP certification. Topics covered include LAN media, advanced switch configuration, VLAN's spanning tree protocol and redundant links, routing between switches, multi-layer switching, hot standby routing protocol, multi-casting, and restricting network access. (Pre-requisite: Grade of C or higher in CIT 206)

CIT 406. ADVANCED NETWORK TROUBLESHOOTING (Cisco #8).**5 Hrs.**

This course is one of four required to prepare the student for a career in networking and the Cisco CCNP certification. Topics covered include network maintenance tasks, troubleshooting models, troubleshooting tools, and troubleshooting of specific network technologies. (Pre-requisite: Grade C or higher in CIT 305 and CIT 405)

CIT 410. AUTOMATING SYSTEM ADMINISTRATION.**3 Hrs.**

Automating System Administration will teach students how to use a modern, cross-platform scripting language to automate complex and repetitive systems administrative tasks.

CIT 430. NETWORK SECURITY DESIGN (MCP #6).**3 Hrs.**

The sixth in the series of courses required to prepare the student for the Microsoft MCITP certification. Topics include analyzing business and technical requirements for network security, network security design, security between networks and communication channel security. (Pre-requisite: Grade of C or better in CIT 211 or concurrent)

CIT 431. NETWORK INFRASTRUCTURE DESIGN (MCP #7).**3 Hrs.**

The seventh in the series of courses required to prepare the student for the Microsoft MCITP certification. Topics include analyzing business and technical requirements for network infrastructure design, Internet connectivity design, WAN infrastructure design, and network management and implementation design. (Pre-requisites: Grade of C or higher in CIT 114 and CIT 211 or concurrent)

CIT 460. INTERDISCIPLINARY PROJECTS.**3 Hrs.**

An investigation of an actual or experimental situation; may involve the design, construction, and testing of an experimental apparatus. Students will be assigned to a multiple-disciplinary project team. Capstone course. (Pre-requisite: Grade of C or higher in STEM 420)

COMPUTER SCIENCE (CS)**CS 100. COMPUTER LITERACY.****3 Hrs.**

Students will learn basic computer concepts relating to current operating systems, the Internet, setting up a home network, using multimedia and photo functions. Word processing, spreadsheet and presentation software will be covered.

CS 101. INTRODUCTION TO PC APPLICATIONS.**4 Hrs.**

Students learn the basics of information technology and computer science, and use Microsoft Office applications for problem solving and data analysis. (Pre-requisite: College level MATH or concurrent or appropriate MATH placement score)

CS 102. SPREADSHEET APPLICATIONS.**2 Hrs.**

Course teaches the use, design, and application of Excel spreadsheets from a technician viewpoint. Topics include: creating and using spreadsheets, predefined functions, graphs and charts, filters, and application design and development.

CS 121. INTRODUCTION TO PROGRAMMING.**4 Hrs.**

Students study and learn the fundamentals of computer programming techniques to solve problems. Topics include: programming language structure, syntax, style, types of data, variables, functions, control structures, and algorithms. (Pre-requisite: Grade of C or higher Math 125, Math 126, Math 128, Math 129, Math 150, Math 155, Math 156 or Math 211 or better, or concurrent)

CS 122. OBJECT ORIENTED PROGRAMMING.**4 Hrs.**

This course introduces new programming tools required to solve more advanced problems. Students will study object-oriented design and programming including using interfaces, inheritance, and the fundamentals of data sets and data structures. (Pre-requisite: Grade of "C" or higher in CS 121; grade of "C" or higher in Math 125, Math 126, Math 128, Math 129, Math 150, Math 155, Math 156 or Math 211)

CS 129. WEB PAGE DESIGN.**3 Hrs.**

Students will learn how to create web sites using Adobe Dreamweaver by critical thinking, problem-solving approaches involving hands-on projects. Students must pass an industry-standard external assessment. (Pre-requisite: CS 101 or concurrent)

CS 201. DATABASE THEORY AND DESIGN.**3 Hrs.**

Introduction to database structure, organization, and retrieval. Query languages, normalization, file structures, database security and distributed database systems will be discussed. (Pre-requisite: Grade of C or higher in CS 121 or CIT 410)

CS 220. WEB APPLICATION PROGRAMMING.**3 Hrs.**

Students learn how to design, develop, and deploy ASP.NET web applications. This course will introduce students to the use of web programming and databases to create dynamic web-based applications for businesses. (Pre-requisites: Grade of C or higher in CS 129 or concurrent and CS 201 or concurrent)

CS 221. DATA STRUCTURES.**4 Hrs.**

The conceptualization and usage of software data structures and abstract data types to solve complex problems. Topics include using standard libraries to develop complex software and analyze algorithms for efficiency and performance. (Pre-requisite: Grade of "C" or higher in CS 122)

CS 260. COMPUTER SCIENCE CAPSTONE.**3 Hrs.**

This course is the final capstone project for the CS degree. It is designed to give the student supervised experience in a real world software development. The student will undertake a real world project that will encompass all the different subject areas covered in the CS program. Students will also sit for an industry certification exam. (Pre-requisites: Grade of C or higher in CS 301 or concurrent, CS 220 or concurrent, and CS 221 or concurrent)

CS 295. SEMINAR.**Variable Hrs.**

Designed for small groups interested in a particular topic. Participants will present material for discussion. Course may be repeated up to 6 credit hours. (Pre-requisite: departmental approval)

CS 302. SYSTEM ANALYSIS AND DESIGN.**3 Hrs.**

Analysis and design of computer-based information systems; organization of information systems; techniques for conducting system studies; developing specifications and design; and documentation. (Pre-requisite: Grade of C or higher in CIT 130)

CS 309. OPERATING SYSTEMS.**3 Hrs.**

Students learn the history and internal workings of operating systems software, the fundamentals of UNIX operating system, and learn the C programming language. (Pre-requisites: Grade of C or higher in CS 221)

CS 320. OBJECT ORIENTED DESIGN.**3 Hrs.**

Object-oriented design is the process of planning a system of interacting objects for the purpose of solving a software problem. (Pre-requisite: Grade of C or higher in CS 221)

CS 321. MOBILE APPLICATION DEVELOPMENT.**3 Hrs.**

This course teaches how to design, author, and publish applications for mobile devices such as smart phones and tablets. (Pre-requisites: Grade of C or higher in CS 122)

CS 329. ADVANCED WEB PAGE DESIGN.**3 Hrs.**

Students will learn how to create 3D objects and characters in a three dimensional graphics program for use in games, animated advertisements and web sites. Students enrolled in CS 330 will be required to cover more material.

CS 401. COMPUTER NETWORKS.**3 Hrs.**

Understanding of the design of software to support computer networks, layered protocol architecture, and distributed operating systems. Other topics include switching, encryption, data compression, and security. (Pre-requisite: Grade of C or higher in CS 221)

CS 403. SOFTWARE ENGINEERING AND DATA STRUCTURES.**3 Hrs.**

Dealing with problems of programming in the large, software life cycle, object-oriented design, numerical algorithms, graph algorithms, pattern matching and encryption methods. (Pre-requisite: Grade of C or higher in CS 221)

CS 404. WEB SERVICES.**3 Hrs.**

Students learn the use of SOAP and REST technologies, and using the Internet as a platform for building distributed information systems. (Pre-requisites: C or higher in CS 220 and CS 221)

CS 420. ADVANCED WEB DEVELOPMENT.**3 Hrs.**

Students learn the use of the Model/View/Controller (MVC) programming paradigm in web application development. (Pre-requisites: C or higher in CS 220 and CS 221)

CS 460. SENIOR PROJECT.**3 Hrs.**

Students will present a systems analysis and design project as a final senior project in Computer Information Systems. Capstone course. (Pre-requisite: STEM 420)

CRIMINAL JUSTICE (CJ)**CJ 111. INTRODUCTION TO CRIMINAL JUSTICE.****3 Hrs.**

Introductory course designed to familiarize students with the criminal justice system. Emphasis is placed on understanding the nature, functions, and limits of law and the criminal justice process from arrest to final disposition.

CJ 112. CRIMINAL LAW.**3 Hrs.**

Covers substantive criminal and constitutional laws and how they relate to the criminal justice system. Examination of case, common, and penal law in conjunction with the Bill of Rights.

CJ 122. POLICE COMMUNITY RELATIONS.**3 Hrs.**

A study of the philosophy and history of American law enforcement: limitations imposed on law enforcement in a democratic society, law enforcement agencies, and police ethics. Special emphasis is placed on the police and community relations.

CJ 123. INTRODUCTION TO CORRECTIONS.**3 Hrs.**

A survey of the history of corrections; the philosophy of punishment; historical and contemporary correctional theories; and correctional institutions, services and programs with an emphasis on correctional policies.

CJ 143. PRINCIPLES OF PRIVATE SECURITY.**3 Hrs.**

An overview of the security field, covering the organization and management of the security function in industry, business, government and institutions. The protection of personnel, facilities and other assets as well as the administrative, legal and technical problems of loss prevention and control are analyzed. Various areas within the security field are explored along with employment opportunities.

CJ 160. CRISIS/DOMESTIC COMMUNICATION.**3 Hrs.**

A course providing knowledge of crisis theory and the development of communication skills pertaining to intervention services for family violence, sexual assault and other crisis situations.

CJ 212. ETHICS IN CRIMINAL JUSTICE.**3 Hrs.**

An introduction to fundamental ethical theory, doctrines, controversies, and the rules of moral judgment. Emphasis is placed on reforms and unethical themes in criminal justice and criminal justice management. (Pre-requisite: Grade of C or higher in CJ 111)

CJ 213. PROBATION AND PAROLE.**3 Hrs.**

The study of the development, organization, operation, and outcomes of the systems of probation and parole as substitutions for incarceration methods; selection, success criteria, and public attitudes are addressed.

CJ 226. PENOLOGY.**3 Hrs.**

Development of interpersonal communication and decision making skills for direct intervention with correctional clients and analysis of current methods of correctional treatment with a focus on rehabilitation.

CJ 230. WOMEN AND CRIME.**3 Hrs.**

An introductory examination of women's roles in the various aspects of criminal justice, including the various theories and approaches to the slow but progressive changes taking place by women as offenders, victims and professionals within the criminal justice system who are women.

CJ 231. CRIMINAL INVESTIGATIONS.**3 Hrs.**

Introduces the investigative procedures for concluding that a crime was committed. The course also introduces the processes of recognizing, collecting and preparing physical evidence for transmission to court and preparing an investigation report in the potential prosecution of a criminal case

CJ 245. VICTIMOLOGY.**3 Hrs.**

An introductory examination of victimology within the sociological framework in order to deepen the student's understanding of the victim of a crime. The student will explore the role of victimology in today's criminal justice system, examining the consequences of victimization and the various remedies now available for victims.

CJ 255. DRUGS IN AMERICA.**3 Hrs.**

A course designed to provide an overview of drug issues in America, including an understanding of drugs and substance abuse, historical and contemporary responses to the drug problem, and the role of the criminal justice system in responding to substance abuse through prevention and treatment.

CJ 270. COURTROOM PROCEDURE.**3 Hrs.**

An introduction and overview of courtroom procedures, to include the historical influences on the court system, the steps in the criminal justice system prior to trial (including investigation, arrest, and pre-trial proceedings), and the trial process itself and post-trial proceedings such as sentencing and appeals.

CJ 280. DEATH INVESTIGATIONS.**3 Hrs.**

This course will cover the procedures in conducting death investigations from crime scene through courtroom trial of death investigations. Topics include the role of the medical examiner/coroner, cause and manner of death, identifying human remains, the autopsy and interpretation of various types of injuries, equivocal death investigations and legal considerations in death cases.

CJ 285. BASIC CJ RESEARCH METHODS.**3 Hrs.**

Explores basic concepts and terminology related to social science research used in CJ. Emphasis is placed on reading and understanding academic research articles and other relevant sources of data and information pertinent to criminal justice. (Pre-requisites: Grade of C or higher in CJ 111 and ENGL 102)

CJ 290. PROFESSIONALISM IN CRIMINAL JUSTICE.**3 Hrs.**

Provides instruction on the many facets of professional behavior within the criminal justice system. This course examines the nuances of establishing a professional identity associated with being a criminal justice practitioner. The capstone course for the Certificate in Criminal Justice.

CJ 291. INTERNSHIP.**3 Hrs.**

Provides on-site, supervised observation and participation in various law enforcement areas. Students work with the respective agencies in the performance of regular criminal justice related duties. This course bridges the gap between theory and practice and requires a specific number of field work hours each week and a periodic seminar. (Serves as the capstone for the AAS degree, and is to be taken the semester of graduation)

CJ 301. HISTORY OF CRIME AND PUNISHMENT.**3 Hrs.**

The development of the legal world with a focus on the history of criminal activity and punishment from recorded history through the modern age. (Pre-requisite: Grade of C or higher in CJ 111 or LS 101)

CJ 305. INTERVIEWING.**3 Hrs.**

This course concentrates on the theories and applications of law enforcement interviewing techniques. The learner examines the issues and impacts of proper and improper application of interviewing skills on the criminal justice system. (Pre-requisite: Grade of C or higher in CJ 111 or LS 101. Requires admission to BAS in Criminal Justice program or BAS Legal Studies program or signature of program coordinator)

CJ 306. CRISIS MANAGEMENT.**3 Hrs.**

This course will examine the role of criminal justice in the proper response to and management of crisis incidents. The course will focus on the Federal Emergency Management Agency's (FEMA) National Incident Management System (NIMS) and Incident Command System (ICS). The course will also explore appropriate responses for interacting with individuals experiencing a crisis, including the purpose of crisis intervention team models. (Pre-requisites: Grade of C or higher in CJ 111. Admission to BAS in Criminal Justice Program or signature of program coordinator)

CJ 311. CRIMINAL BEHAVIOR.**3 Hrs.**

Both life course and biosocial perspectives of crime and offending are examined. Research issues covered include: criminal behavior across developmental stages; the influence of biology and molecular genetics on behavior; and programmatic intervention. (Pre-requisite: Grade of C or higher in SOC 232)

CJ 315. POLICE TECHNOLOGY.**3 Hrs.**

This course will cover the history, current and future uses of technology in the criminal justice field. Attention will be given to technical aspects of various forms of technology, implementation and interoperability, and ethical and legal implications. (Pre-requisite: Grade of C or higher in CJ 111. Admission to BAS Criminal Justice Program or signature of program coordinator)

CJ 320. POLICE ADMINISTRATION AND SUPERVISION.**3 Hrs.**

Identifies the investigative procedures used in the process of fact gathering, testing and confirmation techniques by police administrators in relationship to effective utilization of resources. Examines the executive's responsibilities, provides for implementation of command policy, and studies the auxiliary services in support of police operations. (Pre-requisites Grade of C or higher in CJ 111. Admission to the BAS in Criminal Justice Program or signature of program coordinator.)

CJ 321. EVIDENCE COLLECTIONS AND HANDLING.**3 Hrs.**

This course will cover the proper ways to locate, identify, collect and process evidence at a crime scene, the proper way to request lab examinations and the proper ways to submit to a crime lab. (Pre-requisite: Grade of C or higher in CJ 111. Admission to BAS in Criminal Justice program or signature of Program Coordinator)

CJ 330. FIREARMS AND BALLISTICS.**3 Hrs.**

This course will examine the history of firearms as related to the criminal justice field. It will also examine firearms and ballistics evidence collection at crime scenes and their submission to crime labs for further testing. (Pre-requisite: Grade of C or higher in CJ 111. Admission to BAS in Criminal Justice program or signature of Program Coordinator.)

CJ 339. ORGANIZED CRIME.**3 Hrs.**

The study of organized crime and how it has evolved into modern day organizations. Students will become familiar with federal statutes dealing with organized crime and various departments assigned to investigating them. Students will also understand the various roles of the local, state and federal task forces. (Requires admission to BAS in Criminal Justice program or BAS Legal Studies program or signature of program coordinator)

CJ 341. FINGERPRINTS AND TRACE EVIDENCE.**3 Hrs.**

This course will examine the history of fingerprints as an identification procedure in the criminal justice field. The course will explore the collection procedures in collecting fingerprints and trace evidence at a crime scene. It will also cover processing of trace evidence for submission to crime labs for further testing. (Pre-requisite: Grade of C or higher in CJ 111. Admission to BAS in Criminal Justice program or signature of program coordinator)

CJ 355. CRIME SCENE INVESTIGATIONS.**3 Hrs.**

This course will cover the evolution of the crime scene investigations. It will cover how to conduct crime scene investigations from first response to court room presentation. It will also cover future trends in crime scene investigations. (Pre-requisite: Grade of C or higher in CJ 111. Admission to BAS in Criminal Justice program or signature of program coordinator)

CJ 360. FRAUD EXAMINATION.**3 Hrs.**

Delve into the world of white-collar crime and forensic accounting. Study methods of detection, prevention and investigation. (Pre-requisite: Grade of C or higher in CJ 111 or Legal Studies 101. Admission to BAS in Criminal Justice program or BAS in Legal Studies program or signature of program coordinator)

CJ 372. POLICE TACTICS.**3 Hrs.**

Advanced study of law enforcement practices with an emphasis on major issues involving ethical practices; use of force and deadly force and other liability issues; as well as high speed pursuit; and certification in fire arms and other tactical weapons. (Pre-requisite: Grade of C or higher in CJ 111. Admission to BAS in Criminal Justice program or signature of program coordinator)

CJ 375. CRIME SCENE PHOTOGRAPHY.**3 Hrs.**

Focus on developing skills in photographing a crime scene. Includes black and white film and paper; color films and paper; and developing of photos. Also includes tools and equipment taking basic crime scene photographs and chemical process used in processing crime scene photos. (Pre-requisite: Grade of C or higher CJ 111. Admission to BAS in Criminal Justice program or signature of program coordinator)

CJ 388. BLOODSTAIN PATTERN ANALYSIS.**4 Hrs.**

Examines the techniques and methods of identifying and interpreting blood spatter evidence. Topics include fundamentals of bloodstain evidence; bloodstains of differing velocity; significance of partially dried, clotted, aged, physically altered bloodstains, and others. (Admission to BAS in Criminal Justice program or signature of program coordinator. (Pre-requisite: Grade of C or higher in CJ 355).

CJ 410. ADVANCED CRIME SCENE PHOTOGRAPHY.**3 Hrs.**

This course concentrates on the use of the Single Lens Reflex (SLR) photographic equipment as it relates to the criminal justice field and crime scenes. The course also covers the proper ways to take, keep and store crime scene photographs with an emphasis on macro and other special photography techniques. (Pre-requisite: Grade of C or higher in CJ 375. Admission to BAS in Criminal Justice program or signature of program coordinator)

CJ 440. ADVANCED CJ RESEARCH METHODS.**3 Hrs.**

Explores concepts related to social science research. Emphasis placed on the development of superior writing skills and statistical evaluation of information through conducting applied research. (Pre-requisite: Grade of C or higher in CJ 285)

CJ 460. CAPSTONE.**2 Hrs.**

Student will conduct a semester long project in the criminal justice field that will be concluded with a research report and oral presentation. Taken the semester of graduation. (Pre-requisites: Grade of C or higher in CJ 111 and ENGL 102. Admission to BAS in Criminal Justice program and signature of coordinator)

DRAFTING (DRAF)**DRAF 102. DRAFTING FUNDAMENTALS.****3 Hrs.**

Introductory-level drafting course, including graphic language, fundamentals of lettering, sketching, orthographic projection, dimensioning, sectioning, axonometric projection, and auxiliary views.

DRAF 103. MECHANICAL BLUEPRINT READING.**2 Hrs.**

Reading of machine prints and drawings commonly used in industry and trades.

