

# Course Information

## COURSE PREFIXES

<a href="#">ACCT</a>	<a href="#">CRJU</a>	<a href="#">MATH</a>
<a href="#">AIRC</a>	<a href="#">CTDL</a>	<a href="#">MCHT</a>
<a href="#">ALHS</a>	<a href="#">DHYG</a>	<a href="#">MGMT</a>
<a href="#">ALMA</a>	<a href="#">DIET</a>	<a href="#">MUSC</a>
<a href="#">AMCA</a>	<a href="#">ECCE</a>	<a href="#">NAST</a>
<a href="#">ARTS</a>	<a href="#">ECON</a>	<a href="#">PHAR</a>
<a href="#">AUTT</a>	<a href="#">ELCR</a>	<a href="#">PHLT</a>
<a href="#">BARB</a>	<a href="#">ELTR</a>	<a href="#">PNSG</a>
<a href="#">BIOL</a>	<a href="#">EMPL</a>	<a href="#">POLS</a>
<a href="#">BUSN</a>	<a href="#">EMSP</a>	<a href="#">PSYC</a>
<a href="#">CHEM</a>	<a href="#">ENGL</a>	<a href="#">RADT</a>
<a href="#">CIST</a>	<a href="#">FORS</a>	<a href="#">READ</a>
<a href="#">CLBT</a>	<a href="#">FWMT</a>	<a href="#">RNSG</a>
<a href="#">COLL</a>	<a href="#">HIST</a>	<a href="#">SOCI</a>
<a href="#">COMP</a>	<a href="#">IDFC</a>	<a href="#">SPCH</a>
<a href="#">COSM</a>	<a href="#">MAST</a>	<a href="#">WELD</a>

## COURSE NUMBERS

Course designations consist of a four-letter prefix, a number, and the title of the course (e.g., ACCT 1100 - Financial Accounting I). The four-letter prefix indicates the subject.

## COURSE HOURS AND CREDIT HOURS

Following the course title, the course credit hours and minutes are indicated.

(Institutional credit is designated for learning support courses following the number of credit hours. Learning support courses cannot be used for elective credit to meet the graduation requirements. Unless otherwise specified, regular admission is a Prerequisite for registration for all credit courses.)

## PREREQUISITES

"Prerequisites" are required before enrolling in a course; they will be identified immediately preceding the course description.

## CO-REQUISITES

"Co-requisites" are courses that must/may be taken at the same time and will be identified immediately preceding the course description.

## COURSE SCHEDULE

Not all of the courses in the following list are taught each semester. Course schedules are published prior to each semester showing the courses that will be offered. Courses offered are subject to change.

\* Southeastern Technical College reserves the right to cancel any course for which there is insufficient enrollment.

## COURSE COMPLETION

A grade of "C" or higher is required for successful completion of all courses in the Southeastern Technical College Catalog.

**ACCT 1100 - Financial Accounting I** (4 credit hours, 3750 minutes)

*(Prerequisites: Program admission)*

Introduces the basic financial accounting concepts of the complete accounting cycle and provides the student with the necessary skills to maintain a set of books for a sole proprietorship. Topics include: accounting vocabulary and concepts, the accounting cycle for a personal service business, the accounting cycle for a merchandising business, inventory, cash control, and receivables. Laboratory work demonstrates theory presented in class.

**ACCT 1105 - Financial Accounting II** (4 credit hours, 3750 minutes)

*(Prerequisites: ACCT 1100)*

Introduces the intermediate financial accounting concepts that provide the student with the necessary skills to maintain a set of books for a partnership and corporation. Topics include: Fixed and Intangible Assets, Current and Long-Term Liabilities (Notes Payable), Payroll, Accounting for a Corporation, Statement of Cash Flows, and Financial Statement Analysis. Laboratory work demonstrates theory presented in class.

**ACCT 1115 - Computerized Accounting** (3 credit hours, 3750 minutes)

*(Prerequisites: ACCT 1100, COMP 1000)*

Emphasizes operation of computerized accounting systems from manual input forms. Topics include: company creation (service and merchandising), chart of accounts, customers' transactions, vendors' transactions, banking activities, merchandise inventory, employees and payroll, and financial reports. Laboratory work includes theoretical and technical application.

**ACCT 1120 - Spreadsheet Applications** (4 credit hours, 4500 minutes)

*(Prerequisites: COMP 1000)*

This course covers the knowledge and skills to use spreadsheet software through course demonstrations, laboratory exercises, and projects. Topics and assignments will include: spreadsheet concepts, creating and manipulating data, formatting data and content, creating and modifying formulas, presenting data visually and collaborating and securing data.

**ACCT 1125 - Individual Tax Accounting** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

Provides instruction for the preparation of individual federal income tax returns. Topics include: taxable income, income adjustments, schedules, standard deductions, itemized deductions, exemptions, tax credits, and tax calculations.

**ACCT 1130 - Payroll Accounting** (3 credit hours, 3000 minutes)

*(Prerequisites: ACCT 1100)*

Provides an understanding of the laws that affect a company's payroll structure and practical application skills in maintaining payroll records. Topics include: payroll tax laws, payroll tax forms, payroll and personnel records, computing wages and salaries, taxes affecting employees and employers, and analyzing and journalizing payroll transactions.

**ACCT 2000 - Managerial Accounting** (3 credit hours, 3000 minutes)

*(Prerequisites: ACCT 1105)*

Emphasizes the interpretation of data by management in planning and controlling business activities. Topics include: Managerial Accounting Concepts, Manufacturing Accounting Using a Job Order Cost System, Manufacturing Accounting using a Process Cost System, Cost Behavior and Cost-Volume-Profit Analysis, Budgeting and Standard Cost Accounting, Flexible Budgets, Standard Costs and Variances, and Capital Investment Analysis and Budgeting. Laboratory work demonstrates theory presented in class.

**ACCT 2100 - Accounting Internship I** (4 credit hours, 9000 minutes)

*(Prerequisites: All non-elective courses required for program completion.)*

Introduces the application and reinforcement of accounting and employability principles in an actual job setting. Acquaints the student with realistic work situations and provides insights into accounting applications on the job. Topics include: appropriate work habits, acceptable job performance, application of accounting knowledge and skills, interpersonal relations, and development of productivity. The half-time accounting internship is implemented through the use of written individualized training plans, written performance evaluation, and weekly documentation or seminars and/or other projects as required by the instructor.

**ACCT 2105 - Accounting Internship II** (8 credit hours, 18000 minutes)

*(Prerequisites: All non-elective courses required for program completion.)*

Introduces the application and reinforcement of accounting and employability principles in an actual job setting. Acquaints the student with realistic work situations and provides insights into accounting applications on the job. Topics include: appropriate work habits, acceptable job performance, application of accounting knowledge and skills, interpersonal relations, and development of productivity. The full-time accounting internship is implemented through the use of written individualized training plans, written performance evaluation, and weekly documentation or seminars and/or other projects as required by the instructor.

**ACCT 2140 - Legal Environment of Business** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Introduces law and its relationship to business. Topics include: legal ethics, legal processes, business contracts, business torts and crimes, real and personal property, agency and employment, risk-bearing devices, and Uniform Commercial Code.

**AIRC 1005 - Refrigeration Fundamentals** (4 credit hours, 4500 minutes)

*(Prerequisites: Provisional Admission)*

Introduces the basic concepts, theories, and safety regulations and procedures of refrigeration. Topics include an introduction to OSHA, safety, first aid, laws of thermodynamics, pressure and temperature relationships, heat transfer, the refrigerant cycle, refrigerant identification, and types of AC systems.

**AIRC 1010 - Refrigeration Principles and Practices** (4 credit hours, 4500 minutes)

*(Prerequisites: Provisional Admission)*

This course introduces the student to basic refrigeration system principles and practices, and the major component parts of the refrigeration system. Topics include refrigeration tools, piping practices, service valves, leak testing, refrigerant recovery, recycling, and reclamation, evacuation, charging, and safety.

**AIRC 1020 - Refrigeration Systems Components** (4 credit hours, 4500 minutes)

*(Prerequisites: Provisional Admission)*

This course provides the student with the skills and knowledge and skills to install, test, and service major components of a refrigeration system. Topics include compressors, condensers, evaporators, metering devices, service procedures, refrigeration systems and safety.

**AIRC 1030 - HVACR Electrical Fundamentals** (4 credit hours, 4500 minutes)

*(Prerequisites: Provisional Admission)*

This course provides an introduction to fundamental electrical concepts and theories as applied to the air conditioning industry. Topics include AC and DC theory, electric meters, electrical diagrams, distribution systems, electrical panels, voltage circuits, code requirements, and safety.

**AIRC 1040 - HVACR Electrical Motors** (4 credit hours, 4500 minutes)

*(Prerequisites: AIRC 1030)*

This course provides the student with the skills and knowledge necessary for application and service of electric motors commonly used by the refrigeration and air conditioning industry. Topics include diagnostic techniques, capacitors, installation procedures, types of electric motors, electric motor service, and safety.

**AIRC 1050 - HVACR Electrical Components and Controls** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

*(Co-requisites: AIRC 1030)*

Provides instruction in identifying, installing, and testing commonly used electrical components in an air conditioning system. Topics include: pressure switches, transformers, other commonly used controls, diagnostic techniques, installation procedures, solid state controls, and safety.

**AIRC 1060 - Air Conditioning Systems Application and Installation** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

*(Co-requisites: AIRC 1010, AIRC 1030)*

Provides instruction on the installation and service of residential air conditioning systems. Topics include: installation procedures, split-systems, add-on systems, packaged systems, system wiring, control circuits, and safety.

**AIRC 1070 - Gas Heat** (4 credit hours, 4500 minutes)

*(Prerequisites: AIRC 1030)*

This course introduces principles of combustion and service requirements for gas heating systems. Topics include servicing procedures, electrical controls, piping, gas valves, venting, code requirements, principles of combustion, and safety.