DRAF 111. FUNDAMENTALS OF DRAFTING USING AUTOCAD.**3 Hrs.**

Graphic designs and drawings developed by use of computer. Drawings include orthographic, pictorial, electrical, auxiliary, isometric, mechanical, and architectural.

DRAF 112. ADVANCED DRAFTING TECHNIQUES.**3 Hrs.**

Continuation of DRAF 111. Working drawings, intersections, geometric space problems, and engineering drawings. (Pre-requisite: DRAF 111, DRAF 102 or DRAF 314)

DRAF 113. DESCRIPTIVE GEOMETRY.**3 Hrs.**

Graphic representation and solution of space problems; points, lines, planes, parallelism, perpendicularity, vectors, developments, intersections, and warped surfaces. (Pre-requisite: DRAF 102, DRAF 111 or DRAF 314)

DRAF 114. ELECTRICAL DRAFTING.**3 Hrs.**

Study of electronics components and symbols. Electronics symbol in CAD, CAD Generated Diagrams, block diagrams, schematic diagrams, logic diagrams, wiring diagrams, motors and control circuits, power distribution printed circuit design, and printed circuit boards. (2 lecture hours and 2 lab hours per week)

DRAF 115. COMPUTER AIDED DRAFTING.**3 Hrs.**

Graphic designs and drawings developed by use of computer. Drawings include orthographic, pictorial, electrical, electronic, petrochemical, metal and mining, and architectural. (Co-requisite: DRAF 102, DRAF 111 or DRAF 314)

DRAF 116. 3D MODELING WITH AUTOCAD.**3 Hrs.**

Introduction to customizing computer-aided drafting software using AutoCAD. Topics covered are 3D drawing, solid modeling, symbol libraries, slides, screen menus, icon menus and tablet menus. (Pre-requisite: DRAF 102, DRAF 111 or DRAF 314)

DRAF 122. FUNDAMENTALS OF 3D STUDIO MAX.**3 Hrs.**

Students will learn the fundamentals of creating 3D models in an environment that is used in multiple fields of study such as design, engineering and animation.

DRAF 212. STRUCTURAL DESIGN.**3 Hrs.**

Design and checking of steel to be used as beams, girders, lintels, columns and struts; design of simple frames; use of bar, and open-web, and long joists; and design of timber beams, girders, columns and wood floors. (Pre-requisite: DRAF 102, DRAF 111 or DRAF 314)

DRAF 213. SCHEMATIC DRAFTING.**3 Hrs.**

Schematic interpretation of electronic, hydraulic and pipe drawings. Electronic drawings include logic and integrated circuit schematics; hydraulic drawings include multiple position and pictorial schematics; and pipe drawings include isometric and oblique schematics. (Pre-requisite: DRAF 102, DRAF 111, DRAF 314 or ELEC 101)

DRAF 220. FUNDAMENTALS OF MICROSTATION WITH 3D.**3 Hrs.**

Graphic designs and drawings developed by use of computer. Drawings include orthographic, pictorial, electrical, auxiliary, isometric, mechanical and architectural. An introduction to 3D modeling using CAD is also covered.

DRAF 225. ADVANCED WORK WITH 3D STUDIO MAX.**3 Hrs.**

Continuation of DRAF 122. Students will learn advanced techniques and uses of creating 3D models in an environment that is used in multiple fields of study such as design, engineering and animation. (Pre-requisite: DRAF 122)

DRAF 226. 3D PARAMETRIC MODELING WITH INVENTOR.**3 Hrs.**

Students will learn the fundamentals of creating 3D models using feature-based modeling. This method starts with rough sketches that are transformed into intelligent models by applying dimensions and constraints. The model can then be refined by adjusting these constraints using engineering design data. (Pre-requisite: DRAF 116)

DRAF 227. AUTODESK SIMULATION.**3 Hrs.**

Students will learn advanced techniques and uses of creating 3D models with Inventor in an environment that is used in multiple fields of study such as design, engineering and animation. (Pre-requisite: DRAF 226)

DRAF 228. 3D ARCHITECTURAL DRAFTING.**3 Hrs.**

Students will learn the fundamentals of creating 3D models in an architectural environment. Architectural drafting and design will be studied using 3D modeling that can be applied to many areas of engineering and construction. (Pre-requisite: DRAF 116)

DRAF 229. AUTODESK REVIT.**3 Hrs.**

Students will learn the fundamentals of creating 3D models in an architectural environment using Autodesk Revit. Architectural drafting and design will be studied using 3D modeling that can be applied to many areas of engineering and construction. (Pre-requisite: DRAF 102, DRAF 111 or DRAF 314)

DRAF 235. TOOLMACHINE DESIGN.**3 Hrs.**

Advanced drafting; design and techniques used in planning and designing dies, jigs, and fixtures. (Pre-requisite: DRAF 102, DRAF 111 or DRAF 314)

DRAF 260. DRAFTING CAPSTONE.**1 Hr.**

This course serves as a culmination of the Engineering Technology – Drafting Option A.A.S. degree program. A project is designed and completed that demonstrates competencies and skills learned within the courses of the program. Industry Standards Examinations are prepared for and taken. Capstone course.

DRAF 314. COMPUTER-AIDED DESIGN.**3 Hrs.**

The basics of 2-D AutoCAD. Study drawing types from the major field of study. Create drawings in technology majors, such as electronics, electro-mechanical, environmental, manufacturing, and welding.

ECONOMICS (ECON)**ECON 201. MICROECONOMICS.****3 Hrs.**

Introduction to types of business organizations; market models of capitalism. Basic theories of costs of production and output determination. This course also touches on labor unions, international trade, and economic considerations in the control of American industry. [Common Professional Component Course]

ECON 202. MACROECONOMICS.**3 Hrs.**

Theories of supply and demand, national income determination and public debt. Overview of classical and Keynesian economic theory; national fiscal policy; and current problems/policies bearing thereon. [Common Professional Component Course]

ECON 320. MANAGERIAL ECONOMICS.**3 Hrs.**

Managerial Economics is concerned with the application of economic principles and methodologies to business decision-making. In this course students will increase their understanding of managerial economics and learn a variety of approaches that will allow them to solve business problems relating to costs, prices, revenues, profits, and competitive strategies. (Pre-requisites: ECON 201 and ECON 202)

ECON 331. FINANCIAL ECONOMICS.**3 Hrs.**

This course emphasizes the financial system, financial institutions, central banks, monetary policy, foreign exchange rate and financial stability. The course studies the role of money and interest rates in the operation of the U.S. economy. The aim is to give students an overview of the U.S. financial system and an understanding of the theory and practice of monetary policy. (Pre-requisites: ECON 201 and ECON 202)

EDUCATION (EDUC)**EDUC 100. INTRODUCTION TO TEACHER EDUCATION.****3 Hrs.**

Overview of the teaching profession. Central themes cover the aspects of becoming a teacher; schools and their place in society; students and curriculum, as well as career opportunities and professional development. Historical foundations of education are presented together with a look to the future. Classroom computer applications also are introduced. (Co-requisite: 20 hours of field experience)

EDUC 108. EDUCATIONAL TECHNOLOGY.**3 Hrs.**

Course focuses on practical applications for computers and technology in the elementary/middle school classroom.

EDUC 200. INTRODUCTION TO EXCEPTIONAL CHILDREN.**3 Hrs.**

Survey of the non-traditional learner with emphasis upon the legal, ethical and educational ramifications for public school personnel. Characteristics and etiologies of categorical classifications will be studied. (Pre-requisite: EDUC 100; Co-requisite: 20 hours field experience)

EDUC 230. COOPERATIVE DISCIPLINE.**3 Hrs.**

Students will study the attention seeking, power seeking, revenge seeking, and avoidance of failure behaviors. Manifestations of these behaviors will be studied, as well as preventions and interventions. Issues of self-esteem and belonging will be emphasized in this class that helps students learn to build communities in their classrooms (Pre-requisite: placement test; Co-requisite: field experience)

EDUC 250. INTRO TO EARLY EDUCATION.**3 Hrs.**

Study of developing and creating learning environments for kindergarten and pre-kindergarten classrooms. Also includes study of family involvement, engaged advocacy, and importance of the community in building relationships for strong programs.

EDUC 255. LANGUAGE ARTS & EMERGENT LITERACY.**3 Hrs.**

Focus on planning, selection, and use of programs for beginning readers. Includes study of strategies for oral skills and emergent literacy. Course will review evaluation strategies appropriate for early reading assessment.

EDUC 300. THEORIES OF LEARNING.**3 Hrs.**

Focus on psychological learning principles and their classroom applications. Major classical and modern theories of learning are emphasized. An exploration of learning styles, metacognition and forms of problem-solving and their importance in the classroom to the early and middle childhood teacher. (Pre-requisites: EDUC 200. To be taken the semester applying for admission to the program; Co-requisite: field experience)

EDUC 301. LANGUAGE ARTS FOR TEACHERS.**3 Hrs.**

The study of language development and the strategies for language arts instruction in early and middle-childhood education. Explores the big ideas in reading education; phonemic awareness, phonics, fluency, vocabulary, comprehension, writing; and technology integration. (Pre-requisites: ENGL 131 or 132; ENGL 403; admission to Teacher Education program) (Co-requisite: field experience)

EDUC 302. STRATEGIES IN EARLY EDUCATION.**3 Hrs.**

Study of essential concepts, inquiry tools, and structure of content area for early education. Includes identification of resources to deepen understanding of appropriate materials, manipulatives, media, and technology for young learners. Practice observation skills/techniques. (Pre-requisites: Admission to Teacher Education program; concurrent enrollment in EDUC 402 required)

EDUC 303. TEACHING READING K6.**3 Hrs.**

Strategies and materials in teaching reading for early and middle-Childhood teachers. (Pre-requisites: Admission to Teacher Education program and EDUC 301; Co-requisite: field experience)

EDUC 304. INSTRUCTIONAL STRATEGIES IN MATHEMATICS.**3 Hrs.**

Methods and content with respect to real numbers, algebra, geometry, graphing, problem solving, measurement, probability and statistics. (Pre-requisites: Grade of C or higher in MATH 121 and MATH 126, and admission to Teacher Education program; Co-requisite: field experience)

EDUC 305. INSTRUCTIONAL STRATEGIES IN SCIENCE.**3 Hrs.**

A course designed to facilitate the elementary education major in the teaching of science. The course will investigate the teaching of science through discovery and inquiry. (Pre-requisites: Admission to Teacher Education program; BIOL 101/103, BIOL 102/104, and PSCI 101/L)

EDUC 306. INSTRUCTIONAL STRATEGIES IN HEALTH AND PHYS ED.**3 Hrs.**

This course provides techniques for curriculum design; program implementation and evaluation; and other strategies, skills and methods of teaching physical education and health activities to elementary and middle school children. (Pre-requisite: Admission to Teacher Education; Co-requisite: field experience)

EDUC 310. DIVERSITY IN EDUCATION.**3 Hrs.**

Strategies for providing differentiated instruction to students with diverse learning, social, and behavior needs who are being educated in inclusive settings. Emphasis will be on practical planning and teaching of students from diverse backgrounds. (Pre-requisite: Admission to Teacher Education program; Co-requisite: field experience)

EDUC 314. INSTRUCTIONAL STRATEGIES IN SOCIAL STUDIES.**3 Hrs.**

This course covers the subject content, materials and instructional strategies for planning, teaching and evaluating social studies lessons in grades K-6. (Pre-requisites: Admission to Teacher Education program.)

EDUC 315. ART STRATEGIES.**3 Hrs.**

This course prepares teacher candidates to use basic art skills in the elementary classroom. The course will focus on the integration of art into all areas of the multi-subjects curriculum. (Pre-requisite: Admission to Education program)

EDUC 316. MUSIC STRATEGIES.**3 Hrs.**

This course prepares teacher candidates to use basic music skills in the elementary classroom. This course will focus on the integration of music into all areas of the multi-subjects curriculum. (Pre-requisite: Admission to Education program)

EDUC 320. EDUCATIONAL ASSESSMENT.**3 Hrs.**

Introduction to the assessment process. A study of the philosophical and theoretical foundations of evaluation procedures used in public schools will lead to the statistical devices for measuring pupil progress in early childhood and middle school levels. Focus will be upon the skills of device design, administration, scoring and interpretation of data in all content areas. (Pre-requisite: Admission to Teacher Education program)

EDUC 330. CLASSROOM MANAGEMENT.**3 Hrs.**

Study models of classroom management; characteristics of positive classroom environments; prevention of classroom disruptions through understanding student behaviors, basic physiological, emotional, and cognitive needs. This class should be completed the semester prior to EDUC 401. (Pre-requisites: Admission to Teacher Education program; Co-requisite: EDUC 330L)

EDUC 330L. CLASSROOM MANAGEMENT PRACTICUM.**0 Hrs.**

A practicum offered on-site at a local professional development school. Application of management plans and techniques are the focus of this experience. This class should be completed the semester prior to EDUC 401. (Pre-requisite: Admission to Teacher Education program; Co-requisite: EDUC 330)

EDUC 350. SPECIAL PRACTICUM IN TEACHING - PRIMARY.**1-6 Hrs.**

This practicum provides skills development in observation, planning, teaching, and evaluation at the primary levels under the direct supervision of public schools and college supervisors. (Pre-requisite: Division Chair permission)

EDUC 351. SPECIAL PRACTICUM IN TEACHING-INTERMEDIATE.**1-6 Hrs.**

This practicum provides skills development in observation, planning, teaching, and evaluation at the intermediate levels under the direct supervision of public schools and college supervisors. (Pre-requisite: Division Chair permission)

EDUC 387. READING/LANGUAGE ARTS FOR MIDDLE SCHOOL.**3 Hrs.**

Relationships among thinking, learning and the six language arts; includes explanation of principles that guide instruction and determine appropriate assessment and use of technology in the language arts. Identifies characteristics and the five systems of language. (Pre-requisite: Admission to Teacher Education program and EDUC 301; Co-requisite: field experience)

EDUC 388. MATH STRATEGIES GRADES 7-ALGEBRA I.**2 Hrs.**

This course is designed for education majors seeking a math specialization. Curricula and methods at the middle school levels are studied. Laboratory and field experiences will occur, along with the use of current technology. (Pre-requisites: Admission to Teacher Education program, and completion of all mathematics requirements; Co-requisite: field experience)

EDUC 389. INSTRUCTIONAL STRATEGIES FOR MIDDLE SCHOOL SOCIAL STUDIES.**2 Hrs.**

This course covers content, materials and instructional strategies for planning, teaching and evaluating social studies lessons at the middle school level. (Pre-requisites: Admission to Teacher Education program and EDUC 314; Co-requisite: 20-hour field experience)

EDUC 390. SCIENCE STRATEGIES FOR MIDDLE SCHOOL.**2 Hrs.**

Instructional strategies and curriculum materials appropriate for the teaching of science in grades 7-9 will be investigated. Students will prepare and use hands-on inquiry lessons in teaching experience with local middle school students. (Pre-requisites: Admission to Teacher Education program, and completion of all science requirements; Co-requisite: Field Experience)

EDUC 401. EARLY CHILDHOOD & MIDDLE SCHOOL CURRICULUM.**3 Hrs.**

The analysis and application of various curriculum design, instructional strategies and planning models for early and middle childhood teachers. Cooperative learning and the application of technology in the classroom are emphasized. (Pre-requisites: EDUC 330 and EDUC 330L; Co-requisites: EDUC 401L)

EDUC 401L. EARLY CHILDHOOD & MIDDLE SCHOOL CURRICULUM LAB.**0 Hrs.**

A clinical offered on-site at a local professional development school. Application of lesson planning and management techniques are the focus of this experience. This class should be completed the semester prior to student teaching. (Pre-requisite: Admission to Teacher Education program; Co-requisite: EDUC 401)

EDUC 402. CURRICULUM IN EARLY EDUCATION.**2 Hrs.**

This class will focus on planning skills both in class and in the field experience. Interpersonal skills and decision-making skills will be exercised in team activities and experiences. Professional commitment, instructional skills, decision-making and diversity will be addressed both in the classroom activities and through field experiences. The application of technology will be emphasized and incorporate in class activities and in the field experience. (Pre-requisite: Admission to Teacher Education program; Co-requisite: field experience and EDUC 302)

EDUC 403. STUDENT TEACHING - EARLY EDUCATION.**5 Hrs.**

Eight weeks of full-time observation, planning, teaching, and evaluation at the Pre K-K levels under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 404. STUDENT TEACHING - PRIMARY.**5 Hrs.**

Eight weeks of full-time observation, planning, teaching and evaluation at the primary grades (K-2) levels under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 405. STUDENT TEACHING IN GENERAL SCIENCE 5-9.**5 Hrs.**

Full-time planning, teaching and evaluation at the middle school level in science under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 406. STUDENT TEACHING IN GENERAL MATH 5-9.**5 Hrs.**

Full-time planning, teaching and evaluation at the middle school level in mathematics under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 407. STUDENT TEACHING IN ENGLISH 5-9.**5 Hrs.**

Full-time planning, teaching and evaluation at the middle school level in English under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 408. STUDENT TEACHING - INTERMEDIATE.**5 Hrs.**

Eight weeks of full-time observation, planning, teaching, and evaluation at the intermediate grades (3-6) levels under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 409. STUDENT TEACHING IN SOCIAL STUDIES 5-9.**5 Hrs.**

Full-time planning, teaching and evaluation at the middle school level in social studies under the direct supervision of public school and college supervisors. (Pre-requisite: Admission to student teaching)

EDUC 410. STUDENT TEACHING SEMINAR.**2 Hrs.**

Self-analysis and evaluation of instructional performance through a peer counseling approach. Preparation of a plan for continued professional development and inquiry into current issues in the profession. (Pre-requisite: Admission to student teaching; Co-requisite: EDUC 403, 404, 405, 406, 407, 408, and 409)

EDUC 412. DIAGNOSTIC PRESCRIPTIVE READING.**3 Hrs.**

The development of competencies in diagnosing reading problems through the use of various instruments and in prescribing remediation based on the evaluations. (Pre-requisites: Admission to EDUC 301 and EDUC 303, Teacher Education program. Co-requisite: EDUC 412L)

EDUC 412L. DIAGNOSTIC PRESCRIPTIVE READING LAB.**0 Hrs.**

This course requires teacher candidates to apply their knowledge of a variety of assessment instruments and remediate reading difficulties using evidence-based instructional strategies. Students will apply skills learned in EDUC 412. (Pre-requisite: Admission to Teacher Education program; EDUC 301 and EDUC 303. Co-requisite: EDUC 412)

ELECTRONICS (ELEC)**ELEC 101. ELECTRICITY & ELECTRONICS FUNDAMENTALS.****3 Hrs.**

Introduction to concepts and applications of electricity and electronics related to technical fields. Topics include electron flow, analog vs. digital waveforms, process control, motors, generators, wiring, and drawings. (2 credit hour lecture and 1 credit hour lab)

ELEC 102. ELECTRICAL & INSTRUMENTATION 1.**3 Hrs.**

Provides an introduction to electrical theory, safety, Electrical & Instrumentation (E&I) testing and process technologies. Laboratory exercises are designed to provide hands-on practice of concepts. (Co-requisites: ELEC 103 and ELEC 104)

ELEC 103. ELECTRICAL AND INSTRUMENTATION 2.**3 Hrs.**

Study of flow, pressure, level, temperature, tubing conductors and drawings. Laboratory exercises are designed to provide hands-on practice of concepts. (Co-requisite: ELEC 102 and ELEC 104)

ELEC 104. ELECTRICAL AND INSTRUMENTATION 3.**3 Hrs.**

Study of electronic components, hazardous locations, machine bending, and installation of tubing systems. Laboratory exercises are designed to provide hands-on practice of concepts. (Co-requisite: ELEC 103 and ELEC 102)

ELEC 105. DIRECT CURRENT CIRCUITS.**2 Hrs.**

Study of theory and laboratory experiments in basic and advanced direct current circuits as well as networks. Concepts covered include voltage, current, resistance, conductance and power. Topics studied are: Ohms Law, series circuits, parallel circuits, complex circuits and network theorems. (Pre-requisite: MATH 111 or 126 or concurrent registration) (Co-requisite: ELEC 105L)

ELEC 105L. DIRECT CURRENT CIRCUITS LAB.**1 Hr.**

Application of concepts introduced in ELEC 105. (Co-requisite: ELEC 105)

ELEC 115. RES/COMM ELECTRICAL 1.**3 Hrs.**

This course introduces students to the electrical trade through knowledge competencies and performance tasks. Topics include: hand bending; electrical theory; electrical test equipment; raceways, boxes, and fittings; conductors; and residential, commercial, and industrial wiring. (Co-requisite: Grade of C or higher in MATH 125)

ELEC 116. RES/COMM ELECTRICAL 2.**3 Hrs.**

Continuation of ELEC 115. Students will expand their knowledge competencies and performance capabilities within the electrical trade. Topics include: alternating current, motors, grounding, conductor installations, cable tray, and electric lighting.

ELEC 117. RES/COMM ELECTRICAL 3.**3 Hrs.**

Continuation of ELEC 116. Students will continue to expand their knowledge competencies and performance capabilities within the electrical trade. Topics include: load calculations, hazardous locations, overcurrent protection, distribution equipment, and transformers.

ELEC 118. RES/COMM ELECTRICAL 4.**3 Hrs.**

Continuation of ELEC 117. Students will continue to expand their knowledge competencies and performance capabilities within the electrical trade. Topics include: lighting applications, heat/freeze protection, motor maintenance, and high-voltage terminations/splices.

ELEC 120. ALTERNATING CURRENT CIRCUITS.**2 Hrs.**

Theory and laboratory experiments in the area of alternating current in resistive, capacitive and inductive circuits. Topics covered are: sinusoidal and nonsinusoidal waveforms, current/voltage relationships in RC, RL and RLC circuits, power factor, phase angles, phasor diagrams and network analysis (Pre-requisite: ELEC 105 and Math 111 or 126; Co-requisite: ELEC 120L)

ELEC 120L. ALTERNATING CURRENT CIRCUITS LAB.**1 Hr.**

Application of concepts introduced in ELEC 120. (Co-requisite: ELEC 120)

ELEC 124. ANALOG CIRCUITS.**3 Hrs.**

Concepts covered include atomic structures, P-type and N-type materials, rectification, voltage regulation, signal processing, amplification, filters, harmonic distortion, power supplies, transistor operation, thyristor applications and LEDs. Laboratory experiments are used to verify the topics covered in lecture. (Pre-requisites: ELEC 101, 102 and 105, or concurrent registration)

ELEC 133. INDUSTRIAL WIRING AND CODE.**2 Hrs.**

Industrial, commercial and residential electrical wiring, safety code, motor starters and controllers. (Co-requisite: ELEC 133L)

- ELEC 133L. INDUSTRIAL WIRING AND CODE LAB.** **1 Hr.**
Application of concepts introduced in ELEC 133. (Co-requisite: ELEC 133)
- ELEC 202. ELECTRICAL AND INSTRUMENTATION 4.** **3 Hrs.**
Study of motor control, electrical distribution, transformer applications, hydraulic and pneumatic controls. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites: Grade C or higher in ELEC 104 or Permission; Co-requisite: ELEC 203 and 204)
- ELEC 203. ELECTRICAL AND INSTRUMENTATION 5.** **3 Hrs.**
Study of emergency systems, control elements, transducers, and actuators. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites: Grade C or higher in ELEC 104 or Permission; Co-requisite: ELEC 202 and 204)
- ELEC 204. ELECTRICAL AND INSTRUMENTATION 6.** **3 Hrs.**
Study of instrument calibration, loop checks, troubleshooting a loop, Programmable Logic Controllers (PLCs), and data networks. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites; Grade of C or higher in ELEC 104 or permission. Co-requisites: ELEC 202 and 203).
- ELEC 210. ELECTRICAL CERTIFICATION.** **1 Hr.**
This is a review course for West Virginia Electrician Apprentice exam. Exams dates are scheduled through the State Fire Marshal's office. The first four chapters of the National Electric Code are reviewed.
- ELEC 222. DIGITAL LOGIC CIRCUITS.** **3 Hrs.**
The analysis of digital logic circuits and systems with the help of truth table diagrams, Boolean Algebra and Karnaugh maps. Devices studied include: inverters, logic gates, memory, arithmetic and numbering circuits AND Gates, OR Gates NAND and NOR Gates, Exclusive OR and Exclusive NOR Gates. Systems studied include: Half and Full Adders, Encoders, and Decoders Code Converters, Multiplexers, Analog/Digital and Digital/Analog Conversion. (Pre-requisites: ELEC 101 or ELEC 102, or ELEC 105)
- ELEC 224. ET - ELECTRONICS CAPSTONE COURSE.** **1 Hr.**
This course serves as a culmination of the Engineering Technology – Electronics Option A.A.S. Degree Program. A project is designed and completed that demonstrates competencies and skills learned within the ELEC courses of the program.
- ELEC 225. ELECTRICAL MACHINERY.** **3 Hrs.**
Theory and applications of direct and alternating current motors and generators; armature winding, field winding, induced voltage, types of AC, DC machines, parallel operation, speed regulation, power factor, efficiency and losses. (Pre-requisite: ELEC 120) (Co-requisite: ELEC 225L)
- ELEC 225L. ELECTRICAL MACHINERY LAB.** **1 Hr.**
Application of concepts introduced in ELEC 225. (Co-requisite: ELEC 225)
- ELEC 234. SERVICE LEARNING EXPERIENCE.** **3 Hrs.**
This course combines student knowledge and abilities to perform work as an apprentice electrician on a construction site, under the supervision of the instructor. (Pre-requisite: ELEC 115 and Grade of C or higher in MATH 125).
- ELEC 237. ANALOG AND DIGITAL CIRCUITS.** **3 Hrs.**
Provides an overview of Semiconductors, Signal Processing, Amplification, Boolean Algebra and Karnaugh maps, Truth Tables, Logic Gates, Memory, Encoders, Decoders, Analog/Digital and Digital/Analog Conversion. (Pre-requisites: ELEC 101, 102, 105, or concurrent registration)
- ELEC 260. E&I CAPSTONE COURSE.** **1 Hr.**
This course serves as a culmination of the Electrical & Instrumentation (E&I) Certificate program. A project is designed and completed that demonstrates competencies and skills learned within the Multi-Craft Technology (MTEC) and E&I courses of the program. NCCER and or NEC Examinations are prepared for and taken. Capstone course. (Res/Comm Electrical Certificate or 2nd semester E & I Program).

ELEC 324. ADVANCED ANALOG CIRCUITS.**3 Hrs.**

Advanced theory and application of Voltage Regulation, Signal Processing, Amplification, Filters, Harmonic Distortion, Power Supplies, Transistor Operation, Thyristor Applications and Light Emitting Diodes LEDs). Laboratory experiments are used to verify the topics covered in lecture. (Pre-requisites: ELEC 101, 102, 105, or concurrent registration)

ELEC 420. ADVANCED AUTOMATED SYSTEMS CONTROL.**3 Hrs.**

Course topics include, Advanced Programmable Logic Controller (PLC) Programming and Applications, Variable Frequency Motor Drives, Robotics, Power Generation, Distribution and Transformation, Motor and Generator Theory and Telemetry. (Pre-requisites: ELEC 101 or ELEC 102 or ELEC 105)

ELEC 422. ADVANCED DIGITAL LOGIC CIRCUITS.**3 Hrs.**

Advanced applications of logic gates, memory, arithmetic and numbering circuits, encoders, and decoders, CPUs, storage media and A/D and D/A Conversion. (Pre-requisites: ELEC 101 or ELEC 102 or ELEC 105)

ENGINEERING (ENGR)**ENGR 101. ENGINEERING PROBLEM SOLVING I.****2 Hrs.**

Engineering problem-solving methodologies and analysis, use of computers in problem-solving, technical report writing, team based project work and presentations. (Co-requisite: Math 155)

ENGR 102. ENGINEERING PROBLEM SOLVING II.**3 Hrs.**

Continued development of engineering problem-solving, teamwork and communication skills, with focus on using the computer as a tool through algorithm development and the use of a high-level computing language, such as MATLAB (Pre-requisites: ENGR 101, Grade of C or higher in Math 155)

ENGR 120. ENGINEERING METHODS FOR TECHNICIANS.**3 Hrs.**

Roles and responsibilities of Engineering Technicians and Technologists, including the basic tools, problem-solving, computer and mathematical skills.

ENGR 124 PLCs, NETWORKS AND TELEMETRY FUND.**3 Hrs.**

Provides an overview of Computer hardware, I/O, operating systems, communications, routing, addressing, telemetry devices and networking. (Pre-requisites: ELEC 101)

ENGR 199. ORIENTATION TO ENGINEERING.**1 Hrs.**

This course provides a beginning engineering student with information and tools to prepare him/her for a successful college life. Freshmen students can explore various engineering disciplines, prepare for an engineering career, and learn academic success strategies.

ENGR 220. FLUID, MECHANICAL & ELECTRICAL POWER SYSTEMS**3 Hrs.**

Introduction to the elements of power transmission and the principles that guide the application of those elements in industry.

ENGR 228. EMBEDDED SYSTEMS PROGRAMMING.**3 Hrs.**

This course introduces embedded system controls. Included are an introduction to various hardware and software platforms. Student will create, deploy and troubleshoot a java embedded control program. (Pre-requisites: CS 122 and ENGR 220)

ENGR 230 CONTROL SYSTEMS.**3 Hrs.**

Course topics include, Programmable Logic Controller (PLC) Programming and Applications, Variable Frequency Motor Drives, Robotics, Power Generation, Distribution and Transformation, Motor and Generator Theory and Telemetry. Laboratory exercises are included in this course.

ENGR 234 ADVANCED CONTROL SYSTEMS.**3 Hrs.**

A continuation of ENGR 230, topics include Advanced Programmable Logic Controller (PLC) Programming and Applications, Variable Speed Motor Drives, Robotics, Discrete Control Systems, Designing and programming embedded control systems. (Pre-requisites: Grade of C or higher in ELEC 101.)

ENGR 240. HEATING AND COOLING SYSTEMS 1.**3 Hrs.**

This course introduces students to the Heating, Ventilation, Air Conditioning and Refrigeration Systems. Topics include: heating and cooling load calculation, introduction to cooling, introduction to heating, and air distribution systems, furnaces, boilers and air conditioning systems.

ENGR 241. HEATING AND COOLING SYSTEMS 2.**3 Hrs.**

This course continues instruction of Heating, Ventilation, Air Conditioning and Refrigeration Systems introduced in Heating and Cooling Systems 1. Topics include: heating and cooling load calculation, advanced heating and cooling systems, commercial air handlers and commercial building comfort control systems. (Pre-requisites: Grade of C or higher in ENGR 240)

ENGR 250 BUILDING AUTOMATION CONTROLS.**3 Hrs.**

This course introduces building automation controls. Included are operator access to room sensors, alarms, schedules, trends and reports. Students will create, deploy and troubleshoot a control program. (Pre-requisites: ENGR 240 Heating and Cooling Systems 1, ELEC 220 Automated Systems Control)

ENGR 280. SPECIALIZED TECHNOLOGIES.**3 Hrs.**

This course discusses the theory of operation and application of various state-of-the-art technologies as they apply to modern technological fields. Communications, Automation, Controls, Sustainability and Current Innovations are examined. (Pre-requisites: ELEC 101, CS 121)

ENGLISH (ENGL)**ENGL 101. COMPOSITION 1.****3 Hrs.**

Students write a minimum of twenty formally-evaluated pages in order to expand skills necessary to express ideas and feelings effectively in expository essays centered on rhetorical patterns and strengthening critical thinking skills. 4,000-5,000 words evaluated writing. (Co-requisite ENGL 101L required unless ACT score of 18 and above, SAT score of 450 and above, or SUMM score of 3.)

ENGL 101L. COMPOSITION 1 LAB.**1 Hr.**

This lab provides structured learning support for English 101; offering tailored instruction in the specifics of the writing process; grammar, punctuation, and sentence structure; various forms of documentation; and the traditional rhetorical modes. (Co-requisite: ENGL 101 for students who do not have an ACT score of 18 and above, SAT score of 450 and above, or SUMM score of 3.)

ENGL 102. COMPOSITION 2.**3 Hrs.**

Enhancing skills for writing research-based informative and/or argumentation papers using analysis, synthesis and drawing conclusions from credible sources. Refining research skills, documenting and citing. Employing traditional rhetorical patterns to create an argument. 4,000-5,000 words evaluated writing. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)

ENGL 108. TECHNICAL WRITING 2.**3 Hrs.**

Continues development of students' technical writing skills. Expands problem solving abilities through writing technical content associated with the principles of inductive/deductive reasoning. Emphasizes student interaction to complete applied communications assignments, conduct team research, and write analytical reports that may include pictorial and statistical data. Clarity and organization are stressed. Develops skills in writing in response to other writers' ideas through reading and interpreting technical and nontechnical materials. Requires strong grammar and usage skills. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107 or permission of instructor)

ENGL 131. TYPES OF LITERATURE 1.**3 Hrs.**

A genre approach with an emphasis on the development of critical reading and writing skills through the definition, analysis, and personal experience of poetry and drama. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)

ENGL 132. TYPES OF LITERATURE 2.**3 Hrs.**

A genre approach with an emphasis on the development of critical reading and writing skills through the definition, analysis, and personal experience of the short story, novella, and/or novel. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)

- ENGL 210. INTRODUCTION TO CREATIVE WRITING. 3 Hrs.**
An open enrollment introduction to writing in different literary forms – poetry, fiction, creative nonfiction, and plays. Includes development of clarity, originality, and personal style.
- ENGL 213. CREATIVE WRITING: POETRY. 3 Hrs.**
An open enrollment introduction to the writing of poetry; practice in the basics of image, metaphor, line, form, sound, and voice; the basics of seeking an audience.
- ENGL 214. CREATIVE WRITING: CREATIVE NONFICTION. 3 Hrs.**
An open enrollment introduction to the writing of creative nonfiction, including literary journalism, personal essay, characterization and scene, detail and description, distinctive voice and point of view, and memoir.
- ENGL 215. CREATIVE WRITING: FICTION. 3 Hrs.**
An open-enrollment introduction to the writing of fiction.
- ENGL 221. WORLD LITERATURE 1. 3 Hrs.**
Masterworks from Western culture through the Renaissance with emphasis on universal themes and changing attitudes toward them. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 222. WORLD LITERATURE 2. 3 Hrs.**
Representative master works of literature from throughout the world from the Renaissance through the present times with emphasis on universal themes and changing attitudes toward them. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 227. FILM AS ART. 3 Hrs.**
“Reading” film as a visual and sound experience. Basic concepts of narrative film form and style: film time and space, elements of theatre in film, cinematography, editing, and sound. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 241. AMERICAN LITERATURE 1. 3 Hrs.**
Representative works from pre-national period to the Civil War. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 242. AMERICAN LITERATURE 2. 3 Hrs.**
Representative poetry, fiction, and drama from the post-Civil War period to the present. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 257. INTRODUCTION TO SCIENCE FICTION. 3 Hrs.**
An exploration of the development of science fiction and fantasy through the study of representative works. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 260. INTERNATIONAL TRAVEL AND LITERARY STUDIES. 3 Hrs.**
A combination of the study of literature from different areas of the world and a tour to those sites for further setting and background research. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)
- ENGL 261. ENGLISH LITERATURE 1. 3 Hrs.**
Representative works from the Middle Ages to the Eighteenth Century; Beowulf, Chaucer, Shakespeare, and others. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)
- ENGL 262. ENGLISH LITERATURE 2. 3 Hrs.**
Representative works from the Romantic period through the twentieth century. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)
- ENGR 280. SPECIALIZED TECHNOLOGIES. 3 Hrs.**
This course discusses the theory of operation and application of various state-of-the-art technologies as they apply to modern technological fields. Communications, Automation, Controls, Sustainability, and Current Innovations are examined. (Pre-requisites: ELEC 101, CS 121)

ENGL 285. GENDER IN LITERATURE.**3 Hrs.**

Exploration of multiple definitions and understandings of gender roles and labels, often accompanied by stereotypes, as portrayed in a variety of literary genres, films, and other materials. How personal and cultural assumptions interact with individual interpretation and perception of what are often considered archetypal roles. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 290. CLASSROOM COMMUNICATION SKILLS.**1-3 Hrs.**

A review of both verbal and written communication skills needed by public school teachers with an emphasis on basic grammar and effective speaking (Individualized as much as possible). (The course is geared toward, but not limited to, education majors.)

ENGL 308. ADVANCED WRITING.**3 Hrs.**

Advanced Writing develops enhanced techniques expected in academic and professional writing. This course concentrates on formal formats, audience analysis, research and documentation, proofreading, editing, revision, and integration of source materials from various disciplines. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 320. MEDIEVAL LITERATURE.**3 Hrs.**

This course examines works written primarily in the British Isles in the period between 500-1500. Exact topics will vary but may include Old and Middle English texts, the Arthurian legends, religious writings, and Chaucer and his contemporaries. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 325. SHAKESPEARE.**3 Hrs.**

Shakespeare's comedies, tragedies, and histories are covered. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 330. MILTON.**3 Hrs.**

Milton's poems and selected prose are discussed as well as the literary context of Neoclassicism. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 334. SCIENTIFIC AND TECHNICAL WRITING.**3 Hrs.**

Upper-level course requiring the study of readings, practices, technical/scientific writing conventions: uses of graphics, professional vocabulary, audience analysis, research techniques, parameters and professional requirements for scientific or technical content and secondary research writing. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 335. THE ROMANTIC MOVEMENT.**3 Hrs.**

An upper-division survey of the works of the major Romantic writers. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 340. THE VICTORIAN ERA.**3 Hrs.**

An upper-division concentration on major Victorian writers and an overview of cultural and literary criticism of the time. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 345. MODERN AND POST MODERN LITERATURE.**3 Hrs.**

Examines the influence of culture and thought on the themes, styles, literary devices and approaches of Modern and Post Modern authors. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 350. APPROACHES TO TEACHING GRAMMAR.**3 Hrs.**

Students learn diagramming sentences, active/passive voice, distinction among verbals, use of modifiers, how to connect words, phrases, clauses and sentences correctly, and how to maximize the computer as learning and teaching aid for grammar. (Pre-requisite: Admission to Teacher Education) (Co-requisite: Field Experience) Fall only

ENGL 403. CHILDREN'S LITERATURE.**3 Hrs.**

Development of children's literature with emphasis on modern books; evaluation, selection, and use of books and non-print materials; illustrations. (Pre-requisite: Grade of C or higher in ENGL 101 or ENGL 107)

ENGL 404. ADOLESCENT LITERATURE.**3 Hrs.**

Examines literature for young adults through discussion of historical development and current trends. Recognition of story elements and application of critical judgments practiced. Study of diversity and use of adolescent literature emphasized. (Pre-requisite: Grade of C or higher in ENGL 101 or 107)

ENGL 406. PLAYWRITING.**3 Hrs.**

Students will develop basic skills in playwriting techniques through the examination of written theatrical works, attendance at live performances, and completion of classroom exercises. Self-expression will be emphasized.