**AIRC 1080 - Heat Pumps and Related Systems** (4 credit hours, 4500 minutes)

*(Prerequisites: AIRC 1010, 1030)*

This course provides instruction on the principles, applications, and operation of a residential heat pump system. Topics include installation and servicing procedures, electrical components, geothermal ground source energy supplies, dual fuel, valves, and troubleshooting techniques.

**AIRC 1090 - Troubleshooting Air Conditioning Systems** (4 credit hours, 4500 minutes)

*(Prerequisites: AIRC 1010, 1030)*

This course provides instruction on the troubleshooting and repair of major components of a residential air conditioning system. Topics include troubleshooting techniques, electrical controls, air flow, the refrigeration cycle, electrical servicing procedures, and safety.

**ALHS 1011 – Structure and Function of Human Body** (5 credit hours, 3750 minutes)

*(Prerequisites: Regular Admission)*

Focuses on basic normal structure and function of the human body. Topics include general plan and function of the human body, integumentary system, skeletal system, muscular system, nervous and sensory systems, endocrine system, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary system, and reproductive system.

**ALHS 1040 - Introduction to Health Care** (3 credit hours, 3750 minutes)

*(Prerequisites: Provisional Admission)*

Introduces a grouping of fundamental principles, practices, and issues common in the health care profession. In addition to the essential skills, students explore various delivery systems and related issues. Topics include: basic life support/CPR, basic emergency care/first aid and triage, vital signs, infection control/blood and air-borne pathogens. A \$20 fee is associated with this course due to the cost of CPR/first aid card and training.

**ALHS 1060 - Diet and Nutrition for Allied Health Sciences** (2 credit hours, 1500 minutes)

*(Prerequisites: Program Admission)*

A study of the nutritional needs of the individual. Topics include: nutrients, standard and modified diets, nutrition throughout the lifespan, and client education.

**ALHS 1090 - Medical Terminology for Allied Health Sciences** (2 credit hours, 1500 minutes)

*(Prerequisites: Provisional Admission)*

Introduces the elements of medical terminology. Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes. Topics include: origins (roots, prefixes, and suffixes), word building, abbreviations and symbols, and terminology related to the human anatomy.

**ALMA 1000 - Allied Health Math Applications** (0 credit hours)

*(Prerequisites: MATH 1012)*

*(Co-requisites: MATH 1111)*

Prepares students in understanding the application of mathematics in their health science program courses. The topics included are basic mathematics, medical terminology, mathematical conversions, weight and measurement applications used in health science programs. Additionally, problem solving strategies, basic principles of medication administration, and research in health science will be incorporated into the course competencies.

**AMCA 2110 – CNC Fundamentals** (3credit hours, 4500 minutes)

*(Prerequisites: Program admission; MCHT 1012; MCHT 1013)*

*(Co-requisite: AMCA 2130)*

Provides a comprehensive introduction to computer numerical controlled (CNC) machining processes. Topics include: safety, Computer Numerical Control of machinery, setup and operation of CNC machinery, introduction of programming of CNC machinery, introduction to CAD/CAM.

**AMCA 2130 – CNC Mill Manual Programming** (5 credit hours, 5250 minutes)

*(Prerequisites: Program admission; MCHT 1012; MCHT1013)*

*(Co-requisite: AMCA 2110)*

Provides instruction for the safe operation and manual programming of computer numerical controlled (CNC) milling machines. Topics include: safety, calculation for programming, program codes and structure, program run and editing of programs.

**AMCA 2150 – CNC Lathe Manual Programming** (5 credit hours, 5250 minutes)

*(Prerequisites: Program admission; MCHT 1012; MCHT 1013; AMCA 2110; AMCA 2130)*

*(Co-requisite: AMCA 2170)*

Provides instruction for the safe operation and manual programming of computer numerical controlled (CNC) milling machines. Topics include: safety, calculation for programming, program codes and structure, program run and editing of programs.

**AMCA 2170 – CNC Practical Applications** (3 credit hours, 4500 minutes)  
(Prerequisites: Program admission; MCHT 1012; MCHT 1013; AMCA 2110; AMCA 2130)  
(Co-requisite: AMCA 2150)

Provides additional instruction in part holding and fixture design. Students will also gain additional experience in print-to-part development of CNC programming. Topics include: safety, fixture design and manufacturing, and CNC part manufacturing.

**ARTS 1101 - Art Appreciation** (3 credit hours; 2250 minutes)  
(Pre-requisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)  
(Co-requisites: None)

Explores the visual arts and the relationship to human needs and aspirations. Students investigate the value of art, themes in art, the elements and principles of composition, and the materials and processes used for artistic expression. Well-known works of visual art are explored. The course encourages student interest in the visual arts beyond the classroom.

**AUTT 1010 - Automotive Technology Introduction** (2 credit hours, 2250 minutes)  
(Prerequisites: Provisional Admission)

Introduces basic concepts and practices necessary for safe and effective automotive shop operations. Topics include: safety procedures; legal/ethical responsibilities; general service; hand tools; shop organization, management, and work flow systems. A \$25 fee is associated with this course due to the cost of fluids.

**AUTT 1020 - Automotive Electrical Systems** (7 credit hours, 12000 minutes)  
(Prerequisites: None)

(Co-requisites: AUTT 1010)

Introduces automotive electricity, emphasizes the basic principles, diagnosis, and service/repair of batteries, starting systems, starting system components, alternators and regulators, lighting system, gauges, horn, wiper/washer, and accessories. A \$25 fee is associated with this course due to the cost of electrical components.

**AUTT 1030 - Automotive Brake Systems** (4 credit hours, 5250 minutes)  
(Prerequisites: None)

(Co-requisites: AUTT 1010)

Introduces brake systems theory and its application to automotive systems and anti-lock brake system (ABS) to include ABS components and ABS operation, testing, and diagnosis. Topics include: hydraulic system diagnosis and repair; drum brake diagnosis and repair; disc brake diagnosis and repair; power assist units diagnosis and repair; miscellaneous brake components (wheel bearings, parking brakes, electrical, etc.) diagnosis and repair; test, diagnose, and service electronic brake control system. A \$25 fee is associated with this course due to material cost (fluid, cleaner, hardware).

**AUTT 1040 - Automotive Engine Performance** (7 credit hours, 11500 minutes)  
(Prerequisites: AUTT 1020)

Introduces basic engine performance systems which support and control four stroke gasoline engine operations and reduce emissions. Topics include: general engine diagnosis, computerized engine controls and diagnosis, ignition system diagnosis and repair, fuel and air induction, exhaust systems, emission control systems diagnosis and repair, and other related engine service.

**AUTT 1050 - Automotive Suspension and Steering Systems** (4 credit hours, 6250 minutes)  
(Prerequisites: None)

(Co-requisites: AUTT 1010)

Introduces students to principles of steering, suspension, wheel alignment, electronic steering, and electronic active suspension. Topics include: general suspension and steering systems diagnosis; steering systems diagnosis and repair; suspension systems diagnosis and repair; related suspension and steering service; wheel alignment diagnosis, adjustment and repair, wheel and tire diagnosis and repair. A \$25 fee is associated with this course due to the increased cost of supplies.

**AUTT 1060 - Automotive Climate Control Systems** (5 credit hours, 5500 minutes)  
(Prerequisites: AUTT 1020)

Introduces the theory and operation of automotive heating and air conditioning systems. Students attain proficiency in inspection, testing, service, and repair of heating and air conditioning systems and related components. Topics include: a/c system diagnosis and repair; refrigeration system component diagnosis and repair; heating, ventilation, and engine cooling systems diagnosis and repair; operating systems and related controls diagnosis and repair; refrigerant recovery, recycling, and handling.

**AUTT 2010 - Automotive Engine Repair** (4 credit hours, 8750 minutes)  
(Prerequisites: None)

(Co-requisites: AUTT 1010)

This course introduces the students to automotive engine theory and repair, placing emphasis on inspection, testing, and diagnostic techniques for both 2 cycle and 4 cycle internal combustion engines. Topics include general engine diagnosis; removal

and reinstallation; cylinder heads and valve trains diagnosis and repair; engine blocks assembly diagnosis and repair, lubrication and cooling systems diagnosis and repair.

**AUTT 2020 - Automotive Manual Drive Train and Axles** (4 credit hours, 5050 minutes)

*(Prerequisites: None)*

*(Co-requisites: AUTT 1010)*

This course introduces basics of rear-wheel drive, front-wheel drive, and four-wheel drive, drive line related operation, diagnosis, service and related electronic controls. Topics include: drive shaft and half shaft, universal and constant-velocity (CV) joint diagnosis and repair; ring and pinion gears and differential case assembly; limited slip differential; drive axle shaft; four-wheel drive/all-wheel drive component diagnosis and repair. Introduces basics of front and rear-wheel drive. Clutch operation, diagnosis and service is included. Electronic controls related to transmission/transaxles operation are discussed. Topics include: clutch diagnosis and repair; transmission/transaxles diagnosis and repair. A \$25 fee is associated with this course due to the increased cost of supplies.

**AUTT 2030 - Automotive Automatic Transmissions and Transaxles** (5 credit hours, 6750 minutes)

*(Prerequisites: AUTT 1020)*

Introduces students to basic automatic transmission/transaxle theory, operation, inspection, service, and repair procedures as well as electronic diagnosis and repair. Topics include: general automatic transmission and transaxle diagnosis; in vehicle and off vehicle transmission and transaxle maintenance, adjustment and repair. A \$25 fee is associated with this course due to the increased cost of supplies.

**AUTT 2100 - Automotive Alternative Fuel Vehicles** (4 credit hours, 3500 minutes)

*(Prerequisites: AUTT 1020)*

This course will give students the basic knowledge to understand Electric Drive Vehicles, Hybrid Electric Vehicles, and Alternative Fuel Vehicles. The course will cover components, operation, precautions, and diagnostics of BEV, HEV, Fuel Cell Vehicles, and other fuel vehicles. The student will become familiar with the unique hybrid systems and repair procedures on various hybrid vehicles. This course is a program elective which can be used as a substitute for AUTT 1070 (Internship).