ENGL 410. REGIONAL LITERATURE.**3 Hrs.**

A study of regional essayists, short story writers, poets, novelists, dramatists, and writers of creative nonfiction in relation to ideological and cultural background, style, and subject matter. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 415. AMERICAN VOICES.**3 Hrs.**

Students examine literature by one or more American authors representative of particular movements, eras, genres, styles, themes, cultures, or other relevant perspectives. Focus may vary each semester. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 420. SINGLE AUTHOR.**3 Hrs.**

This course provides in-depth study of a single author's literary work. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 425. TOPICS IN CONTEMPORARY GLOBAL LITERATURE.**3 Hrs.**

Specialized topics, which may vary per semester, will provide students with the opportunity to discuss, interpret, compare, and critique contemporary literature by international authors. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 430. COMPARATIVE LITERATURE.**3 Hrs.**

Using literary texts, "Comparative Literature" promotes studying intercultural relations that cross national boundaries, multicultural relationship, and the interactions between literature, the arts, the sciences, technology, history, political science, philosophy, and linguistic boundaries and other disciplines. (Pre-requisite: Grade of C or higher in ENGL 101 or 107 or permission of instructor)

ENGL 444. WRITER'S WORKSHOP.**3 Hrs.**

Offers opportunity to create, shape, and polish poetry, fiction, screen plays, drama, creative non-fiction. Focus on elements essential to good writing. Stresses both creativity and practical skills, such as manuscript preparation, critiquing, editing, and marketing. (Pre-requisite: Grade of C or higher in ENGL 101 and ENGL 107 or permission of instructor.)

ENGL 450. LITERARY CRITICISM.**3 Hrs.**

The study of literary criticism from Aristotle to the present. (Pre-requisites: Grade of C or higher in ENGL 101 or permission of instructor)

ENTREPRENEURSHIP (ENT)**ENT 200. ENTREPRENEURSHIP 1.****3 Hrs.**

This course will involve developing a business plan, starting or expanding a business venture and understanding the legal requirements of business.

ENT 206. MANAGING AND MARKETING.**3 Hrs.**

This course offers several approaches to the study of small business management and marketing. Specific topics will cover the management process, strategic planning, human resources, business promotion, pricing and inventory control.

ENT 207. FINANCING AND INFORMATION.**3 Hrs.**

This course will provide the student with the knowledge of what financing options are available and their requirements for small businesses. This course will also cover the use of computer technology in the business setting.

ENT 208. NEW VENTURE ACCOUNTING.**3 Hrs.**

This course will cover entrepreneurial accounting, concepts various accounting, and financial records needed in business. The course will also familiarize the student with the tax consequences of different forms of business organizations.

ENVIRONMENTAL TECHNOLOGY (ENVR)**ENVR 102. BASIC ENVIRONMENTAL SCIENCE.****3 Hrs.**

Students will learn the fundamentals of environmental science including the elements of chemistry, biology, and ecology; review historical and current environmental legislation; learn to recognize environmental hazards; and learn how to identify their role in environmental protection.

ENVR 310. TOPICS IN ENVIRONMENTAL SCIENCE.**3 Hrs.**

This course will present a number of current topics of environmental science for discussion which may include resource use, global warming, ozone depletion, and global environmental crime. An overview of the history of environmental regulation in the US will also be presented.

FINANCE AND BANKING (FIN)**FIN 101. PERSONAL FINANCE.****3 Hrs.**

This course introduces the basic tools of money management and personal finance. The course aims to prepare the student to live better financially. Topics include budgeting, managing checking and savings accounts, obtaining loans and credit.

FIN 340. PRINCIPLES OF BUSINESS FINANCE.**3 Hrs.**

The role of financial management in business enterprises; financial analysis; planning for short-term and long-term financing; budgeting; and current asset management are topics covered in this course. (Pre-requisites: ACCT 202; admission to BSBA or BASBA)

FIN 356. FUNDAMENTALS OF INVESTING.**3 Hrs.**

This course covers the various types of investment instruments, the organized exchanges (NYSE, AMEX and Regionals), the over-the-counter market, the international financial exchanges, mutual funds, portfolio management, setting and achieving financial goals.

FOREIGN LANGUAGES (FLAN)**CLASSICS (CLAS)****CLAS 101. ELEMENTARY LATIN 1.****3 Hrs.**

Students will study Classical Latin grammar and vocabulary through the reading of stories. Attention is also given to proper pronunciation, writing, and the study of ancient Roman culture.

CLAS 103. ELEMENTARY ANCIENT GREEK 1.**3 Hrs.**

Students will study ancient Greek grammar and vocabulary through the reading of Classical Attic, Septuagint, and Koiné Greek selections. Attention is also given to proper pronunciation, writing in Greek, and the study of the Athenian, Spartan, and broader Hellenistic cultures.

FRENCH (FREN)

FREN 101. ELEMENTARY FRENCH 1.

3 Hrs.

Students will acquire beginning skills in speaking, reading, writing, and listening to the language. A cultural component is included in the course.

FREN 102. ELEMENTARY FRENCH 2.

3 Hrs.

Continuation of FREN 101. Students will develop a greater mastery of speaking, reading, writing, and listening than in the beginning course. A cultural component is included in the course (Pre-requisite: FREN 101 or equivalent)

FREN 203. INTERMEDIATE FRENCH 1.

3 Hrs.

Continuation of FREN 102. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite FREN 102 or equivalent)

FREN 204. INTERMEDIATE FRENCH 2.

3 Hrs.

Continuation of FREN 203. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite FREN 203 or equivalent)

GERMAN (GERM)

GERM 101. ELEMENTARY GERMAN 1.

3 Hrs.

Students will acquire beginning skills in speaking, reading, writing, and listening to the language. A cultural component is also included in the course.

GERM 102. ELEMENTARY GERMAN 2.

3 Hrs.

Continuation of GERM 101. Students will develop a greater mastery of speaking, reading, writing, and listening than in the beginning course. A cultural component is also included in the course. (Pre-requisite: GERM 101 or equivalent)

GERM 203. INTERMEDIATE GERMAN 1.

3 Hrs.

Continuation of GERM 102. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite GERM 102 or equivalent)

GERM 204. INTERMEDIATE GERMAN 2.

3 Hrs.

Continuation of GERM 203. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite GERM 203 or equivalent)

JAPANESE (JAPN)

JAPN 101. ELEMENTARY JAPANESE 1.

3 Hrs.

Students will acquire beginning skills in speaking, reading, writing katakana, and listening to the language. A cultural component is also included in the course

JAPN 102. ELEMENTARY JAPANESE 2.

3 Hrs.

Continuation of JAPN 101. Students will develop a greater mastery of speaking, reading, writing (hiragana), and listening than in the beginning course. A cultural component is also included in the course. (Pre-requisite: JAPN 101 or equivalent)

JAPN 203. INTERMEDIATE JAPANESE 1.

3 Hrs.

Continuation of JAPN 102. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. Kanji will be introduced. (Pre-requisite JAPN 102 or equivalent)

JAPN 204. INTERMEDIATE JAPANESE 2.

3 Hrs.

Continuation of JAPN 203. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite JAPN 203 or equivalent)

SPANISH (SPAN)

SPAN 101. ELEMENTARY SPANISH 1.

3 Hrs.

Students will acquire beginning skills in speaking, reading, writing, and listening to the language. A cultural component is also included in the course

SPAN 102. ELEMENTARY SPANISH 2.

3 Hrs.

Continuation of SPAN 101. Students will develop a greater mastery of speaking, reading, writing, and listening than in the beginning course. A cultural component is also included in the course. (Pre-requisite: SPAN 101 or equivalent)

SPAN 103. SPANISH FOR FIRST RESPONDERS.

3 Hrs.

This course concentrates on communicating in Spanish in emergency situations by phrases, questions and answers, and commands.

SPAN 203. INTERMEDIATE SPANISH 1.

3 Hrs.

A continuation of SPAN 102. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite SPAN 102 or equivalent)

SPAN 204. INTERMEDIATE SPANISH 2.

3 Hrs.

Continuation of SPAN 203. Students will focus on deeper vocabulary development and the mastery of intermediate sentence patterns through reading and speaking. (Pre-requisite SPAN 203 or equivalent)

SPAN 295. SEMINAR IN SPANISH.

1-3 Hrs.

(Pre-requisite: Foreign Languages Departmental consent)

GENERAL BUSINESS (GBUS)

GBUS 101. INTRODUCTION TO BUSINESS.

3 Hrs.

Forms and functions performed within the business organizations. Covers accounting, blaw, economics, finance, management, marketing. COLL101 (embedded) will focus on personal development, interpersonal and academic skills and campus connections [Common Professional Component Course]

GBUS 117. FINANCIAL BUSINESS APPLICATIONS.

3 Hrs.

Topics such as interest computations, depreciation amounts, payroll calculations, determination of markups, inventory pricing and valuations, and basic tax computations are covered. This course is not available for credit toward the BSBA degree. (Pre-requisite: MATH 120 or higher)

GBUS 202. BUSINESS COMMUNICATIONS.

3 Hrs.

Prepares the student to understand business communication in its ever-changing environment. Includes: business writing, business style, business memos, short and long reports, word usage, public speaking and business research methods. [Common Professional Component Course]

GBUS 240. BUSINESS CAPSTONE AAS.

3 Hrs.

This is the capstone course for all Associate in Applied Science in Business Administration majors. Outcomes include development of a career planning portfolio and completions of the Associate degree extreme assessment exam. Topics to be explored include self-management, personal finance, human relations, workplace ethics, diversity and accountability. Capstone course. This course will only count as the capstone for AAS in Business Administration. (Pre-requisites: GBUS 101 and BTEC 275)

GBUS 300. PRINCIPLES OF MANAGEMENT INFORMATION SYSTEMS.

3 Hrs.

The course provides an overall picture of how technology is used to assist businesses in making informed decisions. It covers the important features of management information structure and technology to business and managerial applications. Topics covered include database management, responsibilities of Information Technology personnel and interaction with functional managers, analysis of organizational communications using online and web-based technology, e-commerce, decision support, project management, and other software solutions to business problems. [Common Professional Component CPC course for BSBA majors] (Pre-requisites: CS 101, MGMT 220)

GBUS 301. PROCESS AND QUALITY MANAGEMENT.**3 Hrs.**

Exploration of continuous quality management and process control. (Pre-requisite: GBUS 117 and MGMT 220 or higher).

GBUS 304. ADVANCED EXCEL.**3 Hrs.**

Using Microsoft Excel, students are taught Excel advanced spreadsheet formatting. Topics include advanced formulas and logical functions, mathematical computations, data analysis, lookups, scenarios, goal seek, chart presentations, pivot tables and charts, data imports, exporting, and linking multiple workbooks, with an emphasis on critical thinking, problem solving, and decision making for marketing, finance, accounting, economics, and management. Additional "advanced hands-on projects and tests" are required. (Pre-requisite: CS 101)

GBUS 306. ADVANCED ACCESS.**3 Hrs.**

Using Microsoft Access, students are taught advanced Access data management to create fields, tables, queries, calculations, charts, forms and reports, data imports, exporting, and relationship databases, with an emphasis on critical thinking, problem solving, and decision making for marketing, finance, accounting, economics, and management. Additional "advanced hands-on projects and tests" are required. (Pre-requisite: CS 101)

GBUS 310. BUSINESS LAW I.**3 Hrs.**

An introduction to the Law and the Legal Process is followed by a study of the substantive law of torts, contracts, and agency. [Common Professional Component Course]

GBUS 325. QUANTITATIVE BUSINESS ANALYSIS.**3 Hrs.**

The objective of this course is to understand the concept and process of quantitative analysis in theory and practice as applied to a business. Students learn the basics of mathematical models and their use in analysis and decision making in functional areas of business. Content areas include techniques like Linear Programming (Graphical, Corner point, Simplex, sensitivity analysis), Basic concepts of probability, commonly used probability distributions and Decision Theory. Broad survey of other topics like Network models, Game theory, dynamic programming, AHP, Inventory, Forecasting. Common Professional Component Course for BSBA majors. (Pre-requisite: MATH 211)

GBUS 371. BUSINESS LOGISTICS.**3 Hrs.**

A study of the policies, procedures, and problems encountered by the business manager in establishing and maintaining an effective distribution system. Students in this course also discuss the historical development of the transportation system in the United States and the present regulatory environment. (Pre-requisite: MKTG 230)

GBUS 400. SUPERVISORY MANAGEMENT CAPSTONE.**3 Hrs.**

Capstone experience includes a culminating project, case analysis, and a simulation. Final assessment required. This course does not count toward any business degree at WVU Parkersburg and is not designed for transfer. (Pre-requisite: GBUS 301)

GBUS 405. GLOBAL BUSINESS.**3 Hrs.**

A study of the emergence of the "global economy" concept and its impact on business in the United States. International marketing channels, financial markets, management challenges and opportunities are covered in this course. [Common Professional Component Course.] (Pre-requisite: Senior Status, FIN 340 and MKTG 230)

GBUS 410. GOVERNMENT REGULATION OF BUSINESS.**3 Hrs.**

This course exposes students to a number of historical and contemporary examples and illustrations wherein state and/or federal government agencies or courts imposed rules or regulations on segments of the business community. (Pre-requisite: GBUS 310)

GBUS 415. MANAGERIAL BUSINESS ETHICS.**3 Hrs.**

This course will focus on both theoretical constructs and frameworks of ethical behavior and practical application of ethics in today's business world. Students will review literature on ethical standards and read extensive case analysis on companies who have demonstrated poor social responsibility. Areas of study will include personal values, serving and providing value to stakeholders, and what it means for a company to be a good corporate citizen. (Pre-requisites: MGMT 220 and admission to BSBA or BASBA)

GEOGRAPHY (GEOG)**GEOG 102. WORLD GEOGRAPHY.****3 Hrs.**

Students will study the spatial relationship between geographic features such as climate, natural vegetation, topography, natural resources and physical landscapes; along with political, social, economic, globalization, and cultural systems within world regions.

GEOG 240. NORTH AMERICAN GEOGRAPHY.**3 Hrs.**

Students will study the spatial relationships between the geographic features such as climate, natural vegetation, topography, natural resources and physical landscape, along with political, social, economic, and cultural systems in the United States and Canada.

GEOLOGY (GEOL)**GEOL 101. PHYSICAL GEOLOGY.****3 Hrs.**

The physical, chemical, and biological processes that shape the Earth will be studied in light of the concept of global plate tectonics and the interaction of Earth's subsystem's; the lithosphere, biosphere, hydrosphere, and atmosphere. (3 lecture hours per week)

GEOL 103. HISTORICAL GEOLOGY.**3 Hrs.**

An introduction to the study of the origin of the Earth and its evolutionary development through time are presented. The concepts of geologic time, organic evolution, and plate tectonics are fundamental themes used to unravel Earth history. In this context, present and past interactions of Earth's subsystems (the lithosphere, biosphere, hydrosphere, and atmosphere) are studied (3 lecture hours per week) (Pre-requisites: GEOL 101 and 102 or PSCI 112) (Co-requisite: GEOL 104)

GEOL 104. HISTORICAL GEOLOGY LAB.**1 Hr.**

The laboratory study of sedimentary rocks, fossils, correlation of rock units, interpretation of geologic maps, and local geology with field trips. (2 laboratory hours per week) (Co-requisite: GEOL 103)

GEOL 105. ENVIRONMENTAL GEOLOGY.**4 Hrs.**

And introduction to the study of the Earth's processes and interconnections between the humans and Earth. The physical, chemical, and biological processes that shape Earth will be studied in conjunction with environmental issues. The study of Earth's subsystems (the lithosphere, biosphere, hydrosphere, and atmosphere) and the human impact on the subsystems. The laboratory work will emphasize; minerals and rocks, interpretation of maps, and geologic processes. (Co-requisites: GEOL 105L) (2 laboratory hours per week, 3 lecture hours per week)

GEOL 307. PALEOBIOLOGY OF DINOSAURS.**3 Hrs.**

This course will explore the evolution, history and paleobiology of dinosaurs from their appearance in the geologic record to their extinction. The course will also cover the relationship of dinosaurs to ancestral vertebrates of the Paleozoic era, and to the birds and mammals, two groups which emerged in the early Mesozoic era. Hypotheses dealing with the extinction (perhaps catastrophic) of the dinosaurs and other groups at the end of the Mesozoic era will also be studied. (Pre-requisite: ENGL 101 and 102 and a 100 or 200 level Natural Science course)

GEOL 310. FIELD STUDIES IN GEOLOGY.**1-3 Hrs.**

This is a field studies course that will have two primary focuses: 1) the study of the geologic history of a region of the U.S. and 2) the study and practice of geologic and paleontologic data collection (including fossils, rocks, and minerals) and the application of this data to paleontologic, stratigraphic, and sedimentologic interpretations of paleoenvironments. (Pre-requisites: GEOL 101/102 or PSCI 112 or consent of instructor) (Other information: Variable credit, 1-3 credit hours and repeatable to a maximum of 6 credit hours)

HEALTH, PHYSICAL EDUCATION AND RECREATION (HPER)

HPER 100. SPORTS SKILLS UNDERSTANDING.

1 Hr.

Provides students with specific knowledge pertaining to physical fitness, golf, tennis and bowling. It is intended to develop a minimal amount of fitness for each student with emphasis on cardiovascular endurance, muscular strength, and flexibility. It is also intended to provide students with the basic knowledge of skills, rules, strategy and etiquette in the games of golf, tennis and bowling.

HPER 111-159. GENERAL ACTIVITY COURSES.

1 Hr.

The activity courses listed below are designed to acquaint the student with the fundamental skills necessary for maximum enjoyment of leisure time pursuits. Courses will be offered as interest dictates and as facilities are available. The one credit hour classes meet a total of 32 class hours per semester. (An eight week course meets 4 hours per week/A 16 week course meets 2 hours per week)

111 Beginning Golf

121 Basic Judo

113 Beginning Tennis

122 Advanced Judo

114 Intermediate Tennis

123 Karate

115 Beginning Bowling

124 Basic Aikido

116 Advanced Bowling

125 Shao-Lin Kung Fu

119 Beginning Volleyball

120 Advanced Golf

136 Beginning Yoga

159 Beginning Table Tennis

HPER 145. FITNESS – AEROBIC ACTIVITIES.

1 Hr.

Provides students with specific knowledge pertaining to physical fitness, weight loss, and relaxation. It is intended to develop a minimal amount of fitness for each student with emphasis placed on personal assessment and program development in the areas of cardiovascular strength and endurance, muscular strength and endurance, flexibility, diet and nutrition, and relaxation.

HPER 148. FITNESS FOR LIFE.

1 Hr.

Provides students with specific knowledge pertaining to physical fitness, weight loss and relaxation. It is intended to develop a minimal amount of fitness for each student with emphasis placed on personal assessment and program development in the areas of cardiovascular strength and endurance, muscular strength and endurance, flexibility, diet and nutrition, and relaxation.

HPER 150-157. SPORTS OFFICIATING.

1 Hr.

These courses provide instruction and practice in officiating procedures within a clinical atmosphere. Topics include the Pre-requisites of good officiating, rule interpretation, and officiating mechanics. Each student will become a rated official.

150 – Officiating Football

154 – Officiating Softball

151 – Officiating Basketball

155 – Officiating Baseball

152 – Officiating Volleyball

156 – Officiating Wrestling

153 – Officiating Soccer

157 – Officiating Track

HPER 167. INTRODUCTION TO PHYSICAL EDUCATION.

2 Hrs.

Introduction to the field of Physical Education. Provide students with a basic historical, biological, and sociological foundation of Physical Education. Students will be encouraged to develop introspection regarding their professional interests and talents in relation to Physical Education.

HPER 172. STANDARD FIRST AID.

2 Hrs.

Stresses the functional First Aid capabilities required to provide the initial emergency care necessary to sustain life and to maintain life support until the victims of an accident or sudden illness are cared for by qualified medical personnel. Opportunity for students to receive American Heart Association CPR certification.

HPER 215. PERSONAL AND COMMUNITY HEALTH.**2 Hrs.**

Emphasis will be placed on relating course content to lifestyle to foster a better understanding of the major health issues of today. Examinations will be made of the ways in which these issues have implications that not only deal with each individual but also with the community at large. Current issues include, but are not limited to: emotional health, chemical use and abuse, human sexuality, major diseases, physical fitness, nutrition, aging, death and dying.

HISTORY (HIST)**HIST 101. WESTERN CIVILIZATION THROUGH THE REFORMATION.****3 Hrs.**

An analytical survey of the major events from about 4000 B.C. to 1648. Emphasis upon the relationship between the past and the present wherever possible.

HIST 102. WESTERN CIVILIZATION FROM THE REFORMATION.**3 Hrs.**

An analytical survey of the major events from 1648 to the present. Emphasis is placed upon the events as they reveal the intimate ties between the histories of Great Britain, France, Germany, Russia and the United States.

HIST 152. U.S. HISTORY THROUGH THE CIVIL WAR.**3 Hrs.**

Examines the major issues in the nation's development from the beginning of colonization through the end of the Civil War, with an emphasis on the role of slavery and contact with Native Americans.

HIST 153. U.S. HISTORY FROM RECONSTRUCTION TO THE PRESENT.**3 Hrs.**

Describes the history of the United States as it grew from a predominately rural, agrarian society at the conclusion of the Civil War to today's urban, industrial nation and world economic and military superpower.

HIST 201. RESEARCH METHODOLOGY.**3 Hrs.**

Introduces students to skills needed for the study of history, including library/archive research, use of the Internet, historiography and historical schools of thought, The Chicago Manual of Style, and discussions on careers for history majors.

HIST 250. WEST VIRGINIA AND THE APPALACHIAN REGION.**3 Hrs.**

A course which deals with all phases of the state's history economic, cultural, social, and political in relationship to Appalachia, the nation and the world.

HIST 302. HISTORY OF AMERICAN INDIANS.**3 Hrs.**

Migration to and settlement of North America, development of distinct cultures, encounters with Europeans; wars of survival and the twentieth century; all from the perspective of American Indians.

HIST 306. COLONIAL AMERICA 1607-1763.**3 Hrs.**

Settlement of the individual British colonies; Native American contact, trade and conflict; evolving relationships with other colonies and Great Britain; establishing social, political, and economic institutions; race and gender.

HIST 310. AFRICAN-AMERICAN HISTORY.**3 Hrs.**

Trace history of African-Americans from 1619 to the present; describe origins of slavery in Colonial America; examine opposition to slavery and racial inequality; describe results of Reconstruction; understand development of a unique African-American culture. (Pre-requisites: HIST 152 and HIST 153)

HIST 340. AMERICAN CENTURY, 1919-1989.**3 Hrs.**

Study of the political, economic, and social changes that swept the United States as the nation grew to a world power, from the conclusion of World War I through the end of the Cold War. (Pre-requisites: HIST 153)

HIST 355. ANCIENT GREECE AND ROME.**3 Hrs.**

The development of the Western World, with a focus on Ancient Greece and its surrounding cultures through the Roman Empire in the 5th century. (Pre-requisites: ENGL 102, HIST 101, or Instructor's consent)

HIST 360. HISTORY OF CRIME AND PUNISHMENT.**3 Hrs.**

The development of the legal world with a focus on the history of criminal activity and punishment from recorded history through the modern age.

HIST 390. LEGENDS, LORE AND MYTHOLOGY.**3 Hrs.**

This course exposes different historical aspects of mythology and development of legends and lore throughout mankind and advancement of mythological beliefs or legendary influence in a social and historical event.

HIST 410. REVOLUTIONARY AMERICA, 1763-1787.**3 Hrs.**

Constitutional and economic causes of rebellions; major military campaigns and engagements, diplomatic and domestic political issues; impact on race and gender in war and peace; goals of self-government.

HIST 430. CIVIL WAR AND RECONSTRUCTION.**3 Hrs.**

Causes as well as constitutional and diplomatic aspects of the Civil War; the role of race and gender in war and peace; and the economic and political aspects of Reconstruction.

HIST 445. HISTORY OF AMERICAN WOMEN.**3 Hrs.**

Examination of the history of American women from 1607 to the present, with emphasis on working conditions, women's rights, development of feminism, women's roles in war time and women in the family.

HIST 463. EUROPE AND THE MIDDLE AGES.**3 Hrs.**

Europe from the fall of the Roman Empire to the beginning of the Renaissance, with emphasis on religious, cultural, social, political, and economic advancement. (Pre-requisites: ENGL 102, HIST 101, or Instructor consent)

HIST 465. RENAISSANCE AND REFORMATION.**3 Hrs.**

The impact of the Renaissance upon economic and political developments in the 15th and 16th centuries. A study of the growth of the Protestant movement and the influence of the movement upon the New and Old World. (Pre-requisites: ENGL 102, HIST 101, HIST 102 or Instructor's consent)

HIST 475. MODERN EUROPEAN HISTORY 1900- PRESENT.**3 Hrs.**

Development of the modern Western world focusing on political, social, and economic developments through the Age of Imperialism carrying through the modern age. (Pre-requisites: ENGL 102, HIST 102, or Instructor consent)

INDUSTRIAL ELECTRICAL/INSTRUMENTATION TECH (IDIT)**IDIT 101. ADVANCED INSTRUMENTATION 1.****3 Hrs.**

Comprehensive study of temperature and pressure instrumentation devices. Students will learn installation, calibration, and troubleshooting skills associated with various types of sensors, controllers, and recording devices relating to temperature and pressure parameters. (2 lecture; 2 lab) (Pre-requisite: MATH 125 or higher with C or higher)

IDIT 102. ADVANCED INSTRUMENTATION 2.**3 Hrs.**

Comprehensive study of flow and level instrumentation devices and procedures. Students will learn installation, calibration, and troubleshooting skills associated with various types of sensors, controllers, and recording devices relating to flow and level parameters. (Pre-requisite: MATH 125 or higher with C or higher)

IDIT 201. ADVANCED INSTRUMENTATION 3.**3 Hrs.**

Comprehensive study of analytical instrumentation devices and procedures. Students will learn installation, calibration, and troubleshooting skills associated with various types of analyzers, including pH and ORP meters, gas chromatographs, spectrophotometers, color, carbon, and optical analyzers (turbidity, opacity, etc.). (2 lecture; 2 lab). (Pre-requisite: IDIT 102 or Instructor Permission).

IDIT 202. ADVANCED INSTRUMENTATION 4.**3 Hrs.**

Comprehensive study of Supervisory Control and Data Access (SCADA) systems, Distributed Control systems (DCS), and Programmable Control systems (PLC). Students will discuss the hardware, software, and telemetry systems involved with these control mechanisms. (2 lecture; 2 lab) (Pre-requisite: IDIT 102 or Instructor Permission).

INDUSTRIAL MAINTENANCE (IM)**IM 101. INDUSTRIAL MAINTENANCE 1.****3 Hrs.**

Provides an introduction to piping, valves installation, hydraulic and pneumatic testing. Laboratory exercises are designed to provide hands-on practice of concepts. (Co-requisites: IM 102, IM 103)

IM 102. INDUSTRIAL MAINTENANCE 2.**3 Hrs.**

Provides an introduction to bearings, steam systems, distillation towers, heaters, coolers and furnaces. Laboratory exercises are designed to provide hands-on practice of concepts. (Co-requisites: IM 101, IM 103)

IM 103. INDUSTRIAL MAINTENANCE 3.**3 Hrs.**

Provides an introduction to measuring tools, advanced trade math, bearing and coupling installation. Laboratory exercises are designed to provide hands-on practice of concepts. (Co-requisites: IM 101, IM 102)

IM 132. SHOP FABRICATION.**4 Hrs.**

Sketching, pattern making, layout, and assembly of parts from sheet metal. Development of elbows, tees, offsets and transitions. (2 class hours and 4 lab hours per week)

IM 201. INDUSTRIAL MAINTENANCE 4.**3 Hrs.**

Topics include setting base plates, pre-alignment, belt, seal, and chain installation. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites: IM 101, IM 102, IM 103, Co-requisites; IM 202, IM 203)

IM 202. INDUSTRIAL MAINTENANCE 5.**3 Hrs.**

Topics include preventative and predictive maintenance, advanced blueprint reading and compressor systems. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites: IM 101, IM 102, IM 103, Co-requisites; IM 201, IM 203)

IM 203. INDUSTRIAL MAINTENANCE 6.**3 Hrs.**

Topics include laser alignment, troubleshooting and repairing hydraulic systems, troubleshooting and repairing pumps. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites: IM 101, IM 102, IM 103, Co-requisites; IM 201, IM 202)

IM 254. CNC MACHINING 1.**3 Hrs.**

This course will teach students how to program computer controlled milling machines. Conversational language will be used and G codes will be discussed.

IM 255. CNC MACHINING 2.**3 Hrs.**

This course will teach students to program and run CNC Lathes and Milling Machines. Both G Code and conversational language will be included. No previous knowledge of computers is required.

JOURNALISM
(PLEASE SEE COMMUNICATION AND MEDIA STUDIES)

LEGAL STUDIES (LS)

LS 101. INTRODUCTION TO LEGAL STUDIES.

3 Hrs.

This course will explore the world of law, its functions, roles and elements. It will cover an introductory look at the legal systems and its functions in the United States.

LS 210. LEGAL RESEARCH AND WRITING 1.

3 Hrs.

In this course the student will learn how to research and analyze legal problems and to convey that legal analysis of a problem into a written form that adheres to the conventions of the legal profession.

LS 215. LAW OFFICE MANAGEMENT.

3 Hrs.

This course will cover the fundamentals of law office management. This course is designed to familiarize the legal assistant with the practical inner workings of a law office, including an understanding of law office procedures.

LS 220. LEGAL RESEARCH AND WRITING 2.

3 Hrs.

The student will build on their knowledge of conducting legal research and being able to convey that information in various written legal documents. (Pre-requisite: LS 210)

LS 231. LEGAL ETHICS.

3 Hrs.

In this course the student is to evaluate the main philosophical theories of ethics and law, probe central moral and legal issues, examine the practical application of such theories and issues, and analyze the interrelationship between ethics and law.

LS 240. CIVIL PROCEDURES.

3 Hrs.

This course provides an introduction to the civil adjudicative process, primarily that of the federal and state courts, including jurisdiction, pleadings, discovery, dispositive motions and trial procedures.

LS 291. INTERNSHIP.

3 Hrs.

This course provides a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts in a legal setting.

LS 295. LEGAL PROFESSIONAL DEVELOPMENT.

2 Hrs.

The course incorporates all course work in the AAS program through creation of a professional portfolio. The course works on skills related to legal professionalism and career development. Serves as the capstone for the AAS.

LS 311. TORTS.

3 Hrs.

The purpose of this course is to provide a comprehensive overview of the major areas of tort law, including basic intentional torts, defamation and privacy, negligence, strict (or absolute) liability, product liability, and nuisance and to understand the concepts relevant to all torts. (Requires Admission into BAS LS Program or Program Coordinator signature)

LS 313. CRIMINAL PROCEDURES.

3 Hrs.

Advanced instruction in the rules of criminal procedures for Circuit Court, Magistrates, Court and Federal Courts. Additionally, topics will include Rules of Evidence and Appeal Court Procedures. (Pre-requisites: CJ 111 and 112, or LS 101. Requires admission to BAS CJ Program or BAS LS program or signature of Program Coordinator)

LS 315. CONTRACTS.

3 Hrs.

This course provides an introduction to the principles of contract law, including the formation, performance and interpretation of contracts, and the consequences of failure to perform contracts. (Requires Admission into BAS LS Program or Program Coordinator signature)

LS 320. PROPERTY AND PROBATE.**3 Hrs.**

This course is an overview of ownership and process of transferring assets. Topics include real and personal property, trusts, wills and gifts, administration of decedent's estates, probate procedure, federal and state estate and income taxes, and fiduciary accounting and responsibilities.

LS 330. EVIDENCE.**3 Hrs.**

This course provides a systematic study of the rules of evidence and emphasizes the role and importance of these rules to any legal action. The course specifically emphasizes how the paralegal assist the attorney in recognizing and identifying admissible evidence and the challenges to admissibility of evidence. (Requires Admission into BAS LS Program or Program Coordinator signature)

LS 335. FAMILY LAW.**3 Hrs.**

This course provides the student with practical and procedural aspects of family law practice. Areas explored include matrimonial law, divorce, alimony, child custody, adoption, paternity, abortion and family violence. (Requires Admission into BAS LS Program or Program Coordinator signature)

LS 460. CAPSTONE.**2 Hrs.**

This course provides the student with an opportunity for students to review, enhance and demonstrate their knowledge and practical application of the law in legal office setting. Capstone course. (Requires Program Coordinator signature and is to be taken semester of graduation)

MANAGEMENT (MGMT)**MGMT 214. PERSONNEL SUPERVISION.****3 Hrs.**

Leadership skills, employee development and evaluation, communication skills, and selected employer employee current issues are the major topics covered herein. The credits earned in this course are not applicable toward the BSBA degree.

MGMT 220. PRINCIPLES OF MANAGEMENT.**3 Hrs.**

Principles of Management includes the functions of planning, organizing, staffing, and leading, and controlling for organizations in the global environment. Ethics, diversity, technology, future trends, and practical application of principles are included. [Common Professional Component Course]

MGMT 310. SMALL BUSINESS MANAGEMENT.**3 Hrs.**

This course offers several approaches to the study of small business management. The traditional approach whereby students are exposed to the various functional areas of the business enterprise and the functions are discussed as part of this course. (Pre-requisite: MGMT 220)

MGMT 322. ORGANIZATIONAL BEHAVIOR.**3 Hrs.**

Students analyze how behavior impacts the success of a business at the organization level, department/team level, and individual level. Organizations are recognized as social systems and the relationships among all employees and supervisors enable students to be better employees and better managers. Students also learn about authority, communications, performance appraisal, discipline, informal organizations, job satisfaction, and motivation. (Pre-requisite: MGMT 220)

MGMT 333. HUMAN RESOURCE MANAGEMENT.**3 Hrs.**

The organization and role of the personnel function in business and nonbusiness entities are explored and discussed. Specifically, job analysis, employment procedures, compensation, employee training programs, employment regulations, and collective bargaining are topics considered in depth. (Pre-requisite: MGMT 220)

MGMT 338. LABOR RELATIONS.**3 Hrs.**

The development of labor organizations and the process of collective bargaining are the primary topics covered in this course. Collateral concerns include arbitration, grievance procedures, mediation, the NLRB, and selected statutes governing labor relations. (Pre-requisite: MGMT 220)

MGMT 401. PRODUCTION AND OPERATIONS MANAGEMENT.**3 Hrs.**

Students in this course are introduced to the functions of operations management, including designing, planning, organizing, scheduling, and controlling and its relationship with other functional areas of the business enterprise. (Pre-requisites: MGMT 220 and GBUS 325) [Common Professional Component Course for BSBA]

MGMT 410. ESSENTIALS OF LEADERSHIP.**3 Hrs.**

This course explores the nature, function, and importance of the leadership process in organizations and society. Topics studied include leader-follower relationships, leadership styles, and the development of current theories that help managers determine the “best” style of leadership to use based on situational analysis. A thorough review of the literature and research surrounding leadership will help the student find his/her leadership strengths and understand the source of leader strengths (nurture or nature). A service learning component may be required for this course.

MARKETING (MKTG)**MKTG 230. PRINCIPLES OF MARKETING.****3 Hrs.**

Analysis of the flow of goods and services from the producer to the consumer. Includes target marketing and segmentation, analysis of market research and marketing information systems to provide data for decision making regarding the 4 Ps: Product, Promotion, Pricing, and Placement/Distribution. Includes international marketing, business ethics and social responsibility, and marketing management overview. [Common Professional Component Course for BSBA and BASBA]

MKTG 341. ADVERTISING.**3 Hrs.**

An analysis of the principles and practices businesses adapt as part of their promotional mix options, including advertising using traditional media, media selections and implementation, and sales promotions. Students will analyze and practice using social media and online advertising options. All forms of promotional communications will be explored from the perspective of the consumer, business and macro-environment. (Pre-requisite: MKTG 230).

MKTG 351. PRINCIPLES OF RETAILING.**3 Hrs.**

A comprehensive analysis of retailing enterprises in all business arenas. Students will learn the role retail stores play in the economy and review all issues related to managing a retail business from site selection, HR, IT, customer relationship management, in-store merchandising, visual merchandising and design, buying and pricing strategies, and financial analysis related to retailing. A study of the structure and function of retailing; and, the special demands on the business person who elects to work in business at the retailing level. (Pre-requisite: MKTG 230).

MKTG 360. BUSINESS MARKETING.**3 Hrs.**

An examination of the process of marketing to business, Institutional and governmental entities, with a focus on business buyers and development of appropriate marketing strategies for goods and services. (Pre-requisite: MKTG 230)

MKTG 370 – PRINCIPLES OF PURCHASING.**3 Hrs.**

This course is an intensive study of the role of purchasing and materials management in a firm’s ability to achieve its goal of providing quality raw materials and supplies while containing costs. The course covers terminology and techniques used by purchasing and materials management personnel as well as legal and ethical issues of purchasing.

MKTG 371. BUSINESS LOGISTICS.**3 Hrs.**

Logistics is a course in advanced logistical concepts. It is designed to provide the student with an in depth foundation in logistics. Students will understand the role procurement and specifically logistics, plays in achieving the goals of a government facility, private company, manufacturing firm, or a small or large business firm. Students completing this course will obtain skills in research, analysis, writing, speaking, listening, and observing. (Pre-requisite: MKTG 230)

MKTG 401. MARKETING RESEARCH.**3 Hrs.**

This course is an introduction to research methods which will emphasize the collection, analysis, and interpretation of data that will guide marketing managers toward making effective decisions for planning and controlling the activities of business and service organizations. In addition, students will be able to analyze the effectiveness of the research design, data collection, and analysis of information provided by other researchers in order to make informed decisions about the usefulness of information provided. A team project for a business client is required. (Pre-requisite: MKTG 230 and MATH 211)

MKTG 403. MARKETING MANAGEMENT.**3 Hrs.**

An analysis of the principles and practices businesses adopt as part of their promotional mix options including advertising using traditional and social media, media selection and implementation, and sales promotions. Students will analyze and practice using social media and online advertising options. All forms of promotional communications will be explored from the perspective of the consumer, business, and macro-environment. (Pre-requisite: MKTG 230)

MKTG 460. SALES MANAGEMENT.**3 Hrs.**

An investigation of the functions and activities of sales managers. Topics include recruiting, organizing, training, compensating, leading, motivating, and managing the sales force. (Pre-requisite: MKTG 230)

MKTG 471 – FEDERAL CONTRACT ADMINISTRATION.**3 Hrs.**

This course is an intensive study of the federal contract administration process in the area of procurement and purchasing. Students will explore the total process needed to ensure a fair and comprehensive environment for suppliers to place bids on purchasing packages offered by the Federal Government. The course will cover the full range of topics on federal contract procedures from initiation of need to contract administration completions. The course will view these processes from both the federal government and the commercial view point.

MATHEMATICS (MATH)**MATH 119. INTRODUCTION TO COLLEGE ALGEBRA.****3 Hrs.**

A study of algebraic concepts necessary to be successful in College Algebra.

MATH 120. QUANTITATIVE LITERACY.**3 Hrs.**

Topics will included logic, problem solving, quantitative information in everyday life, probability, statistics, and mathematical modeling. (Pre-requisite: Satisfactory score on a placement test or consent of instructor). (Co-requisite: MATH 120E if pre-requisites are not met)

MATH 120E. QUANTITATIVE LITERACY ENHANCED.**0 Hrs.**

This co-requisite course is designed to establish the necessary background knowledge to be successful in Quantitative Literacy. (Co-requisite: MATH 120).