**BARB 1000 - Introduction to Barber/Styling Implements** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Introduction to Barber/Styling Implements is designed to give an overview of the barbering profession. Students are also taught the fundamentals of each barber/styling implement. Emphasis will be placed on the maintenance and care of each implement. Topics include: Barbering history, personality development, professional barbering ethics, and professional barbering image, safety, and reception and telephone techniques, nomenclature, types and sizes, proper use and care, and maintenance.

**BARB 1010 - Science: Sterilization, Sanitation, and Bacteriology** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

Introduces fundamental theories and practices of bacteriology, sterilization, sanitation, safety, and the welfare of the barber/stylist and patron. Topics include: sterilization, sanitation, safety, bacteriology, and Hazardous Duty Standards Act compliance.

**BARB 1022 - Haircutting and Shampooing I** (3 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course introduces the theory and skills necessary to apply basic haircutting techniques. Safe use of haircutting implements are stressed. The course also introduces the fundamental theory and skills required to shampoo hair. Laboratory training includes shampooing a live model. Topics include patron preparation, haircutting terminology, safety and sanitation, implements, basic haircutting techniques, shampoo chemistry, and shampoo procedures.

**BARB 1024 - Haircutting and Shampooing II** (3 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course introduces the theory and skills necessary to apply basic haircutting techniques. Safe use of haircutting implements are stressed. The course also introduces the fundamental theory and skills required to shampoo hair. Laboratory training includes shampooing a live model. Topics include patron preparation, haircutting terminology, safety and sanitation, implements, basic haircutting techniques, shampoo chemistry, and shampoo procedures.

**BARB 1030 - Haircutting/Basic Styling** (3 credit hours, 5250 minutes)

*(Prerequisites: None)*

Continues the theory and application of haircutting techniques and introduces hairstyling. Topics include: introduction to styling, client consultation, head and hair analysis, style cutting techniques, and implements for style cutting and tapering techniques.

**BARB 1040 – Shaving** (3 credit hours, 4500 minutes)

*(Prerequisites: None)*

Introduces the theory and skills necessary to prepare and shave a patron. Simulated shaving procedures will precede practice on live models. Topics include: patron preparation, beard preparation, shaving techniques, once-over shave techniques, and safety precautions.

**BARB 1050 - Science: Anatomy and Physiology** (3 credit hours, 2250 minutes)

*(Prerequisites: None)*

Develops knowledge of the function and care of the scalp, skin, and hair. Emphasis is placed on the function, health, and growth of these areas. Topics include: cells, skeletal system, muscular system, nervous system, circulatory system, and related systems.

**BARB 1082 - Advanced Haircutting and Styling I** (3 credit hours, 6000 minutes)

*(Prerequisites: None)*

This course continues instruction in the theory and application of haircutting and styling techniques. Topics include elevation and design cutting, introduction to hairpieces, blow-dry styling, thermal waving and curling, advanced haircutting and styling; use of clippers, shears, and razor; permanent waving and styling; shaving techniques and beard trimming.

**BARB 1084 - Advanced Haircutting and Styling II** (3 credit hours, 6750 minutes)

*(Prerequisites: None)*

This course continues instruction in the theory and application of haircutting and styling techniques. Topics include elevation and design cutting, introduction to hairpieces, blow-dry styling, thermal waving and curling, advanced haircutting and styling; use of clippers, shears, and razor; permanent waving and styling; shaving techniques and beard trimming.

**BARB 1090 - Structures of Skin, Scalp, Hair and Facial Treatments** (3 credit hours, 5250 minutes)

*(Prerequisites: None)*

Introduces the theory, procedures, and products used in the care and treatment of the skin, scalp, and hair. Provides instruction on the theory and application of techniques in the treatment of the skin, scalp, and hair; and introduces the theory and skills required in massaging the face, preparing the patron for facial treatment, and giving facial treatments for various skin conditions. Benefits of facial treatments and massage will be emphasized. Emphasis will be placed on work with live models. Topics include: treatment theory, basic corrective hair and scalp treatments, plain facial, products and supplies, disease and disorders, implements, products and supplies, diseases and disorders, corrective hair and scalp treatments, facial procedures and manipulations, and safety precautions, theory of massage, preparation of patron for massage, massage procedures, facial treatment, types of facials, and facial treatment benefits.

**BARB 1100 - Barber/Styling Practicum and Internship** (3 credit hours, 6750 minutes)

*(Prerequisites: None)*

Provides experience necessary for professional development and completion of requirements for state licensure. Emphasis will be placed on the display of professional conduct and positive attitudes. The requirements for this course may be met in a laboratory setting or in a combination of a laboratory setting and an approved internship facility. Topics include: haircutting/styling, hairstyling texturizing, shaving, beard trimming, thermal waving, hairpiece fitting and styling, safety precautions, and licensure preparation.

**BARB 1110 - Shop Management/Ownership** (3 credit hours, 5250 minutes)

Emphasizes the steps involved in opening and operating a privately owned cosmetology salon or barber/styling shop. Topics include: planning a salon/shop, business management, retailing, public relations, sales skills, client retention, and entrepreneurship.

**BIOL 1111 - Biology I** (3 credit hours, 2250 minutes)

*(Prerequisites: Regular Admission)*

*(Co-requisites: BIOL 1111L)*

Provides an introduction to basic biological concepts with a focus on living cells. Topics include chemical principles related to cells, cell structure and function, energy and metabolism, cell division, protein synthesis, genetics, and biotechnology.

**BIOL 1111L - Biology Lab I** (1 credit hour, 2250 minutes)

*(Prerequisites: Regular Admission)*

*(Co-requisites: BIOL 1111)*

Selected laboratory exercises paralleling the topics in BIOL 1111. The laboratory exercises for this course include chemical principles related to cells, cell structure and function, energy and metabolism, cell division, protein synthesis, genetics, and biotechnology.

**BIOL 1112 - Biology II** (3 credit hours, 2250 minutes)

*(Prerequisites: BIOL 1111, BIOL 1111L)*

*(Co-requisites: BIOL 1112L)*

Provides an introduction to basic evolutionary concepts. Also, the course emphasizes animal and plant diversity, structure and function including reproduction and development, and the dynamics of ecology as it pertains to populations, communities, ecosystems, and biosphere. Topics include principles of evolution, classification and characterizations of organisms, plant structure and function, animal structure and function, principles of ecology, and biosphere.

**BIOL 1112L - Biology Lab II** (1 credit hour, 2250 minutes)

*(Prerequisites: BIOL 1111, BIOL LAB 1111)*

*(Co-requisites: BIOL 1112)*

Selected laboratory exercises paralleling the topics in BIOL 1112. The laboratory exercises for this course include principles of evolution, classification and characterizations of organisms, plant structure and function, animal structure and function, principles of ecology, and biosphere.

**BIOL 2113 - Anatomy and Physiology I** (3 credit hours, 2250 minutes)

*(Prerequisites: Regular Admission)*

*(Co-requisites: BIOL 2113L, ENGL 1101)*

Introduces the anatomy and physiology of the human body. Emphasis is placed on the development of a systemic perspective of anatomical structures and physiological processes. Topics include body organization, cell structure and functions, tissue classifications, integumentary system, skeletal system, muscular system, and nervous and sensory systems.

**BIOL 2113L - Anatomy and Physiology Lab I** (1 credit hour, 2250 minutes)

*(Prerequisites: Regular Admission)*

*(Co-requisites: BIOL 2113, ENGL 1101)*

Selected laboratory exercises paralleling the topics in BIOL 2113. The laboratory exercises for this course include body organization, cell structure and functions, tissue classifications, integumentary system, skeletal system, muscular system, and nervous sensory systems.

**BIOL 2114 - Anatomy and Physiology II** (3 credit hours, 2250 minutes)

*(Prerequisites: BIOL 2113, BIOL 2113L)*

*(Co-requisites: BIOL 2114L)*

Continues the study of the anatomy and physiology of the human body. Topics include the endocrine system, cardiovascular system, blood and lymphatic system, immune system, respiratory system, digestive system, urinary system, and reproductive system.

**BIOL 2114L - Anatomy and Physiology Lab II** (1 credit hour, 2250 minutes)

*(Prerequisites: BIOL 2113, BIOL 2113L)*

*(Co-requisites: BIOL 2114)*

Selected laboratory exercises paralleling the topics in BIOL 2114. The laboratory exercises for this course include the endocrine system, cardiovascular system, blood and lymphatic system, immune system, respiratory system, digestive system, urinary system, and reproductive system.

**BIOL 2117 - Introductory Microbiology** (3 credit hours, 2250 minutes)

*(Prerequisites: BIOL 2113 and BIOL 2113L OR BIOL 1111 and BIOL 1111L)*

*(Co-requisites: BIOL 2117L)*

Provides students with a foundation in basic microbiology with emphasis on infectious disease. Topics include microbial diversity, microbial cell biology, microbial genetics, interactions and impact of microorganisms and humans, microorganisms and human disease.

**BIOL 2117L - Introductory Microbiology Lab** (1 credit hour, 2250 minutes)

*(Prerequisites: BIOL 2113 and BIOL 2113L OR BIOL 1111 and BIOL 1111L)*

*(Co-requisites: BIOL 2117)*

Selected laboratory exercises paralleling the topics in BIOL 2117. The laboratory exercises for this course include microbial diversity, microbial cell biology, microbial genetics, interactions and impact of microorganisms and humans, and microorganisms and human disease.

**BUSN 1015-Introduction to Healthcare Reimbursement** (3 credits, 2250 minutes)

*(Prerequisites: BUSN 2300/ALHS 1090)*

This course is designed to increase efficiency and streamline administrative procedures for healthcare insurance billing and reimbursement. Topics include documentation in the medical record, types of insurance, Medicare compliance policies related to documentation and confidentiality, and HIPAA and other compliance regulations.

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**BUSN 1100 - Introduction to Keyboarding** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

This course introduces the touch system of keyboarding placing emphasis on correct techniques. Topics include: computer hardware, computer software, file management, learning the alphabetic keyboard, the numeric keyboard and keypad, building speed and accuracy, and proofreading. Students attain a minimum of 25 GWAM (gross words per minute) on 3-minute timings with no more than 3 errors. (*BUSN 1100 is a required elective for BAT program students that do not meet the minimum keying speed for BUSN 1440.*)

**BUSN 1190 - Digital Technologies in Business** (2 credit hours, 2250 minutes)

*(Prerequisites: COMP 1000 or Guided Elective)*

Provides an overview of digital technology used for conducting business. Students will learn the application of business activities using various digital platforms.

**BUSN 1240 - Office Procedures** (3 credit hours, 3000 minutes)

*(Prerequisites: COMP 1000 or Guided Elective)*

Emphasizes essential skills required for the business office. Topics include office protocol, time management, telecommunications and telephone techniques, office equipment, workplace mail, records management, travel/meeting arrangements, electronic mail, and workplace documents.

**BUSN 1250 - Records Management** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

Introduces records management concepts for use in any office environment. Topics include: Basic Records Management Concepts; Alphabetic, Numeric, Subject, and Geographic filing; and Records Retention, Transfer, and Disposition of Records.

**BUSN 1320 - Business Interaction Skills** (3 credit hours, 2250 minutes)

*(Prerequisites: None)*

This course equips participants with the tools to communicate and interact more effectively in person, in writing, and on the telephone with both internal and external customers. Participants also learn how to work in teams to create a collaborative environment for accomplishing goals. Topics include: language of business, communication skills, working with information, business writing, team and collaborative skills, and resolving interpersonal conflict.

**BUSN 1330 - Personal Effectiveness** (3 credit hours, 2250 minutes)

*(Prerequisites: None)*

This course focuses on the skills needed to be effective in the corporate environment. Participants learn the importance of effectively managing time, stress and change as they relate to work behavior and quality of work. Topics include: time management, stress management, interview skills/job development, resume writing, and managing change.

**BUSN 1400 - Word Processing Applications** (4 credit hours, 4500 minutes)

*(Prerequisites: Prerequisites: COMP 1000 or Guided Elective)*

This course covers the knowledge and skills required to use word processing software through course demonstrations, laboratory exercises and projects. Minimal document keying will be necessary as students will work with existing documents to learn the functions and features of the word processing application. Topics and assignments will include: word processing concepts, customizing documents, formatting content, working with visual content, organizing content, reviewing documents, sharing and securing content.

**BUSN 1410 - Spreadsheet Concepts and Applications** (4 credit hours, 4500 minutes)

*(Prerequisites: COMP 1000 or Guided Elective)*

This course covers the knowledge and skills required to use spreadsheet software through course demonstrations, laboratory exercises and projects. Topics and assignments will include: spreadsheet concepts, creating and manipulating data, formatting data and content, creating and modifying formulas, presenting data visually, and collaborating and securing data.

**BUSN 1420 - Database Applications** (4 credit hours, 4500 minutes)

*(Prerequisites: COMP 1000 or Guided Elective)*

This course covers the knowledge and skills required to use database management software through course demonstrations, laboratory exercises and projects. Topics and assignments will include: database concepts, structuring databases, creating and formatting database elements, entering and modifying data, creating and modifying queries, presenting and sharing data, and managing and maintaining databases.

**BUSN 1430 - Desktop Publishing and Presentation Applications** (4 credit hours, 4500 minutes)

*(Prerequisites: COMP 1000 or Guided Elective)*

This course covers the knowledge and skills required to use desktop publishing (DTP) software and presentation software to create business publications and presentations. Course work will include course demonstrations, laboratory exercises and

projects. Topics include: desktop publishing concepts, basic graphic design, publication layout, presentation design, and practical applications.

**BUSN 1440 - Document Production** (4 credit hours, 5250 minutes)

*(Prerequisites: The ability to key 25 gross words a minute on 3-minute timings with no more than 3 errors, COMP 1000 or guided elective)*

*(Co-requisites: COMP 1000 or guided elective)*

Reinforces the touch system of keyboarding placing emphasis on correct techniques with adequate speed and accuracy and producing properly formatted business documents. Topics include: reinforcing correct keyboarding technique, building speed and accuracy, formatting business documents, language arts, proofreading, and work area management.

**BUSN 2160 - Electronic Mail Applications** (2 credit hours, 2250 minutes)

*(Prerequisites: COMP 1000 or Guided Elective)*

This course provides instruction in the fundamentals of communicating with others inside and outside the organization via a personal information management program. Emphasizes the concepts necessary for individuals and workgroups to organize, find, view, and share information via electronic communication channels. Topics include: internal and external communication, message management, calendar management, navigation, contact and task management, and security and privacy.

**BUSN 2190 - Business Document Proofreading and Editing** (3 credit hours, 3000 minutes)

*(Prerequisites: ENGL 1010 or ENGL 1101)*

*(Co-requisites: BUSN 1440)*

Emphasizes proper proofreading and editing for business documents. Topics include: applying proofreading techniques and proofreader's marks with business documents; proper content, clarity, and conciseness in business documents; and business document formatting.

**BUSN 2210 - Applied Office Procedures** (3 credit hours, 3750 minutes)

*(Prerequisites: BUSN 1440, BUSN 1240, BUSN 1400, BUSN 1410)*

*(Co-requisites: ACCT 1100, BUSN 2190)*

This course focuses on applying knowledge and skills learned in all prior courses taken in the program. Topics include: communication skills, telecommunication skills, records management skills, office equipment/supplies, and integrated programs/applications; serves as a capstone course. Program students will take exit exam when enrolled in this course.

**BUSN 2240 - Business Administrative Assistant Internship I** (4 credit hours, 9000 minutes)

*(Prerequisites: Must be in last semester of program. With advisor approval, may take concurrently with last semester courses.)*

Provides student work experience in the professional environment. Topics include: application of classroom knowledge and skills, work environment functions, and listening/following directions. Students will be under the supervision of the Business Administrative Technology program faculty and/or persons designated to coordinate work experience arrangements.

**BUSN 2250 - Business Administrative Assistant Internship II** (6 credit hours, 13500 minutes)

*(Prerequisites: Must be in last semester of program. With advisor approval, may take concurrently with last semester courses.)*

Provides student with work experience in an off-campus business office. Topics include: application of classroom knowledge and skills, work environment functions, and listening/following directions. Students will be under the supervision of the Business Administrative Technology program faculty and/or persons designated to coordinate work experience arrangements.

**BUSN 2340 - Healthcare Administrative Procedures** (4 credit hours, 4500 minutes)

*(Prerequisites: BUSN 2310/ALHS 1011, BUSN 2300/ALHS1090, COMP 1000 or Guided Elective)*

*(Co-requisites: BUSN 1440)*

Emphasizes the essential skills required for the business healthcare office. Introduces the knowledge, skills, and procedures needed to understand billing purposes. Introduces the basic concept of business healthcare administrative assisting and its relationship to the other health fields. Emphasizes healthcare regulations and ethics and the healthcare administrative assistant's role as an agent of the physician. Provides the student with knowledge and the essentials of professional behavior. Topics include: introduction to business healthcare procedures, healthcare regulations ethics, healthcare records management, scheduling appointments, health insurance billing/collection, work area management, resource utilization, and office equipment. Program students will take exit exam when enrolled in this course.

**BUSN 2350-Electronic Health Records** (3 credits, 3750 minutes)

*(Prerequisites: BUSN 2310/ALHS 1011, BUSN 2300/ALHS 1090, COMP 1000 or Guided Elective)*

*(Co-requisites: BUSN 1440)*

This course provides a study of the content, code sets, storage, retrieval, control, flow, retention, maintenance of electronic health records, and computerized office management. Topics include: electronic healthcare information management, electronic data exchange, coding standards, health record and office management software, point of entry data entry, electronic coding from

health records, speed data entry in processing healthcare records, analysis of records to improve patient care, confidentiality, release of information, security of electronic healthcare record, communication, technology, insurance payment, managed care, posting to accounts, appointment schedules, practice management, report generation, customizing medical documents, claims management, collections management, and HIPAA security.

**BUSN 2370 - Healthcare Coding** (3 credit hours, 3750 minutes)

*(Prerequisites: BUSN 1015, BUSN 2310/ALHS 1011, BUSN 2300/ALHS 1090, COMP 1000 or Guided Elective)*

Provides an introduction to medical coding skills and applications of international coding standards as it applies to healthcare billing for insurance purposes. Topics include: current procedural terminology, International Classification of Diseases, code book formats, coding techniques, formats of the ICD and CPT manuals, and collections.

**CHEM 1151 - Chemistry I** (3 credit hours, 2250 minutes)

*(Prerequisites: MATH 1101 or MAT 1111)*

*(Co-requisites: CHEM 1151L)*

Provides an introduction to basic chemical principles and concepts which explain the behavior of matter. Topics include measurements and units, structure of matter, chemical bonding, chemical reactions, gas laws, liquid mixtures, acids and bases, salts and buffers, and nuclear chemistry.

**CHEM 1151L - Chemistry Lab I** (1 credit hour, 2250 minutes)

*(Prerequisites: MATH 1101 OR MATH 1111)*

*(Co-requisites: CHEM 1151)*

Selected laboratory experiments paralleling the topics in CHEM 1151. The lab exercises for this course include units of measurements, structure of matter, chemical bonding, chemical reactions, gas laws, liquid mixtures, acids and bases, salts and buffers, and nuclear chemistry.

**CIST 1001 - Computer Concepts** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

Provides an overview of information systems, computers and technology. Topics include: Information Systems and Technology Terminology, Computer History, Data Representation, Data Storage Concepts, Fundamentals of Information Processing, Fundamentals of Information Security, Information Technology Ethics, Fundamentals of Hardware Operation, Fundamentals of Networking, Fundamentals of the Internet, Fundamentals of Software Design Concepts, Fundamentals of Software, (System and Application), System Development Methodology, Computer Number Systems conversion (Binary and Hexadecimal), Mobile computing.