MATH 121. INTRODUCTION TO MATHEMATICS.**3 Hrs.**

A survey of mathematical topics including Euclidean geometry, set theory, number theory, numeration, techniques of problem solving, probability & statistics and the history of mathematics.

MATH 125. TECHNICAL MATHEMATICS.**4 Hrs.**

Provide students with a basic understanding of the algebraic and trigonometric concepts that are necessary to successfully advance in technological fields. (Pre-requisites: 19 on ACT or 3,4,5 on HS Sum Exam). (Co-requisite: MATH 125E if pre-requisites are not met).

MATH 125E. TECHNICAL MATHEMATICS ENHANCED.**0 Hrs.**

Topics include study of real numbers, basic algebraic operations, solving linear equations and inequalities, graphing linear equations. Includes applications and activities to build skills in problem solving. (Co-requisite: MATH 125).

MATH 126. COLLEGE ALGEBRA.**3 Hrs.**

Quadratic equations; quadratic type equations; radical equations; rational equations; linear, nonlinear and absolute value inequalities; function concepts; graphing; linear functions and applications; polynomial functions; rational functions; exponential and logarithmic functions; systems of equations using Gaussian elimination; matrix theory and determinants. (4 lecture hours per week.)
(Pre-requisites: 23 on ACT or 3,4,5 on HS Sum Exam, or Math 119)

MATH 128. COLLEGE TRIGONOMETRY.**3 Hrs.**

Degree and radian measure, right and oblique triangles, vector applications, graphing, inverse trigonometric functions, identities and conditional trigonometric equations and applications.

MATH 141. FINITE MATH.**3 Hrs.**

Logic, sets, counting principles, vectors, matrices, probability theory, linear programming, applications.
(Pre-requisite: C or higher in MATH 126) On Demand

MATH 150. INTRODUCTION TO CALCULUS.**3 Hrs.**

For students in other disciplines needing calculus for applications. Limits of sequences and functions, continuity, derivatives, and integrals of polynomials, rational functions, and exponential and logarithmic functions, partial derivatives, maxima and minima. (Pre-requisites: C or higher in MATH 126)

MATH 155. CALCULUS 1.**4 Hrs.**

Limits, continuity, derivatives and applications, properties of the definite integral, and applications.
(5 lecture hours per week.) (Pre-requisites: C or higher in MATH 126 and 128 or placement test)

MATH 156. CALCULUS 2.**4 Hrs.**

Continuation of MATH 155. Derivatives and integrals of logarithmic, exponential, and trigonometric functions, techniques of integration; polar coordinates; series. (5 lecture hours per week.) (Pre-requisite: C or higher in MATH 155)

MATH 211. STATISTICS.**3 Hrs.**

Descriptive and inferential statistics, descriptive measures, probability, random variables, discrete and continuous probability distributions, expected value. The central limit theorem, confidence intervals, tests of hypothesis, chisquare test, regression and correlation.

MATH 230. INTRODUCTION TO EUCLIDEAN GEOMETRY.**3 Hrs.**

Fundamental concepts of plane & solid Euclidean Geometry including points, lines, space, construction proofs, transformation, area formulas, volume formulas, polygons, circles, coordinate geometry and triangle ratio. (Pre-requisites: C or higher in MATH 126)

MATH 251. CALCULUS 3.**4 Hrs.**

Vector products; linear transformations; matrices and determinants; vector differential calculus; line and surface integrals; double and triple integrals; Green's Theorem; Stokes' Theorem; Fourier Series and Integrals.
(Pre-requisite: C or higher in MATH 156)

MATH 261. CALCULUS 4.**4 Hrs.**

Ordinary differential equations; Laplace transforms; partial differential equations with emphasis on engineering and scientific applications. (Pre-requisite: C or higher in MATH 251)

MATH 303. DIAGNOSTIC & PRESCRIPTIVE MATH.**2 Hrs.**

Methods and content with respect to primary grade mathematics. Focus will be on error analysis and guidance for assessment and preventive teaching (Pre-requisites: Admission to Teacher Education Program, MATH 301, EDUC 320) (Co-requisite: Field Experience)

MATH 304. MATH FOR YOUNG CHILDREN.**3 Hrs.**

Study of interactions which set the stage for math talks and problem solving skills. Examine and evaluate use of materials, problem solving techniques, and enriching conversations that will foster mathematic processes. (Co-requisite: 10 hours field experience).

MATH 315. INTRODUCTION TO MODERN ALGEBRA.**3 Hrs.**

An introduction to abstract algebra and modern mathematical thinking. Topics include: group properties, sub-groups, Lagrange's Theorem, co-sets, permutations, normal sub-groups, homomorphisms, and rings. (Pre-requisites: C or higher in MATH 126, MATH 121)

MATH 318. DISCRETE MATH.**3 Hrs.**

Topics include: logic and set theory, functions, algorithms, recursion, combinatorics, and graphs. (Pre-requisites: 23 on ACT or Grade of C or higher in MATH 126, MATH 125)

MULTI-CRAFT TECHNOLOGY (MTEC)**MTEC 102. INTRODUCTORY CRAFT SKILLS.****2 Hrs.**

Provides introduction to, safety, tools, blueprints and rigging. Laboratory exercises are designed to provide hands-on practice of concepts.

MTEC 103. INTRODUCTION TO MAINTENANCE TECHNOLOGIES.**3 Hrs.**

Topics include fasteners and anchors, oxyfuel cutting, gaskets, pumps and lubrication. Laboratory exercises are designed to provide hands-on practice of concepts. (Pre-requisites; MTEC 102 or Instructor Consent)

MTEC 112. WORKPLACE SAFETY.**3 Hrs.**

Safety topics will include ALL OSHA General Industry safety requirements. Successful completion will result in the issuance of an OSHA 30 Hour Safety Card.

MTEC 280. CAPSTONE COURSE.**1 Hr.**

This course serves as a culmination of the MTEC A.A.S. program. A project is designed and completed that demonstrates competencies and skills learned within the MTEC, IM and E & I courses of the program. Capstone course. (Pre-requisites: Instructor Consent)

MULTIDISCIPLINARY STUDIES (MDS)**MDS 460. FINE ARTS SEMINAR.****3 Hrs.**

Senior level course that examines the interdisciplinary relationships among the visual and performing arts. Required for MDS minor in Fine Arts. (Pre-requisite: ART 101, MUSI 170, and THEA 101)

MDS 491. PROJECT PROPOSAL DEVELOPMENT.**1 Hr.**

Project Proposal Development provides guidance for students as they clarify goals and integrate knowledge from their three minors in planning an appropriate project to complete their Bachelor of Arts degree in Multidisciplinary Studies. (Pre-requisite: for MDS 492)

MDS 492. SENIOR PROJECT.**3 Hrs.**

Multidisciplinary studies degree students will combine their three minor disciplines to complete a culminating project during their final semester of their degree program. Fee required. (Pre-requisite: MDS 491)

MUSIC (MUSI)**MUSI 121. MUSIC THEORY 1.****4 Hrs.**

First in a developmental sequence of music courses designed to provide the music student with basic fundamentals necessary for advanced study. Sequence will integrate harmony, analysis, composition, ear training, and dictation, sight singing and keyboard fundamentals. Covers scales, modes, intervals, triads, figured bass, and four-part harmonization.

MUSI 122. MUSIC THEORY 2.**4 Hrs.**

Continuation of MUSI 121 focusing on four-part harmonizations utilizing the dominant seventh, leading tone and diminished sevenths and non-dominant secondary seventh chords, secondary dominants and modulation. Two- and three- part forms will also be examined. Course continues to develop student skills in ear training, sight singing and keyboard harmony. (Pre-requisites: Grade of C or higher in MUSI 121)

MUSI 151. GUITAR FUNDAMENTALS.**1 Hr.**

Fundamentals of tone production, hand position, tuning, basic chords, finger picking, playing simple folk songs, and reading musical notation.

MUSI 152. VOCAL TECHNIQUES.**1 Hr.**

Fundamentals of singing; vocal production, breath control, style, interpretation, sight reading, diction, and literature.

MUSI 161. CLASS PIANO 1.**1 Hr.**

Piano skills for beginners; group instruction at electronic piano; keyboard familiarity; notation; chord progressions; transposition; improvisation; techniques; literature for solo and ensemble performance.

MUSI 162. CLASS PIANO 2.**1 Hr.**

Continuation of MUSI 161. Music reading; functional piano skills; theory; pop/jazz chords; literature from Baroque to contemporary; transposition; improvisation; simple accompaniment; solo and ensemble performance at electronic keyboards. (Pre-requisite: Grade of C or higher in MUSI 161 or audition)

MUSI 163. CLASS PIANO 3.**1 Hr.**

Continuation of MUSI 162. Scales; arpeggios; chords; creative activities; technique; theory; sight reading; lead sheet reading; solo and ensemble literature from Baroque through contemporary periods. (Pre-requisite: Grade of C or higher in MUSI 162 or audition)

MUSI 164. CLASS PIANO 4.**1 Hr.**

Continuation of MUSI 163. Electronic and acoustic pianos used. All major and minor scales; arpeggios; sight reading; chord progressions; study and performance of intermediate piano literature. (Pre-requisite: MUSI 163 with grade of C or audition)

MUSI 170. MUSIC APPRECIATION.**3 Hrs.**

Survey of music with emphasis on the masterworks of the Western tradition. Historical and theoretical concepts will be introduced. Attendance at live performances is a course requirement. Primary course objective is to provide a wide variety of listening experiences which promote development of a curiosity about, an enthusiasm for, and an enjoyment of many types and styles of music. (Pre-requisite: Placement test of English 101.)

MUSI 171-190. APPLIED MUSIC.**1 Hr.**

171 Piano	181 Trumpet
172 Voice	182 French Horn
173 Guitar	183 Trombone
174 Organ	184 Baritone Horn
175 Percussion	185 Tuba
176 Flute	186 Violin
177 Oboe	187 Viola
178 Clarinet	188 Cello
179 Saxophone	189 Bass
180 Bassoon	190 Harp

Individual music instruction in above listed areas offered to all students and members of the community. Lessons scheduled at time of registration. Twelve 45-minute private lessons earn one college credit. Some lessons may be scheduled off campus. May be repeated for credit. Fee required. (Pre-requisite: Department Approval)

MUSI 191. COLLEGE CHORALE.**1 Hr.**

Select chamber choir which performs finest choral music of all periods and styles. Chorale presents a festive performance during the fall semester and tours West Virginia and surrounding states at the end of the spring semester. Auditions are held during first week of classes each semester. May be repeated for credit. (Pre-requisite: Audition)

- MUSI 193. SYMPHONIC CHOIR.** **1 Hr.**
Select choral group which performs with orchestra. Membership by audition. (May be repeated.)
- MUSI 195. WIND ENSEMBLE.** **1 Hr.**
An instrumental ensemble which studies and performs standard wind ensemble literature. (May be repeated)
(Pre-requisite: Permission)
- MUSI 196. JAZZ ENSEMBLE.** **1 Hr.**
An instrumental ensemble allowing the student to learn jazz styles and techniques. (May be repeated)
(Pre-requisite: Permission)
- MUSI 221. MUSIC THEORY 3.** **4 Hrs.**
Continuation of MUSI 122. Examines Neapolitan and augmented sixth chords, upper tertian chords, and chromatic harmony. Sixteenth and eighteenth century counterpoint will be introduced along with analysis of rondo, variation and sonata allegro forms. Course will continue to develop student skills in ear training, sight singing and keyboard harmony. (Pre-requisite: Grade of C or higher in MUSI 122)
- MUSI 222. MUSIC THEORY 4.** **4 Hrs.**
Course is final semester of the music theory sequence. Examines music of the late nineteenth century and beyond but focuses primarily on compositional principles of the twentieth century. Course will continue to develop student skills in ear training, sight singing and keyboard harmony. (Pre-requisite: Grade of C or higher in MUSI 221)
- MUSI 241. CHORAL CONDUCTING & TECHNIQUES.** **3 Hrs.**
Conducting and rehearsal techniques; conducting patterns, development of choral sound; singers' diction; selection of repertoire; analysis of musical score; performance problems. On demand. (Pre-requisite: Permission)
- MUSI 270. HISTORY OF WESTERN MUSIC 1.** **3 Hrs.**
This course surveys the music of Western Europe and the New World from the notated music and writings of the ancient Greeks through the Classical period.
- MUSI 271. HISTORY OF WESTERN MUSIC 2.** **3 Hrs.**
This course surveys all of the musical traditions, languages, and repertoires that are currently cultivated in the United States, beginning with the European music from around 1770 and the musical traditions of West Africa.
- MUSI 291. MUSICAL THEATRE WORKSHOP.** **1-3 Hrs.**
College musical theatre production. (Same as THEA 291; may be repeated)
- MUSI 311. AMERICAN MUSIC.** **3 Hrs.**
American Music is a survey of the varied musical traditions, both historical and sociological, found in the United States. Topics include folk and ethnic music, jazz, blues, rock, country, sacred, musical theatre, concert music, and regional styles. (Pre-requisite: Grade of C or higher in ENGL 102)
- MUSI 312. AMERICAN MUSICAL THEATRE.** **3 Hrs.**
American Musical Theatre is a survey that will examine masterworks of the genre and recent productions currently running on Broadway. Students will also attend and review live performances. This course does not meeting the general education fines arts requirement for any associate degree program. (Pre-requisite: Grade of C or higher in ENGL 102)

MUSI 315. INSTRUCTIONAL STRATEGIES IN MUSIC.**3 Hrs.**

Using the West Virginia Music Program of Study and the National Standards for General Music Education as guides, students will explore the concepts of melody, harmony, form, rhythm, tempo, dynamics and timbre; learn effective lesson planning for music, and examine appropriate textbooks and materials. The philosophies of Orff, Kodaly and Dalcroze will be presented and experienced throughout the course providing a basis for an eclectic curriculum. Learning will be achieved primarily through participation in a wide variety of creative activities including singing, playing instruments, creative movement, games, listening and imagining. (Pre-requisites: MUSI 170, EDU 300; Admission to Teacher Education Program; Co-requisite: Field Experience)

MUSI 390. UPPER LEVEL APPLIED MUSIC.**1 Hr.**

Advanced individual music instruction in voice, guitar, and all band, orchestra, and keyboard instruments. (Pre-requisite: Student must enroll in lower level applied music study (Music 171-190) at WVU Parkersburg and successfully complete a qualifying jury examination. May be repeated for credit. Fee required)

NURSING (NURS)**NURS 101. ORIENTATION TO HEALTH CAREERS.****3 Hrs.**

This course is designed specifically for students who are entering college and are interested in a career in health science. Theory presentation centers on the individual student's development of study skills that are consistent with predicting success in college. Key concepts include adaptation to the role of the student, organization, time management, study skills and communication represented within the context of health science careers. Learning activities include the investigation of career opportunities.

NURS 132. DRUG AND DOSAGE CALCULATION I.**1 Hr.**

This course is designed to enhance the nursing student's ability to read, interpret, and solve dosage calculation problems. Critical thinking skills are applied to medication situations to emphasize the importance of accuracy and the avoidance of medication errors. (Pre-requisite: Admission to Program; Pre/Co-Requisite BIOL 107; Co-Requisite NURS 133, NURS 134)

NURS 133. HEALTH ASSESSMENT AND DIAGNOSTICS.**2 Hrs.**

This course is designed to introduce the nursing student to the knowledge and skills required to perform a health assessment across the lifespan and to document appropriate findings. The nursing student will be introduced to normal lab values and basic diagnostic procedures. (Pre-requisite: Admission to Program; Pre/Co-Requisite BIOL 107; Co-Requisite NURS 132, NURS 134)

NURS 134. INTRODUCTION TO NURSING CONCEPTS.**8 Hrs.**

This foundational course is designed to introduce concepts to the beginning nursing student that will focus on maintaining health and promoting wellness throughout the lifespan. Concepts and core values basic to the foundation of nursing practice are presented. Classroom and laboratory experiences provide opportunity for understanding of the nursing process, clinical judgment and decision making. (Pre-requisite: Admission to Program; Pre/Co-Requisite BIOL 107; Co-Requisite NURS 132, NURS 133; standardized final exam)

NURS 142. DRUG AND DOSAGE CALCULATIONS II.**1 Hr.**

This course expands the nursing student's ability to read, interpret, and solve increasingly complex dosage calculation problems. Critical thinking skills are applied to age and acuity specific variations in select populations. (Pre-requisite: BIOL 107, NURS 132, NURS 133, NURS 134; Pre/Co-Requisite BIOL 108; Co-Requisite NURS 143, NURS 144; standardized final exam)

NURS 143. HEALTH ASSESSMENT AND DIAGNOSTICS II.**1 Hr.**

This course is designed to focus on abnormal assessment and diagnostic findings. Modifications of assessment for select populations will be addressed. (Pre-requisite: BIOL 107, NURS 132, NURS 133, NURS 134; Pre/Co-Requisite BIOL 108, Co-Requisite NURS 142, NURS 144; standardized final exam)

- NURS 144. NURSING CONCEPTS OF HEALTH AND ILLNESS I. 9 Hrs.**
This course builds upon foundational concepts across the lifespan while introducing the concepts of the wellness-illness continuum and the individual and family response. Classroom and laboratory experiences provide opportunity for application of the nursing process and development of clinical judgment and decision making. (Pre-requisite: BIOL 107, NURS 132, NURS 133, NURS 134; Pre/Co-Requisite BIOL 108; Co-Requisite NURS 143, NURS 142; standardized final exam)
- NURS 234. NURSING CONCEPTS OF HEALTH AND ILLNESS II. 9 Hrs.**
This course expands the concepts of the wellness-illness continuum, with emphasis on the expanding family and tertiary care within the community. Classroom and laboratory experiences provide opportunity for analysis within the nursing process and application of clinical judgment and decision making. (Pre-requisite: BIOL 108, ENGL 101, NURS 142, NURS 143, NURS 144; Pre/Co-requisite: BIOL 200; PSYC 101; standardized final exam)
- NURS 244. SYNTHESIS OF NURSING CONCEPTS. 9 Hrs.**
This course together with the capstone course focuses on the integration of interrelated concepts across the wellness-illness continuum. Classroom and laboratory experiences provide opportunity for synthesis of the nursing process and integration of clinical judgment and decision making. (Pre-requisite: NURS 234, BIOL 200, PSYC 101; Co-requisite: NURS 245; standardized final exam)
- NURS 245. PROFESSIONAL NURSING AND HEALTH SYSTEMS CONCEPTS. 3 Hrs.**
This capstone course will focus on current issues in health care and the nursing profession and is designed to facilitate the transition from student to professional registered nurse. Topics of discussion will include national health policy and politics, ethical and bioethical issues, career development, application for state licensure and preparation for the NCLEX-RN examination. (Pre-requisite: NURS 234, BIOL 200, PSYC 101; Co-requisite: NURS 244; standardized final exam; preceptor hours)
- NURS 311. FRAMEWORK FOR PROFESSIONAL PRACTICE. 4 Hrs.**
A theoretical basis for nursing practice is presented through an exploration of professional nursing role. Selected nursing theories will be explored. Emphasis of the course is on clear and appropriate oral and written communication consistent with American Psychological Association (APA) format. (Pre-requisites: Admission into the RN-to-BSN Program, ENGL 101, ENGL 102)
- NURS 320. HEALTH ASSESSMENT AND PROMOTION ACROSS THE LIFE SPAN. 3 Hrs.**
The focus of this course is on health promotion across the lifespan. Concepts, theories and current research are explored in relation to health promotion, health behaviors, and behavioral change. (Pre-requisites: Admission into the RN-to-BSN Program or second year of A.D.N. program with instructor permission)
- NURS 324. TRENDS AND ISSUES OF HEALTH CARE. 3 Hrs.**
This course provides the opportunity for an exploration of selected current issues or concepts affecting nurses, nursing and/or health care. (Pre-requisites: NURS 311)
- NURS 330. INFORMATICS: CONCEPTS, APPLICATION & ISSUES. 3 Hrs.**
This course introduces the student to the language and technology of nursing. Ethical management of data, information, and knowledge are discussed. (Pre-requisites: NURS 311)
- NURS 431. LEGAL AND ETHICAL ISSUES IN NURSING. 3 Hrs.**
This course focuses on the complexity of moral, legal, and ethical issues in health care. (Pre-requisites: PHIL 150, NURS 311)
- NURS 440. RESEARCH IN PROFESSIONAL NURSING. 3 Hrs.**
The basic concepts of the research process will be introduced. Students will perform rapid critical appraisals, learn search strategies using various databases, and enhance their ability to analyze and synthesize research findings into clinical practice. (Pre-requisites: NURS 311, MATH 211)
- NURS 450. EVIDENCE-BASED PRACTICE IN PROFESSIONAL NURSING. 3 Hrs.**
The application of an evidence-based approach to patient care will be promoted. The focus will be on enhancing the student's ability to read, comprehend, critically appraise and apply the best evidence to professional nursing practice. (Pre-requisites: NURS 440)

NURS 451. LEADERSHIP AND MANAGEMENT IN PROFESSIONAL NURSING. 3 Hrs.