**CIST 1122 - Hardware Installation and Maintenance** (4 credit hours, 5250 minutes)

*(Prerequisites: Program Admission)*

This course serves to provide students with the knowledge of the fundamentals of computer technology, networking, and security along with the skills required to identify hardware, peripheral, networking, and security components with an introduction to the fundamentals of installing and maintaining computers. Students will develop the skills to identify the basic functionality of the operating system, perform basic troubleshooting techniques, utilize proper safety procedures, and effectively interact with customers and peers. This course is designed to help prepare students for the CompTIA A+ certification examination.

**CIST 1135 – Operating Systems and Virtual/Cloud Computing** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course provides an overview of modern operating systems and their use in home and small business environments. Activities will utilize the graphical user interface (GUI) and command line environment (CLI). Topics include using the modern virtual operating systems and cloud environments.

**CIST 1220 - Structured Query Language (SQL)** (4 credit hours, 5250 minutes)

*(Prerequisites: CIST 1001)*

Includes basic database design concepts and solving database retrieval and modification problems using the SQL language. Topics include: database Vocabulary, Relational Database Design, Date retrieval using SQL, Data Modification using SQL, Developing and Using SQL Procedures.

**CIST 1305 - Program Design and Development** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

An introductory course that provides problem solving and programming concepts for those that develop user applications. An emphasis is placed on developing logic, troubleshooting, and using tools to develop solutions. Topics include: problem solving and programming concepts, structured programming, the four logic structures, file processing concepts, and arrays.

**CIST 1401 - Computer Networking Fundamentals** (4 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

Introduces networking technologies and prepares students to take the CompTIA's broad-based, vendor independent networking certification exam, Network +. This course covers a wide range of material about networking, including local area networks, wide area networks, protocols, topologies, transmission media, and security. Focuses on operating network management systems, and implementing the installation of networks. It reviews cabling, connection schemes, the fundamentals of the LAN and WAN technologies, TCP/IP configuration and troubleshooting, remote connectivity, and network maintenance and troubleshooting. Topics include: basic knowledge of networking technology, network media and topologies, network devices, network management, network tools and network security.

**CIST 1510 - Web Development I** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

Explores the concepts of Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), XML, and HTML following the current standards set by the World Wide Web Consortium (W3C) for developing inter-linking web pages that include graphical elements, hyperlinks, tables, forms, and image maps.

**CIST 1520 - Scripting Technologies** (3 credit hours, 3000 minutes)

*(Prerequisites: CIST 1510)*

Students learn how to use the features and structure of a client side scripting language, explore the features on server side scripting and develop professional web applications that include special effects, interactive, dynamic, validated, and secure forms.

**CIST 1530 - Web Graphics I** (3 credit hours, 3000 minutes)

*(Prerequisites: Program Admission)*

Students will explore how to use industry standard or open source graphics software programs to create Web ready images and Web pages. Topics include advanced image correction techniques and adjustments, typography and interpolation as well as conditional scripting statements and arrays. The course includes a final project that allows students to develop a Web page/site using the chosen software.

**CIST 1540 - Web Animation I** (3 credit hours, 3000 minutes)

*(Prerequisites: Program Admission)*

In this course, students will use scripting and the latest in industry standard or open source software to cover the creation and manipulation of images and animations. Topics include graphic types, organizational methods, drawing tools, beginning to complex object modeling and an introduction to scripting.

**CIST 1601 - Information Security Fundamentals** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

This course provides a broad overview of information security. It covers terminology, history, security systems development and implementation. Student will also cover the legal, ethical, and professional issues in information security.

**CIST 2120 - Supporting Application Software** (4 credit hours, 5250 minutes)

*(Prerequisites: None)*

This course provides students with knowledge in the following areas: word processing, spreadsheets and presentation software. Word processing topics include creating, customizing, and organizing documents by using formatting and visual content that is appropriate for the information presented. Spreadsheet topics include creating and manipulating data, formatting data and content, creating and modifying formulas, presenting data visually, and collaborating on and securing data. Presentation topics include creating and formatting presentation masters and templates, creating and formatting slide content, working with dynamic visual content, and collaborating on and delivering presentations. This course is designed to help prepare students for the Microsoft Certification tests in Word, Excel and PowerPoint.

**CIST 2126 - Comprehensive Presentations and email Techniques** (3 credit hours, 3750 minutes)

*(Prerequisites: Program Admission)*

This course provides students with knowledge in PIM (Personal Information Management) and presentation software. Presentation topics include creating and formatting presentation masters and templates, creating and formatting slide content, working with dynamic visual content, and collaborating on and delivering presentations. Personal information manager topics include e-mail, calendar, task manager, contact manager, note taking, a journal and web browsing.

**CIST 2127 - Comprehensive Word Processing Techniques** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

This course provides students with knowledge in word processing software. Word processing topics include creating, customizing, and organizing documents by using formatting and visual content that is appropriate for the information presented.

**CIST 2128 - Comprehensive Spreadsheet Techniques** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

This course provides students with knowledge in spreadsheet software. Spreadsheet topics include creating and manipulating data, formatting data and content, creating and modifying formulas, presenting data visually, and collaborating on and securing data.

**CIST 2129 - Comprehensive Database Techniques** (4 credit hours, 5250 minutes)

*(Prerequisites: None)*

This course provides a study of databases beginning with introductory topics and progressing through advanced development techniques. Topics include: advanced database concepts, advanced development techniques, data integration concepts, and troubleshooting and supporting databases.

**CIST 2130 - Desktop Support Concepts** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

This course is designed to give an overview to Desktop Support Management.

**CIST 2311 - Visual Basic I** (4 credit hours, 5250 minutes)

*(Prerequisites: CIST 1305)*

Visual Basic I introduces event-driven programming. Common elements of Windows applications will be discussed created and manipulated using Microsoft's Visual Studio development environment. Topics include numeric data types and variables, decision making structures, arrays, validating input with strings and functions, repetition and multiple forms, test files, lists and common dialog controls.

**CIST 2341 - C# Programming I** (4 credit hours, 5250 minutes)

*(Prerequisites: CIST 1305)*

This course is designed to teach the basic concepts and methods of object-oriented design and C#.Net programming. Use practical problems to illustrate C#.Net application building techniques and concepts. Develop an understanding of C#.Net vocabulary. Create an understanding of where C#.Net fits in the application development landscape. Create an understanding of the C#.Net Development Environment, Visual Studio and how to develop, debug, and run C#.Net applications using the Visual Studio. Continue to develop student's programming logic skills. Topics include: C#.NET Language History, C#.NET Variable Definitions, C#.NET Control Structures, C#.NET Functions, C#.NET Classes, C#.NET Objects, and C#.NET Graphics.

**CIST 2351 - PHP Programming I** (4 credit hours, 5250 minutes)

*(Prerequisites: CIST 1305, CIST 1510)*

An introductory PHP programming course that teaches students how to create dynamic websites. Topics include: PHP and basic web programming concepts, installing PHP, embedding PHP in HTML, variables and constants, operators, forms, conditional statements, looping, arrays, and text files.

**CIST 2361 – C ++ Programming I** (4 credit hours, 5250 minutes)

*(Prerequisites: CIST 1305)*

Provides opportunity to gain a working knowledge of “C++” programming. Includes creating, editing, executing, and debugging “C++” programs of moderate difficulty. Topics include: basic “C++” concepts, simple I/O and expressions, I/O and control statements, arrays, pointers, structures, managing data and developing programs.

**CIST 2371 - Java Programming I** (4 credit hours, 5250 minutes)

*(Prerequisites: CIST 1305)*

This course is designed to teach the basic concepts and methods of object-oriented design and Java programming. Use practical problems to illustrate Java application building techniques and concepts. Develop an understanding of Java vocabulary. Create an understanding of where Java fits in the application development landscape. Create an understanding of the Java Development Kit and how to develop, debug, and run Java applications using the JDK. Continue to develop student's programming logic skills. Topics include: JAVA Language History, JAVA Variable Definitions, JAVA Control Structures, JAVA Methods, JAVA Classes, JAVA Objects, and JAVA Graphics.

**CIST 2381 - Mobile Application Development** (4 credit hours, 4500 minutes)

*(Prerequisites: CIST 1305)*

This course explores mobile guidelines, standards, and techniques. This course includes design and development techniques for multiple mobile devices, platforms, and operating systems. Students will develop mobile applications using state of practice development tools, languages and devices.

**CIST 2411 - Microsoft Client** (4 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

Provides the ability to implement, administrator, and troubleshoot Windows Professional Client as a desktop operating system in any network environment.

**CIST 2412 - Microsoft Server Directory Services** (4 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

Provides students with knowledge and skills necessary to install, configure, manage, support and administer Microsoft Directory Services.

**CIST 2413 - Microsoft Server Infrastructure** (4 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

Provides students with knowledge and skills necessary to install, configure, manage, support and administer Microsoft network infrastructure.

**CIST 2414 - Microsoft Server Administrator** (4 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

Provides students with knowledge and skills necessary to install, configure, manage, support and administer Windows Server. Topics include server deployment, server management, monitor and maintain servers, application and data provisioning, and business continuity and high availability.

**CIST 2420 - Microsoft Exchange Server** (4 credit hours, 4500 minutes)

*(Prerequisites: CIST 2413, CIST 2414)*

Provides students with the knowledge and skills necessary to install, configure, manage, support and administer Microsoft Exchange Server.

**CIST 2451 – Introduction to Networks - CISCO** (4 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

This course provides students with classroom and laboratory experience in current and emerging network technology. Topics include basic network concepts, basic network device configuration, network protocols and models, network access, Ethernet and access control, end to end communications, IPv4 and IPv6 addressing and subnetting, fundamental application services, security, and network performance.

**CIST 2452 – Cisco Routing and Switching Essentials** (4 credit hours, 4500 minutes)

*(Prerequisites: CIST 2451)*

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. Topics include switched networks, routing concepts, routing in a switched network, static and dynamic routing, Single-Area OSPF, Access Control Lists, and IP Services (DHCP and NAT).

**CIST 2453 - Cisco Scaling Networks** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. Students will configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also learn how to implement a WLAN in a small-to-medium network.

**CIST 2454 - Cisco Connecting Networks** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course discusses the WAN technologies and network services required by converged applications in a complex network. Topics include introduction to WANs, private WAN technologies and protocols, Network Address Translation (NAT), public WAN technologies and protocols, network monitoring, and network troubleshooting.

**CIST 2510 - Web Technologies** (3 credit hours, 3000 minutes)

*(Prerequisites: Program Admission)*

In Web Technologies, students will investigate one or more software packages that help automate Web content creation. Students will explore and utilize various features of software packages such as CSS, multimedia incorporation, scripting technologies, form creation, search functionality, advanced image techniques and database connectivity.

**CIST 2531 - Web Graphics II** (3 credit hours, 3000 minutes)

*(Prerequisites: CIST 1530)*

Students will further explore how to use an industry standard or open source graphics software program to create Web ready

images and Web pages. Topics include advanced image correction techniques and adjustments, typography and interpolation as well as conditional scripting statements and arrays.

**CIST 2541 - Web Animation II** (3 credit hours, 3000 minutes)

*(Prerequisites: CIST 1540)*

In this continuation of Web Animation I, students build on their basic scripting knowledge to incorporate advanced scripting techniques in an animated project. They will also explore how to create realistic graphics using inverse kinematics, how to create and edit advanced tweens and how to incorporate various media types into a Web based animation or movie. The course concludes with the completion of a Web animation project.

**CIST 2550 - Web Development II** (3 credit hours, 3000 minutes)

*(Prerequisites: CIST 1220, CIST 1510, CIST 1520)*

Web Development II teaches students how to manipulate data in a database using the Open Database Connectivity (ODBC) model. Students will learn to retrieve, update, and display database information with a web application. Database access may be accomplished using a web programming language (such as PHP, Microsoft VB, Microsoft C#, or Sun Java). Topics include manipulating data in a database, working with a relational database via Open Database Connectivity (ODBC), working with different database systems, developing forms and applications to interact with a database server(s), modifying data in a database, and controls and validation.

**CIST 2560 - Web Application Programming I** (4 credit hours, 4500 minutes)

*(Prerequisites: CIST 1305)*

CIST 2560 explores W3C and Microsoft .NET programming standards in order to practice various web programming techniques for creating web forms, providing web navigation, and accessing data that produce dynamic interactive web applications. Students may use Microsoft Visual Basic .NET, Microsoft C# .NET, or another .NET language.

**CIST 2570 - Open Source Web Application Programming I** (4 credit hours, 4500 minutes)

*(Prerequisites: CIST 1305)*

CIST 2570 explores open source W3C programming standards in order to practice various web programming techniques for creating web forms, providing web navigation, and accessing data that produce dynamic interactive web applications. Students may use Java, Perl, PHP, Python, or other open source web programming languages.

**CIST 2580 - Interactive and Social Apps Integration** (4 credit hours, 3950 minutes)

*(Prerequisites: CIST 1305)*

This course explores social and interactive web application technology and its effect on the business model. Topics include interactive and social web business model, interactive and social business web requirements and successful interactive and social integration.

**CIST 2612 – Computer Forensics** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course examines the use of computers in the commission of crimes, collection, analysis and production of digital evidence. Students will use computer resources to explore basic computer forensic investigation techniques.

**CIST 2921 - IT Analysis, Design, and Project Management** (4 credit hours, 5250 minutes)

*(Prerequisites: None)*

IT Analysis, Design, and Project Management will provide a review and application of systems life cycle development methodologies and project management. Topics include: Systems planning, systems analysis, systems design, systems implementation, evaluation, and project management.

**CIST 2950 - Web Systems Project** (3 credit hours, 3750 minutes)

*(Prerequisites: Program Instructor Approval)*

CIST 2950 is a capstone course providing a realistic experience for students working in a team to develop a complete web systems project.

**CIST 2991 - CIST Internship I** (3 credit hours, 6750 minutes)

*(Prerequisites: None)*

Provides the instructor and student a 3 credit hour opportunity to develop special learning environments. Instruction is delivered through occupational work experiences, practicum's, advanced projects, industry sponsored workshops, seminars, or specialized and/or innovative learning arrangements. To attain additional internship credit hours, the student can take CIST2992 (4 credit hours) and/or CIST2993 (5 credit hours).

**CLBT 1010 - Introduction to Clinical Laboratory Technology** (2 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

Introduces students to the terms, concepts, procedures, and equipment used in a professional clinical laboratory. Topics include: professional ethics and regulatory agencies; basic laboratory safety, equipment and techniques; phlebotomy/specimen processing; related lab math; quality control concepts; process improvement, documentation and computer usage; and point of care testing. Practical experience in phlebotomy will be provided in the institution laboratory and/or clinical setting.

**CLBT 1030 - Urinalysis/Body Fluids** (2 credit hours, 3000 minutes)

*(Prerequisites/Co-requisites: BIOL 2113, 2113L, CLBT 1010)*

Provides theory and techniques required to conduct tests on urine and various body fluids. Theory and tests are related to disease states and diagnosis. Topics include: theory of urinalysis; physical, chemical, and microscopic urinalysis; urinalysis and disease state correlation; related lab math; special urinalysis and related testing; body fluids tests; and safety and quality control.

**CLBT 1040 - Hematology/Coagulation** (5 credit hours - 6750 minutes)

*(Prerequisites/Co-requisites: BIOL 2113, 2113L, CLBT 1010)*

Introduces the fundamental formation, function, and degradation of blood cells. Topics include: reticuloendothelial system and blood cell formation, complete blood count and differential, other related blood tests, related lab math; correlation of test results to disease states, coagulation and fibrinolysis, instrumentation for hematology and coagulation, critical valves and blood cell dyscrasias, safety and quality control, and process improvement.

**CLBT 1050 - Serology/Immunology** (3 credit hours, 3750 minutes)

*(Prerequisites/Co-requisites: CLBT 1010)*

Introduces the fundamental theory and techniques applicable to serology and immunology practice in the clinical laboratory. Topics include: immune system, antigen and antibody reactions, immunological diseases, related lab math; common serological techniques, safety and quality control, and process improvement.

**CLBT 1060 - Immunoematology** (4 credit hours, 6000 minutes)

*(Prerequisites: CLBT 1050)*

Provides an in-depth study of immunoematology principles and practices as applicable to clinical laboratory technology. Topics include: genetic theory and clinical applications, immunology, donor unit collection, related lab math; pre-transfusion testing, management of disease states and transfusion reactions, safety, quality control, and process improvement.

**CLBT 1070 - Clinical Chemistry** (4 credit hours, 6000 minutes)

*(Prerequisites/Co-requisites: CLBT 1010, BIOL 2114, BIOL 2114L, CHEM 1212, CHEM 1212L or CHEM 1151, CHEM 1151L)*

Develops concepts and techniques of clinical chemistry applicable to clinical laboratory technology. Topics include: carbohydrates, electrolytes and acid-base balance, nitrogenous compounds, related lab math; enzymes and endocrinology, liver functions, lipids, toxicology and therapeutic drug monitoring, safety and quality control, correlation of disease states, process improvement (team approach), and critical thinking skills.

**CLBT 1080 - Microbiology** (5 credit hours, 7500 minutes)

*(Prerequisites: CLBT 1010)*

Introduces fundamental microbiology and parasitology theory and techniques applicable to disease state identification. Topics include: microbiology fundamentals; basic techniques; lab related math; clinical microbiology; anti-microbial sensitivity; safety and quality control; parasitology; mycology, mycobacteriology, and virology; correlation of disease states; and process improvement.

**CLBT 2090 - Clinical Phlebotomy, Urinalysis, and Serology Practicum** (3 credit hours, 6750 minutes) (one week each Phlebotomy, Urinalysis and Serology)

*(Prerequisites: CLBT 1010, CLBT 1030, CLBT1050)*

Provides students with an opportunity for in-depth application and reinforcement of principles and techniques in a clinical laboratory job setting. This clinical practicum allows the student to become involved in a work situation at a professional level of technical application and requires concentration, practice, and follow through. Topics include: urinalysis tests, serological tests and techniques, blood and specimen processing, correlation of test results to disease states, safety and quality control, and quality assurance. The clinical practicum is implemented through the use of written training plans, written performance evaluation, and coordinated supervision.

**CLBT 2100 - Clinical Immunoematology Practicum** (4 credit hours, 9000 minutes)

*(Prerequisites: CLBT 1060)*

Provides students with an opportunity for in-depth application and reinforcement of immunoematology principles and techniques in a clinical laboratory job setting. This clinical practicum allows the student to become involved in a work situation at a professional level of technical application and requires concentration, practice, and follow through. Topics include: specimen processing; slide and tube immunological techniques; criteria for special techniques; component and theory practices;

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management of disease states; transfusion complications; safety; documentation/quality control; and process improvement. The clinical practicum is implemented through the use of written training plans, written performance evaluation, and coordinated supervision.

**CLBT 2110 - Clinical Hematology/Coagulation Practicum** (4 credit hours, 9000 minutes)

*(Prerequisites: CLBT 1040)*

Provides students with an opportunity for in-depth application and reinforcement of hematology/coagulation principles and techniques in a clinical laboratory job setting. This clinical practicum allows the student to become involved in a work situation at a professional level of technical application and requires concentration, practice, and follow through. Topics include: complete blood count and differentials; other related blood tests; coagulation and fibrinolysis tests; correlation of test results to disease states and critical values; instrumentation; safety; documentation/quality control; and process improvement. The clinical practicum is implemented through the use of written training plans, written performance evaluation, and coordinated supervision.

**CLBT 2120 - Clinical Microbiology Practicum** (4 credit hours, 9000 minutes)

*(Prerequisites: CLBT 1080)* -150 clinical hours

Provides students with an opportunity for in-depth application and reinforcement of principles and techniques in a clinical laboratory job setting. This clinical practicum allows the student to become involved in a work situation at a professional level of technical application and requires concentration, practice, and follow through. Topics include: specimen inoculations; stains; culture work-ups; bacterial identification; anti-microbial sensitivity; media preparation; safety; documentation/quality control; and process improvement. The clinical practicum is implemented through the use of written training plans, written performance evaluation, and coordinated supervision.