This course focuses on leadership skills, knowledge, and creativity to promote and manage safe, holistic patient-centered care for diverse individuals, families, groups, and populations across the lifespan. (Pre-requisites: NURS 311)

NURS 452. COMMUNITY AND POPULATION BASED HEALTH CARE. 4 Hrs.

This final capstone course is designed to provide the baccalaureate nursing student with an opportunity for reflective synthesis of cognitive and affective concepts explored in the BSN completion program. The focus is on community and population-based health promotion and disease/injury prevention. (Pre-requisites: NURS 320, NURS 324, NURS 330, NURS 440, NURS 431 and NURS 450) (Pre/Co-requisites: NURS 450, NURS 451)

NURS 491. PROFESSIONAL FIELD EXPERIENCE. 2 Hrs.

Prearranged experiential learning program, to be planned, supervised and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

PATIENT CARE TECHNICIAN (PCT)

PCT 101. PATIENT CARE TECHNICIAN I. 6 Hrs.

This course prepares students for the Patient Care Technician (PCT) – Direct Care Worker role in health care settings. Emphasis is on the personal qualities, knowledge, and skills needed by the PCT to provide quality basic care in a healthcare agency or independent assistance to patients in the home setting under the supervision of registered nurses. Basic nursing and home health care, client rights, principles of therapeutic communication, safety and infection control, emergency situations, restorative care, death and dying, and legal/ethical issues related to nursing practice are introduced. This course includes classroom instruction, campus laboratory skills practice, and clinical laboratory rotations to community health care agencies (Pre-requisites: Admission to the program; Pre/Co-requisites: BIOL 109/109L or BIOL 107, HPER 172; Direct Care Worker Certification Exam)

PCT 102. PATIENT CARE TECHNICIAN II. 6 Hrs.

This course is designed to expand upon the role of the Patient Care Technician as a phlebotomist and ECG technician. The student will be introduced to the knowledge and skills required to prepare and monitor clients when performing venipuncture and ECGs safely. This course includes classroom instruction, campus laboratory skills practice, and clinical laboratory rotations to community health care agencies. (Pre-requisites: Completion of PCTA I, HPER 172, and BIOL 109/109L or BIOL 107; Pre/Co-requisites: BTEC 253, PSYC 101, ENGL 101; Patient Care Technician Certification Exam).

PHARMACY TECHNICIAN (PTEC)

PTEC 101 & 101L. PHARMACY PRACTICE. 7 Hrs.

This course, designed for Pharmacy Technician students, introduces the concepts of basic pharmacy activities and the skills required to work in a clinical or community pharmacy. The students will use basic communication skills in interacting with instructors, patients and co-workers. Pharmacy practices will be examined in terms of symbols, language, abbreviations, legal issues, ethical considerations, and accountability. Pharmacy principals studied will provide a basis of practical understanding when working in a pharmacy. Structured campus laboratory experiences provide the student with an opportunity to practice technical skills. The clinical component provides opportunity for each student to observe and apply these skills in clinical and community pharmacies. (3 lecture hours; 2 campus lab hours; 9 clinical lab hours) (Pre-requisite: Admission to the program)

PTEC 102. CLINICAL COMMUNITY PHARMACY. 3 Hrs.

This course, designed for Pharmacy Technician students, provides hands on experience in hospital and community settings. The course provides general training necessary to interpret, prepare, label and maintain records of physicians' medication orders and prescriptions in a community pharmacy and a hospital environment. All training will be under the supervision of a licensed pharmacist. (Pre-requisite: PTEC 101, PTEC 112) (12 hours clinical pharmacy)

PTEC 111. CALCULATIONS FOR PHARMACY TECHNICIANS.**2 Hrs.**

This course, designed for Pharmacy Technician students, includes reading, interpreting, and solving calculations problems encountered in the preparation and distribution of drugs. This course also discusses the conversion of measurement with the apothecary, avoirdupois, and metric systems with emphasis on the metric system of weight and volume. Topics include calculations for community, and institutional pharmacy. (Pre-requisite: PTEC 101, PTEC 112)

PTEC 112. PHARMACOLOGY I.**3 Hrs.**

This course, designed for Pharmacy Technician students provides study of the properties, reaction, and therapeutic value of the primary agents in the major drug classes. This includes understanding of pharmaceuticals for the major body systems. Students will develop knowledge of brand names as well as generic names of drugs. (Pre-requisite: Admission to program)

PTEC 114. PHARMACOLOGY II.**3 Hrs.**

This course, designed for Pharmacy Technician students continues the study of the properties, reaction, and therapeutic value of the primary agents in the major drug classes. This includes understanding of pharmaceuticals for the major body systems. Students will develop knowledge of brand names as well as generic names of drugs. (Pre-requisite: PTEC 112)

PTEC 121. PHARMACY TECH CERTIFICATION REVIEW.**2 Hrs.**

This course, designed for Pharmacy Technician students, is designed to prepare Pharmacy Technician students in reviewing for the national certification exam. This class will entail a comprehensive review for the areas that are covered on the exam. (Pre-requisite: Admission to program)

PHILOSOPHY (PHIL)**PHIL 111. INTRODUCTION TO PHILOSOPHY.****3 Hrs.**

An introduction to the art of wondering. Designed for the student interested in clarifying one's own philosophy through the study of the discipline which, in Greek, means "the love of wisdom."

PHIL 150. INTRODUCTION TO ETHICS.**3 Hrs.**

An introduction to the major theories of ethics and values. In light of such personal and social problems as morality, freedom, right and wrong, social and political responsibility and the meaning of "good", the course asks how we ought to live in relationships to contemporary moral issues.

PHIL 308. PHILOSOPHY OF RELIGION.**3 Hrs.**

A study of the major philosophical problems associated with religion, with attention given to such problems as the existence and nature of God, faith, religious truth, the nature of man, grounds of beliefs, immortality, etc.

PHIL 347. ADVANCED ETHICS.**3 Hrs.**

Provides a critical reexamination of current moral issues and studies the application of ethical theories, concepts, and principles. Topics may include abortion, capital punishment, euthanasia, global poverty, sexuality, and other issues of social concern. Readings are drawn from contemporary and historical sources.

PHIL 170. INTRODUCTION TO LOGIC.**3 Hrs.**

A comprehensive introduction to the art of making sense, that is critical thinking. Designed to improve one's reasoning abilities through study of the most common mistakes made in thinking.

PHIL 231. WORKPLACE ETHICS.**3 Hrs.**

A study of the ethical theories and daily applications of ethics in the workplace. Includes value judgments, critical thinking, problem solving and decisions making guidelines.

PHIL 308. PHILOSOPHY OF RELIGION.**3 Hrs.**

A study of the major philosophical problems associated with religion, with attention given to such problems as the existence and nature of God, faith, religious truth, the nature of man, grounds of beliefs, immortality, etc.

PHIL 347. ADVANCED ETHICS.**3 Hrs.**

Provides a critical reexamination of current moral issues and studies the application of ethical theories, concepts, and principles. Topics may include abortion, capital punishment, euthanasia, global poverty, sexuality, and other Issues of social concern. Readings are drawn from contemporary and historical sources.

PHYSICAL SCIENCE (PSCI)**PSCI 101. FUNDAMENTALS OF PHYSICAL SCIENCE.****4 Hrs.**

Introduction to the basic concepts of physics, chemistry, geology, oceanography, meteorology, and astronomy. Scientific data collection and analysis will be stressed in lab. (Co-requisite: MATH 126 or higher) (3 lecture hours and 2 lab hours per week.)

PSCI 107. ENERGY TECHNOLOGY.**4 Hrs.**

This course presents the knowledge and analytic tools needed to evaluate energy choices while discussing the latest energy technology innovations. The various vocational opportunities available to graduates of the EAMT and SET programs are reviewed.

PSCI 111. INTRODUCTION TO PHYSICAL SCIENCE.**4 Hrs.**

An introduction to the basic concepts of science and scientific methods and the essentials of physics and chemistry. Topics covered include forces, motion, heat, sound, electricity, magnetism, light, atomic structure, chemical bonding, chemical equations, and chemical applications. Scientific data collection and analysis will be stressed in the laboratory portion of the course. (Pre-requisite: MATH 121 or higher) (3 lecture hours and 2 lab hours per week)

PSCI 112. INTRODUCTION TO EARTH SCIENCE.**4 Hrs.**

Fundamental concepts of geology, meteorology, and astronomy. Earth processes, both past and present, will be studied. Topics covered will include the origin of the Universe, solar system and earth; the structure and composition of the earth; plate tectonics; the atmosphere, weather and climate; earth's water resources, and the Earth's place in the Universe. Earth resources and environmental topics will be stressed in the course, rocks and minerals and topographic maps will be studied, and there will be a local geologic field trip. (3 lecture hours and 2 lab hours per week.)

PSCI 114. INTRODUCTION TO METEOROLOGY.**1 Hr.**

This course covers the basic concepts of meteorology (weather and climate). The course is designed for students seeking the Bachelor of Arts Degree in Elementary Education General Science 5-9.

PHYSICS (PHYS)**PHYS 101. INTRODUCTION TO PHYSICS 1.****4 Hrs.**

Mechanics, heat, and sound. Non-calculus based for students in pre-professional programs and college transfer programs. (3 lecture hours and 2 lab hours per week) (Pre-requisite: MATH 126)

PHYS 102. INTRODUCTION TO PHYSICS 2.**4 Hrs.**

Continuation of PHYS 101. Light; optics; electricity; magnetism. (3 lecture hours and 2 lab hours per week) (Pre-requisite: PHYS 101)

PHYS 103. INTRODUCTORY PHYSICS.**4 Hrs.**

Designed to meet the requirements of the Elementary Education Science Specialization 5-9. Topics to be covered are motion, work, energy, heat, sound, light, electricity and magnetism. An integration of scientific inquiry with basic principles of physics. (3 lecture hours and 2 lab hours per week) (Pre-requisite: MATH 126)

PHYS 111. GENERAL PHYSICS 1.**4 Hrs.**

Mechanics; heat; sound; designed for physics, chemistry and engineering majors. (3 lecture hours and 2 lab hours per week) (Pre-requisite: MATH 121)

PHYS 112. GENERAL PHYSICS 2.**4 Hrs.**

Continuation of PHYS 111. Light; optics; electricity; magnetism; modern physics. (Calculus based.) (3 lecture hours and 2 lab hours per week) (Pre-requisite: MATH 155, PHYS 111)

POLITICAL SCIENCE (POLS)**POLS 101. ELEMENTS OF DEMOCRATIC GOVERNMENT.****3 Hrs.**

Introduction to government, origin, forms, and functions of the state, organization and forms of government, and the relations of groups and individuals to the state. Taught generally on a comparative basis.

POLS 102. AMERICAN FEDERAL GOVERNMENT.**3 Hrs.**

A survey course dealing with all aspects of our system of government, with emphasis on the constitution, the federal system, civil rights, the three branches of government, and foreign policy.

POLS 211. FUNCTIONS OF DEMOCRATIC GOVERNMENT.**3 Hrs.**

Course deals primarily with the activities of the executive branch of the government, particularly as they relate to social and economic development and expansion of government activities and services since 1932.

POLS 220. STATE AND LOCAL GOVERNMENT.**3 Hrs.**

Politics and policy at the state and local level in the American political system. Areas for study include constitutional, cultural, and financial constraints on state and local politics; community power structures; state legislatures; governors and other elected executives; and judicial elected institutions.

POLS 225. CONSTITUTIONAL LAW.**3 Hrs.**

Constitutional law is concerned primarily with the exercise of judicial review. The focus is on the manner in which the courts generally have interpreted the cryptic provisions of the US Constitution. The student should emphasize the principles, doctrines and rules developed in the cases and the underlying policies and values.

POLS 256. WEST VIRGINIA LEGISLATIVE PROCESS.**2 Hrs.**

A study of the organization, operation and function of the West Virginia Legislature. Course seeks to involve the student in a direct learning experience through frequent visits to the Legislature, including an intensive internship week at the Capitol. A preliminary phase of the course is instructed by resource people and is designed to prepare students to the point that the later internship phase will be more meaningful. (Pre-requisite: departmental approval)

POLS 310. AMERICAN PRESIDENCY.**3 Hrs.**

This course surveys the literature on the American Presidency with particular attention to its historical and institutional development. It examines the constitutional foundations of the office, the method of election and removal, the President's role as chief executive and administrative head, the nature and extent of executive prerogative, and the dimensions of presidential leadership.

PROCESS TECHNOLOGY (ATPT)**ATPT 130. INTRODUCTION TO PROCESS TECHNOLOGY.****2 Hrs.**

Introduction to the job requirements and duties of a process technician including the physics, chemistry, equipment, safety, health and the environment for process industries. Minimum grade of C.

ATPT 131. PROCESS SAFETY, HEALTH & ENVIRONMENTAL.**3 Hrs.**

Safety topics include all OSHA General Industry requirements. Course includes an introduction to the major environmental regulations affecting process industries. Successful completion will result in the issuance of an OSHA 30 Hour Safety Card. Minimum grade of C.

ATPT 132. PROCESS QUALITY.**3 Hrs.**

Introduces Total Quality Management concepts including customer service, effective communication, team skills, variance and operating consistency, process capability, continuous improvement, corrective/preventive action, SPC basics, data collection, control charts. Minimum grade of C.

ATPT 140. PROCESS INSTRUMENTATION.**3 Hrs.**

Introduces the process instrumentation that a process technician/operator utilizes in performing job functions. In addition, this course provides the student with rudimentary knowledge and troubleshooting assistance of process instrumentation. (Pre-requisites: Grade of C or higher in ATPT 130)

ATPT 141. PROCESS TECHNOLOGY 1 - EQUIPMENT.**3 Hrs.**

Course covers the various types of equipment used in the process environment and the interaction of the process operator/technician with it. An understanding of the operation, operator maintenance and trouble shooting is gained. Minimum grade of C.

ATPT 150. PROCESS TECHNOLOGY FIELD EXPERIENCE 1.**1 Hr.**

A required hands-on experience at a partner processing facility, designed to supplement the classroom curriculum with an understanding of the workplace environment. (Pre-requisites: ATPT 130, ATPT 131, and ATPT 141)

ATPT 242. PROCESS TECHNOLOGY 2 - SYSTEMS.**3 Hrs.**

Equipment roles and control methods are studied for each process system. Emphasis is on the safety of each of these systems and the role played by operator in maintaining the system safely. (Pre-requisites: ATPT 141 grade of C or better and Math 120)

ATPT 244. PROCESS TECH 3 - OPERATIONS.**3 Hrs.**

Equipment is studied for the role and control method within each process system. Emphasis is on the safety of each of these systems and the role played by operator in maintaining the system safely. (Co-requisite: ATPT 260). Minimum grade of C.

ATPT 250. PROCESS TECHNOLOGY FIELD EXPERIENCE 2.**1 Hr.**

A required hands-on experience at a partner processing facility, designed to supplement the classroom curriculum with an understanding of the workplace environment. (Pre-requisites: ATPT 132, ATPT 242, ATPT 244 and ATPT 260)

ATPT 260. PROCESS TECH CULMINATION.**1 Hr.**

Culminating course work (capstone) around Process Technology Certification. Utilizing a needs assessment the student will develop the skills sets needed to achieve success in the process industry. Capstone course. (Co-requisite- ATPT 244)

PROFESSIONAL DEVELOPMENT (PDEV)**PDEV 220. PORTFOLIO DEVELOPMENT SEMINAR.****3 Hrs.**

This course is designed to assist students in developing a portfolio that will be used to document life and work experiences. Flexible format.

PDEV 420. PORTFOLIO DEVELOPMENT SEMINAR.**3 Hrs.**

This course is designed to assist students in developing a portfolio that will be used to document life and work experiences. Flexible format.

PSYCHOLOGY (PSYC)**PSYC 101. INTRODUCTION TO PSYCHOLOGY.****3 Hrs.**

A general introduction survey course, introducing the core areas of psychology. As a behavioral science, the focus will include an eclectic study of heredity, environment and learning. Other topics surveyed will include memory, perception, motivation, emotion, human development, personality, abnormal psychology, and psychotherapies. A general overview of specific theories in psychology will be included.

PSYC 220. INTRODUCTION TO INDUSTRIAL PSYCHOLOGY.**3 Hrs.**

This course provides an overview of the field of industrial psychology which includes testing, performance appraisal, training, leadership, job satisfaction, working conditions, organization, safety, stress and engineering psychology.

PSYC 231. LEADERSHIP AND HUMAN RELATIONS.**3 Hrs.**

Overview of the psychological dynamics associated with leadership and human relations training. Special emphasis will be placed on the basic theories and constructs of leadership styles and techniques, team orientation, communication, group dynamics within organizations, and basic leadership issues.

PSYC 241. INTRODUCTION TO HUMAN DEVELOPMENT.**3 Hrs.**

Survey of human development across the life span with an emphasis on change in physical, cognitive, and social emotional processes. Applied problem solving by use of developmental information provides experience for service related professions such as social work, nursing, education and counseling.

PSYC 251. INTRODUCTION TO SOCIAL PSYCHOLOGY.**3 Hrs.**

Awareness of the many social factors which determine human behavior and the relationship of class, race, culture, gender, social structure and group interactions impacting individual behavior.

PSYC 281. ABNORMAL PSYCHOLOGY.**3 Hrs.**

An introduction to abnormal behavior patterns, descriptions, causes, and treatment. Focuses on major functional and organic disorders, theories related to mental disorders and methods of therapy. (Pre-requisite: PSYC 101 or PSYC 241)

PSYC 310. ENVIRONMENTAL PSYCHOLOGY.**3 Hrs.**

This course will involve the student in research concerning environmental issues and how we as humans are impacted and how we impact our environment.