**CLBT 2130 - Clinical Chemistry Practicum** (4 credit hours, 9000 minutes)

*(Prerequisites: CLBT 1070)*

Provides students with an opportunity for in-depth application and reinforcement of chemistry principles and techniques in a clinical laboratory job setting. This clinical practicum allows the student to become involved in a work situation at a professional level of technical application and requires concentration, practice, and follow through. Topics include: therapeutic drugs and toxicology; automated and manual chemistry; immuno chemistry; special chemistry; safety; correlation of test results to disease states and critical values; instrumentation; documentation/quality control; and process improvement. The clinical practicum is implemented through the use of written training plans, written performance evaluation, and coordinated supervision.

**CLBT 2200 - CLT Certification Review** (2 credit hour, 3000 minutes)

*(Prerequisites: CLBT 1030, CLBT 1040, CLBT 1050, CLBT 1060, CLBT 1070 and CLBT 1080)*

Provides a review of basic knowledge from previous courses and helps the student prepare for national certification examinations for the clinical laboratory technician level. Topics include: review of professional ethics, regulatory agencies, safety, fundamental techniques, phlebotomy and specimen collection and processing, quality control concepts, computer applications, urinalysis and body fluids, hematology and coagulation, immunology and serology, include immunohematology, clinical chemistry, microbiology, parasitology, mycology, mycobacteriology and virology, and test taking skills.

**COLL 1040 - College Foundations** (3 credit hours, 2625 minutes)

*(Prerequisites: None)*

This course is designed to provide tools to assist students to acquire skills necessary to achieve academic and professional success in their chosen occupational/technical program of study. Topics include: Computer Applications/Technology Skills, Getting off to a Good Start, Learning and Personality Styles, Time and Money Management, Study and Test Taking Skills, Stress Management and Wellness, Communication Skills, and Career Exploration.

**COMP 1000 - Introduction to Computers** (3 credit hours, 3750 minutes)

*(Prerequisites: Provisional admission)*

Introduces the fundamental concepts, terminology, and operations necessary to use computers. Emphasis is placed on basic functions and familiarity with computer use. Topics include an introduction to computer terminology, the Windows environment, Internet and email, word processing software, spreadsheet software, database software, and presentation software.

**COSM 1000 - Introduction to Cosmetology Theory** (4 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

Introduces fundamental theory and practices in the cosmetology profession. Emphasis will be placed on professional practices and safety. Topics include: state rules, and regulations; state regulatory agency, image; bacteriology; decontamination and infection control, chemistry fundamentals, safety, Hazardous Duty Standards Act compliance, and anatomy and physiology.

**COSM 1010 - Chemical Texture Services** (3 credit hours, 4500 minutes)

*(Co-requisites: COSM 1000)*

Provides instruction in the chemistry and chemical reactions of permanent wave solutions and relaxers, application of permanent waves and relaxers. Precautions and special problems involved in applying permanent waves and relaxers will be emphasized.

Topics include: permanent wave techniques, chemical relaxer techniques, chemistry, physical and chemical change, safety procedures, permanent wave and chemical relaxer application procedures, hair analysis, scalp analysis, permanent wave procedures (in an acceptable time frame), relaxer application (in an acceptable time frame), and Hazardous Duty Standards Act Compliance. A \$30 fee is associated with this course due to the increased cost of permanent wave solution and chemical relaxer.

**COSM 1020 - Hair Care & Treatment** (3 credit hours, 3750 minutes)

*(Co-requisites: COSM 1000)*

Introduces the theory, procedures and products used in the care and treatment of the scalp and hair, disease and disorders and their treatments and the fundamental theory and skills required to shampoo, condition, and recondition the hair and scalp.

**COSM 1030 - Haircutting** (3 credit hours, 5250 minutes)

*(Co-requisites: COSM 1000)*

Introduces the theory and skills necessary to apply haircutting techniques, advanced haircutting techniques, proper safety & decontamination precautions, hair design elements, cutting implements, head, hair & body analysis, and client consultation.

**COSM 1040 - Styling** (3 credit hours, 4500 minutes)

*(Co-requisites: COSM 1000)*

Introduces the fundamental theory and skills required to create shapings, pin curls, fingerwaves, roller placement, blow dry styling, thermal curling, thermal pressing, thermal waving, artificial hair and augmentation, and comb-outs. Laboratory training includes styling training on manikins. Topics include: braiding/intertwining hair, styling principles, pin curls, roller placement, fingerwaves, skip waves, ridge curls, blow dry styling, thermal curling, thermal pressing, thermal waving, artificial hair and augmentation, comb-outs and safety precautions.

**COSM 1050 – Hair Color** (3 credit hours, 4500 minutes)

*(Co-requisites: COSM 1000)*

Introduces the theory & application of temporary, semi-permanent, demipermanent-deposit only, and permanent hair coloring, hair lightening, and color removal products and application. Topics include: principles of color theory, hair structure, color tone, classifications of color, hair lightening, color removal, application procedures, safety precautions, client consultation, product knowledge, hair color challenges, corrective solutions, and special effects. A \$30 fee is associated with this course due to the increased cost of hair coloring products, lighteners, and toners.

**COSM 1060 - Fundamentals of Skin Care** (3 credit hours, 5250 minutes)

*(Co-requisites: COSM 1000)*

This course provides a comprehensive study in care of the skin for theory and practical application. Emphasis will be placed on client consultation, safety precautions, skin conditions, product knowledge, basic facials, facial massage, corrective facial treatments, hair removal, and make-up application. Other topics in this course include advanced skin treatments in electrotherapy, light therapy, galvanic current, high frequency, and microdermabrasion.

**COSM 1070 - Nail Care and Advanced Techniques** (3 credit hours, 5250 minutes)

*(Co-requisites: COSM 1000)*

Provides training in manicuring, pedicuring and advanced nail techniques. Topics include: implements, products and supplies, hand and foot anatomy and Physiology, diseases and disorders, manicure techniques, pedicure techniques, nail product chemistry, safety precautions and practices, and advanced nail techniques (wraps/tips/acrylics).

**COSM 1080 - Physical Hair Services Practicum** (3 credit hours, 5250 minutes)

*(Prerequisites: COSM 1000, COSM 1020, COSM 1030, COSM 1040)*

Provides laboratory experiences necessary for the development of skill levels required to be a competent cosmetologist. The allocation of time to the various phases of cosmetology is required by the Georgia State Board of Cosmetology. This course includes a portion of the required hours for licensure. Topics include: hair and scalp treatments; haircutting; styling; dispensary; reception; safety precautions/decontamination; and Hazardous Duty Standards Act compliance.

**COSM 1090 –Hair Services Practicum I** ( 3 credit hours, 5250 minutes)

*(Prerequisites: COSM 1000, COSM 1010, COSM 1020, COSM 1030, COSM 1040, COSM 1050)*

This course provides laboratory experiences necessary for the development of skill levels required to be a competent cosmetologist. The allocation of time to the various phases of cosmetology is prescribed by the Georgia State Board of Cosmetology. This course includes a portion of the hours required for licensure. Topics include: permanent waving and relaxers; hair color, foiling, lightening, hair and scalp treatments; haircutting; clipper design, precision cutting, styling; dispensary; reception; safety precautions/decontamination; Hazardous Duty Standards Act compliance; product knowledge, customer service skills, client retention, State Board Rules & Regulations guidelines, and State Board foundation prep.

**COSM 1100 - Hair Services Practicum II** (3 credit hours, 5250 minutes)

*(Co-requisites: COSM 1090)*

Provides experience necessary for professional development and completion of requirements for state licensure. Emphasis will be placed on the display of professional conduct and positive attitudes. The appropriate number of applications for completion of state board service credit requirements for this course may be met in a laboratory setting. Topics include: texture services; permanent waving and relaxers; hair color and lightening; hair and scalp treatments; haircutting; styling; dispensary; reception; safety precautions/decontamination; and Hazardous Duty Standards Act compliance.

**COSM 1110 - Hair Services Practicum III** (3 credit hours, 5250 minutes)

*(Co-requisites: COSM 1100)*

This course provides experience necessary for professional development and completion of requirements for state licensure. Emphasis will be placed on the display of professional conduct and positive attitudes. The requirements for this course may be met in a laboratory setting. Topics include: permanent waving and relaxers; hair color and lightening; hair and scalp treatments; haircutting; dispensary; styling; reception; safety precautions/decontamination; Hazardous Duty Standards Act compliance; and state licensure preparation.

**COSM 1115 - Hair Services Practicum IV** (2 credit hours, 4500 minutes)

*(Co-requisites: COSM 1110)*

This course provides experience necessary for professional development and completion of requirements for state licensure. Emphasis will be placed on the display of professional conduct and positive attitudes. The requirements for this course may be met in a laboratory setting. Topics include: permanent waving and relaxers; hair color and lightening; hair and scalp treatments; haircutting; dispensary; styling; reception; safety precautions/decontamination; Hazardous Duty Standards Act compliance; and state licensure preparation.

**COSM 1120 - Salon Management** (3 credit hours, 2250 minutes)

*(Co-requisites: COSM 1000)*

Emphasizes the steps involved in opening and operating a privately owned salon. Topics include: Law requirements regarding employment, Tax payer education / Federal and state tax responsibilities, law requirements for owning and operating a salon business, business management practices, and public relations and career development.

**COSM 1125 – Skin & Nail Care Practicum** (2 credit hours, 4500 minutes)

*(Co-requisites: COSM 1060, COSM 1070)*

This course provides experience necessary for professional development and completion of requirements for state licensure. Emphasis will be placed on the display of professional conduct and positive attitudes. The appropriate number of applications for completion of state board service credit requirements for this course may be met in a laboratory setting. Topics include: skin treatment; dispensary; manicure/pedicure/advanced nail techniques; reception; safety precautions/decontamination; and Hazardous Duty Standards Act compliance.