PSYC 318. HISTORY AND SYSTEMS.**3 Hrs.**

A survey of Psychology from its origins in Philosophy, Biology and Physics through the early major schools of psychological thought to modern perspectives on the science of behavior and its applications to human affairs. (Pre-requisites: PSYC 101 or 241 and 60 hours)

PSYC 323. INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY.**3 Hrs.**

An introduction to the application of psychological principles in the areas of employee selection, performance appraisal, motivation and morale, sexual harassment, leadership, decision making, team building and general organization behavior. (Pre-requisites: ENGL 102 or its equivalent; 2 Psychology or related Social Science courses, and a Communications course)

PSYC 350. INTRODUCTION TO COUNSELING PSYCHOLOGY.**3 Hrs.**

Basic introduction to group facilitation related to the field of counseling. Included is information, techniques and strategies concerning group foundation. Teamwork and co-facilitation of groups will be emphasized and practiced. (PSYC 101 or 241 and 60 hrs.)

PSYC 351. INTERNATIONAL CULTURE.**3 Hrs.**

Psychological study of the personal behaviors and structures of international cultures. The course will examine beliefs, symbols, language, values, norms, folkways, and mores of various cultures.

PSYC 362. PSYCHOLOGICAL ASSESSMENT.**3 Hrs.**

This course introduces the student to the theory and practice of psychological assessment procedures. The course includes intelligence testing, personality testing, career testing, behavioral assessment procedures, statistics, interviewing and interpretation. (PSYC 101 or 241 and MATH 211 or consent and 60 hrs.)

PSYC 363. THEORIES OF PERSONALITY.**3 Hrs.**

Theoretical and empirical readings in a discussion of the major perspectives in personality theory and methodological problems in personality and research. (Pre-requisite: PSYC 101 plus 60 hours)

PSYC 365. FORENSIC PSYCHOLOGY.**3 Hrs.**

An in-depth study of criminal behavior, criminal responsibility, abnormal psychology and the challenges of mental health issues and the criminal justice system.

PSYC 410. APPLIED ENVIRONMENTAL PSYCHOLOGY.**6 Hrs.**

To involve students in an experiential learning opportunity with the environment. Includes research, projects, team development, group dynamics, and communication. (Pre-requisites: 60 hrs: ENGL 101 & COMM 111) (Co-requisites: Application required)

PSYC 459. CAPSTONE SEMINAR – ADVANCED LEADERSHIP CERTIFICATE.**3 Hrs.**

Provides students an opportunity to demonstrate knowledge, skills acquisition, and application of course information. Capstone course. (Restricted to Adv. Leadership certificate students only, taken semester of certificate completion – instructor permission only)

PSYC 460. CAPSTONE SEMINAR IN PSYCHOLOGY.**1 Hr.**

This course provides students with an opportunity to demonstrate comprehensive learning and application in Psychology. The course will also focus on final preparation for work and/or graduate school. Capstone course. (Pre-requisite: Eligible to graduate with RBA) (Co-requisite: Emphasis in Psychology)

READING (READ)**READ 101. SPEED READING.****3 Hrs.**

Increased reading speed; previewing; post viewing; maintaining attention; comprehension.

READ 111. ADVANCED VOCABULARY STUDY.**2 Hrs.**

Understanding and use of new words, both general and technical; use of word parts and context cues; use of glossaries and textual aids.

RELIGION (RELI)

RELIGION (RELI)**RELI 111. OLD TESTAMENT SURVEY.****3 Hrs.**

The course is designed to help the student acquire a critical and appreciative knowledge of the historical, literary, and religious values of the Old Testament.

RELI 205. NEW TESTAMENT SURVEY.**3 Hrs.**

Study of the beginnings of Christianity, to include the world into which it was born; the person upon whom it was founded; the church it called into being; and its first great advocate, the Apostle Paul. The course is designed to help the student acquire a critical and appreciative knowledge of the historical, literary, and religious values of the New Testament.

RELI 231. RELIGIONS OF THE WORLD.**3 Hrs.**

A study of the major living religions of the world; their basic beliefs and practices; their historical, ethical, social and spiritual impact upon society; and their fundamental strengths and weaknesses. The course provides an introduction to theological analysis.

RELI 341. AMERICAN RELIGION AND POPULAR CULTURE.**3 Hrs.**

Study of the rise of the Social Gospel Movement and the origins of modern marketing and advertising. Emphasis is placed on the influence of the theological concepts and imagery in modern commercialism and consumer culture.

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)

STEM 300. ETHICS AND TECHNOLOGY.

3 Hrs.

This course covers social, legal, and ethical issues professionals will face throughout their career. (Pre-requisites: Grade of C or higher in CIT 130).

STEM 420. PROJECT MANAGEMENT.

3 Hrs.

This course covers how, when, and why to plan and implement all the stages of project management, from conception, planning, implementation, through to completion.

SECURITY (SEC)

SEC 101. SECURITY FUNDAMENTALS.

3 Hrs.

This course is intended for users who want to increase their understanding of information security issues and practices. It is intended for end users who use computers in the office or at home.

SEC 300. INTRODUCTION TO SECURITY.

3 Hrs.

This class addresses real-world business challenges and provides hands-on exercises working with corporate security policies, practices, and procedures. Students will learn topics such as working with acceptable use policies, cryptography, common attackers, and business communications in real-world security situations.

SEC 350. NETWORK SECURITY.

5 Hrs.

This class will teach students to design and implement security solutions that will reduce the risk of revenue loss and vulnerability. The course focuses on the overall security processes based on a security policy, with an emphasis on hands-on skills in the areas of secure perimeter, secure connectivity, security management, identity services, and intrusion detection. (Pre-requisite: C or higher in CIT 206; Pre-requisite or concurrent: SEC 300)

SEC 351. DEFENSE & COUNTERMEASURES.

3 Hrs.

This course will teach students to design and implement intrusion detection, firewalls, and Virtual Private Network security, as well as implementing a security policy, through advanced computer network operating systems. (Pre-requisites: SEC 300)

SEC 410. MANAGEMENT OF INFORMATION SECURITY.

3 Hrs.

This course is designed to explore the management aspects of information security. This course will take a decision-making perspective and presents important information for effectively combining topics covered in other security classes into a holistic security management approach. (Pre-requisites: C or higher in SEC 300)

SEC 430. OPERATING SYSTEM SECURITY.

3 Hrs.

This course is designed to expand networking student's basic network and operating system skills to include planning, implementation, and auditing of a system's security. This course covers a variety of operating systems, including a Window client operating system, Windows server operating system, Linux, Novell NetWare and Mac OS. (Pre-requisite: SEC 300)

SEC 431. COMPUTER FORENSICS.

3 Hrs.

This course presents the methods to properly conduct a computer forensics investigation including a discussion of investigative tools and techniques, investigative reporting, testifying in a court of law, and ethics. (Pre-requisite: SEC 300)

SEC 460. SECURITY CAPSTONE.

3 Hrs.

This course will involve an investigation of an actual or experimental situation, and may include the design, construction, and testing of an experimental, comprehensive scenario demonstrating mastery of security topics covered in previous classes. Capstone course. (Pre-requisites or concurrent: SEC 410 and STEM 420)

SOCIOLOGY (SOC)

SOC 101. INTRODUCTION TO SOCIOLOGY.

3 Hrs.

The course will cover the fundamental concepts and methods of the scientific study of human society and social behavior. It will focus on institutional foundations of group life; social roles and interpersonal relations; values and social processes in context of technological change ethnicity, race, age, gender and socioeconomic classes. Students will gain insight into the social behavior of people in other cultures and adopt an attitude of cultural relativism.

SOC 105. INTRODUCTION TO ANTHROPOLOGY.

3 Hrs.

Physical, cultural, and archaeological anthropology; origin, development, and differentiation of man as a biological organism; human behavior in different cultures; evolution; fossils; human diversity; kinship; marriage; religion; law.

SOC 107. SOCIAL PROBLEMS.

3 Hrs.

Theory and practice of problems that affect the integration and functioning of society as a whole. Both classical and contemporary social issues are addressed as to their cause, impact and meaning.

SOC 151. SOCIOLOGY OF THE WORKPLACE.

3 Hrs.

A study of occupational and organizational work settings, social meanings, types and social functions of work. Contemporary social issues are addressed as they apply to the work environment.

SOC 221. MARRIAGE AND THE FAMILY.

3 Hrs.

The course will examine the concepts and the processes of love, dating, sexual behavior, mate selection, marriage, divorce, parenting, etc. in the context of social expectations of American culture and ongoing social change in the values, attitudes and the roles of men and women. The students will come to understand themselves and their interpersonal relationships in the context of their group affiliations, such as family, school, peers, workers, socioeconomic class and the religious organization, etc. It will provide the kind of information that will make the students more aware of the factors that might be causing marriage and family problems and also various skills and techniques of coping with and resolving the problems.

SOC 223. DEATH AND DYING.

3 Hrs.

Sociological and anthropological perspectives on death and dying. Examines socio-psychological and structured factors supporting the beliefs and practices associated with the institution of death, both historically and in contemporary society.

SOC 232. CRIMINOLOGY.

3 Hrs.

This course provides an introduction to the sociological study of crime and criminal behavior, focusing on the various theories of crime causation. Criminological methods of inquiry and societal reactions to crime will also be addressed.

SOC 233. JUVENILE DELINQUENCY.

3 Hrs.

This course examines the nature, extent, and causes of juvenile delinquency. The course is structured to focus on the juvenile justice system, theoretical explanations of delinquency, and current research in the field of study.

SOC 235. RACE RELATIONS AND MINORITY GROUPS.

3 Hrs.

A study of racial and ethnic groups in the United States with special emphasis upon understanding the cause of the prejudices and the reason for antagonisms between the majority and minority groups. Area of concentration will include problems in education, demographic factors, prejudice and discrimination, conflict and change, racial identity and the social structure of racism. A look at theories and techniques of eliminating prejudices will be made. Students will investigate all structural, institutional and systemic problems as they relate to minority groups and race relations.

SOC 302. DEVIANT BEHAVIOR.**3 Hrs.**

Course examines, within a sociological framework, deviance within society. Explanations, descriptions, and societal reactions are examined, with emphasis on mental illness and mental hospitals, suicide, drug addiction, sexual deviations, crime and delinquency.

SOC 350. INTERNATIONAL CULTURE.**3 Hrs.**

Sociological study of the social behavior and structure of an international culture. The course will examine beliefs, symbols, language, values, norms, folkways, and mores of various cultures.

SOC 360. GENDER AND HUMAN IDENTITY.**3 Hrs.**

Course will explore the concepts of gender from a sociological perspective. Focus will be on perceptions of learning and living gender, roles and relationships, cultural differences of gender, and expectations and consequences of gender. Considerable attention will be focused upon applying knowledge.

SOC 362. SOCIOLOGY OF AGING.**3 Hrs.**

Social forces influencing the experience of aging and the effects of a growing elderly population on society. Topics include changing roles and status of the elderly, intergenerational relationships, retirement traditions, widowhood.

SOC 390. WORLD CULTURES THROUGH FILM.**3 Hrs.**

Cultural perspectives through international films with critical thinking discussions and writing components included.

SOC 405. SOCIAL INEQUALITY.**3 Hrs.**

Systematic study of the ways individuals/groups are differentiated and ranked historically and currently within the United States. Major systems examined are gender, race, ethnicity, socioeconomic status, sexual orientation, place, age, ability and religion.

STUDENT DEVELOPMENT (SDEV)**SDEV 100. TRANSITIONS TO COLLEGE.****1-3 Hrs.**

This course will provide high school students with active participation in the assessment and development of abilities in line with college expectations including an orientation to college services and activities, learning and test taking skills, using traditional and electronic resources, problem solving, people skills, self-management skills, and career/life planning strategies.

SURGICAL TECHNOLOGY (ST)**ST 100. INTRODUCTION TO SURGICAL TECHNOLOGY.****6 Hrs.**

This course is designed to introduce the student to the role, working environment, and required skills of the ST. Asepsis, sterile technique, and surgical case management are emphasized in structured campus laboratory and in the clinical setting. (Pre-requisites: Admission to the program; Co-requisites: ST 102; Pre/Co-requisites BIOL 109/109L)

ST 102. SURGICAL INSTRUMENTATION, EQUIPMENT, AND SUPPLIES.**3 Hrs.**

This course is designed to introduce students to the different classifications of instrumentation, equipment, and supplies required to perform surgical procedures. Assembly of instrumentation will help refine students' manual dexterity and anticipatory skills. (Pre-requisites: Admission to the program; Co-requisites: ST 100; Pre/Co-requisites BIOL109/109L)

ST 110. PATIENT CARE CONCEPTS I.**6 Hrs.**

Diagnostic and surgical procedures in various surgical specialties will be discussed. The clinical component will focus on developing skills in assisting team members and the organization of work by learning to use economy of time, motion, and materials. ST 110 will introduce incisions, diagnostic and surgical procedures in various surgical specialties. (Pre-requisites: ST 100, ST 102, BIOL 109/109L; Co-requisites: ST 113; Pre/Co-requisites BIOL 200/201, MATH 120)

ST 113. PATHOPHYSIOLOGY OF THE SURGICAL PATIENT.**3 Hrs.**

This course will enable students to effectively communicate as a surgical team member utilizing medical terminology. Introduction to disease and tumors will be discussed. Surgically treatable diseases and disorders are emphasized. (Pre-requisites: ST 100, ST 102, BIOL 109/109L; Co-requisites: ST 110; Pre/Co-requisites BIOL 200/201, MATH 120)

ST 114. PHARMACOLOGY FOR THE SURGICAL TECHNOLOGIST.**3 Hrs.**

This course is designed to introduce the surgical technology students to their role in handling of medications and solutions in the surgical setting. A discussion of medication use during the peri-operative period will assist the learner in understanding patient response to various medications. (Pre-requisites: ST 110, ST 113, BIOL 200/201, MATH 120, ENGL 101; Co-requisite ST 211)

ST 211. PATIENT CARE CONCEPTS II.**8 Hrs.**

This course is a continuation of ST 110. The ST 211 clinical component provides solo scrub experiences that promote anticipating needs and minimizing the patient's exposure to trauma. (Pre-requisites: ST 110, ST 113, BIOL 200/201, MATH 120, ENGL 101; Co-requisites: ST 114)

ST 212. SURGICAL TECHNOLOGY CAPSTONE.**10 Hrs.**

Independent first scrub roles and medication preparation in the clinical setting are emphasized. Students will display the manual dexterity and physical stamina required in the employment setting. Concentration will be directed toward anticipatory socialization and adaption to aid role transition from student to graduate. (Pre-requisites: ST 211, ST 114, COMM 202; certification exam)

THEATRE (THEA)**THEA 101. THEATRE APPRECIATION.****3 Hrs.**

A survey of the art of theatre addressing the practical and historical/theoretical aspects of the craft. Students will examine/participate in elements of play production, analysis, genres, historical periods, and the viewing/discussion of live productions.

THEA 102. ACTING 1.**3 Hrs.**

For the beginning actor. Logical steps to follow when approaching a role, exploring the tools of the actor (mind, body, voice) and refining skills in using these tools to communicate a character to the audience.

THEA 103. ORAL INTERPRETATION.**3 Hrs.**

Theory and practice in interpreting literature orally; selection, analysis, and presentational techniques; poetry, prose, and drama are explored. (Pre-requisite: COMM 111)

THEA 125. UNIVERSITY PLAYERS.**1-3 Hrs.**

This course is a performance-oriented class designed to give students hands-on experience through involvement in theatre productions. The emphasis is on directed student activity-one-on-one combined with a team of fellow performers. May be repeated.

THEA 131. INTRODUCTION TO TECHNICAL THEATRE.**3 Hrs.**

A practicum course in technical theatre. Students will participate in all drama productions as a part of the course requirement.

THEA 215. THEATRE MAKEUP.**3 Hrs.**

A course designed to give the student an elementary command of theatre makeup through a study of the human face, light and shadow, color, equipment, construction and makeup types.

THEA 250. DRAMATIC LITERATURE.**3 Hrs.**

Reading and discussion of a minimum of 10 major dramatic works.

THEA 287. READERS THEATRE.**3 Hrs.**

The study and practice of the art including script analysis, interpretation, proper use of the expressive voice, staging approaches including both the ensemble and solo performance. Students will participate in a Reader's Theatre Program.

THEA 291. MUSICAL THEATRE WORKSHOP.**1-3 Hrs.**

College musical theatre production. Credit for participation in a musical. (Same as MUSI 291; May be repeated)

THEA 302. DIRECTING**3 Hrs.**

Examination of directing skills: Script interpretation, casting techniques, rehearsal methods, time and space management, and artistic collaboration so the student will obtain the skills required to direct a production.

THEA 404. PLAYWRITING.**3 Hrs.**

Students will develop basic skills in playwriting techniques through the examination of written theatrical works, attendance at live performances, and completion of classroom exercises. Self-expression will be emphasized.

WELDING (WELD)**WELD 111. BASIC OXYACETYLENE.****3 Hrs.**

Principles of oxyacetylene welding, cutting, and brazing. Nomenclature of the equipment, assembly, care, and safety.

WELD 121. BASIC SMAW.**3 Hrs.**

Safety and nomenclature of the SMAW welding process. Hands-on welding utilizing E6010 and E7018 electrodes on pad of beads, lap joints, tee joints, and butt joints in all positions.

WELD 131. BASIC GTAW.**3 Hrs.**

Introduction to the gas tungsten arc welding process. Equipment set-up and safety. Hands-on welding on pad of beads, lap joints, tee joints, and butt joints.

WELD 132. ADVANCED GTAW.**3 Hrs.**

Pipe certification utilizing the gas tungsten arc welding process according to the ASME Code. (Pre-requisites: Grade D or higher WELD 131)

WELD 133. BASIC FCAW.**3 Hrs.**

Introduction to the flux core arc welding process. Equipment set-up and safety. Hands-on welding on pad of beads, lap joints, tee joints, and butt joints.

WELD 134. BASIC GMAW.**3 Hrs.**

Introduction to the gas metal arc welding process. Equipment set-up and safety. Hands-on welding on pad of beads, lap joints, tee joints, and butt joints.

WELD 135. ADVANCED GMAW.**3 Hrs.**

Pipe certification utilizing the gas metal tungsten arc welding process according to ASME Code. (Pre-requisites: Grade D or higher in WELD 134).

WELD 136. ADVANCED FCAW.**3 Hrs.**

Pipe certification utilizing the flux core arc welding process according to the ASME Code. (Pre-requisites: Grade D or higher WELD 133).

WELD 160. WELDING BLUEPRINT READING.**2 Hrs.**

Fundamentals of blueprint reading geared towards teaching students to decipher blueprints found in industrial settings.

WELD 171. WELDING THEORY.**1 Hr.**

Theory of all ARC welding processes; equipment function and their use. Methods and procedures application.

WELD 221. ADVANCED SMAW.**3 Hrs.**

Bevel plate certification with the shielded metal arc welding process according to the AWS Code. (Pre-requisite: WELD 121)

WELD 260. WELDING CAPSTONE.**2 Hr.**

This capstone course requires students to demonstrate the skills and knowledge acquired throughout the program. Successful completion of the identified external industry standard assessment(s) is required to graduate. Capstone course. (Pre-requisite: Welding students in final semester before graduation)

WELD 261. STEEL FABRICATION.**3 Hrs.**

Job estimation, interpreting layouts from simple sketches or prints. Mathematics of the layout and fit-up situations which arise in weld fabrication.

WELD 279. WELDING INSPECTION.**2 Hrs.**

Teaches the student about inspection and prepares the student to take the AWS welding inspection exam with the API 1104 Code Book.

WELD 281. METALLURGY.**3 Hrs.**

Properties of ferrous and nonferrous metals; physical metallurgy of ferrous metals; producing iron and steel; surface treatment; alloys of special steel; classification of steels.

WELD 291. FAB SHOP.**3 Hrs.**

This course is designed to introduce the student into a work environment depicting the actual day-to-day operations of a fabrication shop. The student will incorporate the skills and knowledge acquired to gain experience that is required to enter the workforce successfully. (Pre-requisite: Welding students in their final semester before graduation)