**CRJU 1010 - Introduction to Criminal Justice** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Introduces the development and organization of the criminal justice system in the United States. Topics include: The American Criminal Justice system; constitutional limitations; organization of enforcement, adjudication, and corrections; and career opportunities and requirements.

**CRJU 1021 - Private Security** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Provides an orientation to the development, philosophy, responsibility, and function of the Private Security Industry. A historical and philosophical perspective of private security will help students better understand the present stage of private security, its principles, its legal authority and its effect on society in general. Topics include: Private Security-an overview; basic security goals and responsibilities; When Prevention Fails; Security Systems at Work-putting it all together.

**CRJU 1030 - Corrections** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Provides an analysis of all phases of the American correctional system and practices, including its history, procedures, and objectives. Topics include: history and evolution of correctional facilities; legal and administrative problems; institutional facilities and procedures; probation, parole, and prerelease programs; community involvement; alternative sentencing; rehabilitation; and staffing.

**CRJU 1040 - Principles of Law Enforcement** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

This course examines the principles of organization, administration, and the duties of federal, state, and local law enforcement

agencies. Topics include: history and philosophy of law enforcement; evaluation of administrative practices, problems in American law enforcement agencies, emerging concepts, professionalism, and community crime prevention programs.

**CRJU 1054 - Police Officer Survival** (3 credit hours, 3000 minutes)

*(Prerequisites: none)*

This course examines the critical issues involved in the survival of a police officer in all aspects including their physical, mental, and psychological wellbeing. Emphasis is placed on personal protection skills, defensive tactics, handcuffing techniques, patrol tactics, vehicle stops, building searches and use of force.

**CRJU 1400 - Ethics and Cultural Perspectives for Criminal Justice** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

This course provides an exploration of ethics and cultural perspective in criminal justice. In presenting ethics, both the individual perspective and the organizational standpoint will be examined. Four areas of ethical decision making opportunities are studied including: law enforcement ethics; correctional ethics; legal professional ethics; and policymaking ethics. The presentation of cultural perspectives is designed to aid law enforcement officers to better understand and communicate with members of other cultures with whom they come in contact in the line of duty. Topics include: defining and applying terms related to intercultural attitudes, role-play activities related to intercultural understanding, developing interpersonal/intercultural communication competence, and development of personal intercultural growth plan.

**CRJU 1062 - Methods of Criminal Investigation** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

This course presents the fundamentals of criminal investigation. The duties and responsibilities of the investigator both in field and in the courtroom are highlighted. Emphasis is placed on techniques commonly utilized by investigative personnel as well as the procedures used of investigating various crimes.

**CRJU 1068 - Criminal Law for Criminal Justice** (3 credit hours, 2250 minutes)

*(Prerequisites: Program Admission)*

This course introduces criminal law in the United States, but emphasizes the current specific status of Georgia criminal law. The course will focus on the most current statutory contents of the Official Code of Georgia Annotated (O.C.G.A.) with primary emphasis on the criminal and traffic codes. Topics include: historic development of criminal law in the United States; statutory law, Georgia Code (O.C.G.A.) Title 16 - Crimes and Offences; statutory law, Georgia Code (O.C.G.A.) Title 40 - Motor Vehicle and Traffic Offenses; and Supreme Court rulings that apply to criminal law.

**CRJU 2020 - Constitutional Law for Criminal Justice** (3 credit hours, 2250 minutes)

*(Prerequisites: Program Admission)*

This course emphasizes those provisions of the Bill of Rights which pertain to criminal justice. Topics include: characteristics and powers of the three branches of government; principles of governing the operation of the U.S. Constitution, the Bill of Rights and the Fourteenth Amendment.

**CRJU 2050 - Criminal Procedure** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Introduces the procedural law of the criminal justice system which governs the series of proceedings through which government enforces substantive criminal law. The course offers an emphasis on the laws of arrest and search and seizure; the rules of evidence, right to counsel, and the rights and duties of both citizens and officers. The course covers in depth appropriate case law and court rulings that dictate criminal procedure of the state and federal level.

**CRJU 2070 - Juvenile Justice** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Analyzes the nature, extent, and causes of juvenile delinquency, and examines processes in the field of juvenile justice. Topics include: survey of juvenile law, comparative analysis of adult and juvenile justice systems, and prevention and treatment of juvenile delinquency.

**CRJU 2090 - Criminal Justice Practicum** (3 credit hours, 6750 minutes)

*(Prerequisites: Program admission)*

Provides experiences necessary for further professional development and exposure to related agencies in the criminal justice field. The student will pursue a professional research project supervised by the instructor. Topics include: criminal justice theory application.

**CRJU 2100 - Criminal Justice Externship** (3 credit hours, 6750 minutes)

*(Prerequisites: Program admission)*

Provides experiences necessary for further professional development and exposure to related agencies in the criminal justice

field. The student will pursue an externship in a related agency supervised by the instructor. Topics include: criminal justice theory application.

**CTDL 1010 - Fundamentals of Commercial Driving** (3 credit hours, 2250 minutes)

*(Prerequisites: None)*

Fundamentals of Commercial Driving introduces students to the transportation industry, federal and state regulations, records and forms, industrial relations, and other non-driving activities. This course provides an emphasis on safety that will continue throughout the program.

**CTDL 1020 - Combination Vehicle Basic Operation and Range Work** (2 credit hours, 2500 minutes)

*(Prerequisites: None)*

*(Co-requisites: CTDL 1010)*

This course familiarizes students with truck instruments and controls and performing basic maneuvers required to drive safely in a controlled environment and on the Driving Range. Each student must receive 12 hours behind the wheel (BTW) instructional time in range operations such as operating a tractor trailer through clearance maneuvers, backing, turning, parallel parking and coupling/uncoupling.

**CTDL 1030 - Combination Vehicle Advanced Operations** (4 credit hours, 6250 minutes)

*(Prerequisites: None)*

*(Co-requisites: CTDL 1020)*

Advanced Operations develops students' driving skills under actual road conditions. The classroom part of the course stresses following safe operating practices. These safe operating practices are integrated into the development of driving skills on the road. Each student must receive at least twelve (12) hours behind-the-wheel (BTW) instructional time on the street/road. In addition, the student must have a minimum program total of forty-four (44) hours BTW instructional time in any combination (with CTDL 1020) of range and street/road driving. Note: state law requires that whenever a combination vehicle is operated on public roads an instructor must be present in the vehicle while the student is driving.

**DHYG 1000 - Tooth Anatomy and Root Morphology** (2 credit hours, 1500 minutes)

*(Prerequisites: Program admission)*

Provides the student with a thorough knowledge of external and internal morphological characteristics of human primary and secondary dentition. Also introduces the student to various tooth identification systems, classifications of occlusion and dental anomalies. Topics include: oral cavity anatomy, dental terminology, external and internal tooth anatomy, tooth nomenclature and numbering systems, individual tooth and root morphology, occlusion and dental anomalies.

**DHYG 1010 - Oral Embryology and Histology** (1 credit hour, 750 minutes)

*(Prerequisites: Program admission)*

Focuses on the study of cells and tissues of the human body with emphasis on those tissues that compose the head, neck, and oral cavity. Topics include: cellular structure and organelles, histology of epithelium, histology of the connective tissue, histology of muscle tissue, histology of nerve tissue, histology of oral mucosa and orofacial structures, embryological development of the head and neck, tooth development, and development of tooth supporting structures.

**DHYG 1020 - Head and Neck Anatomy** (2 credit hours, 1500 minutes)

*(Prerequisites: Program admission)*

Focuses on anatomy of the head and neck. Emphasis is placed on those structures directly affected by the practice of dentistry. Topics include: terminology, anatomic landmarks, osteology of the skull, temporomandibular joint, muscles of mastication, muscles of facial expression, nervous system, blood supply of head and neck, lymphatic system and immunology, endocrine and exocrine glands of the head and neck, nasal and paranasal sinuses, facial spaces and the spread of dental infections, and anatomy concerning local anesthesia.

**DHYG 1030 - Dental Materials** (2 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Focuses on the nature, qualities, composition and manipulation of materials used in dentistry. The primary goal of this course is to enhance the student's ability to make clinical judgments regarding the use and care of dental materials based on how these materials react in the oral environment. Topics include: dental materials standards, dental materials properties, impression materials, gypsum products, mouthguards and whitening systems, dental bases, liners and cements, temporary restorations, classifications for restorative dentistry, direct restorative materials, indirect restorative materials, polishing procedures for dental restorations, removable dental prostheses, sealants, and implants.

**DHYG 1040 - Preclinical Dental Hygiene Lecture** (2 credit hours, 1500 minutes)

*(Prerequisites: Program admission)*

*(Co-requisites: DHYG 1050)*

Provides fundamental skills to be utilized in the delivery of optimum patient care by the dental hygienist. Topics include: patient

assessment, instrumentation, charting, occlusion, caries, emergencies, ethics and professionalism, asepsis, and patient and clinician positioning.

**DHYG 1050 - Preclinical Dental Hygiene Lab** (2 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

*(Co-requisites: DHYG 1040)*

Provides fundamental skills to be utilized in the delivery of optimum patient care by the dental hygienist. Topics include: asepsis, ethics and professionalism, emergencies, patient assessment, patient and clinician positioning, instrumentation, charting, occlusion and caries.

**DHYG 1070 - Radiology Lecture** (2 credit hours, 1500 minutes)

*(Prerequisites: Program admission)*

*(Co-requisites: DHYG 1020)*

Emphasizes the application of radiology principles in the study of the teeth and their surrounding structures. Topics include: radiation physics principles, radiation biology, radiation safety, radiographic quality assurance, imaging theory, radiographic interpretation, radiographic need, legal issues of dental radiography, and digital radiography techniques and principles.

**DHYG 1090 - Radiology Lab** (1 credit hour, 1500 minutes)

*(Prerequisites: Program admission)*

*(Co-requisites: DHYG 1020)*

Emphasizes the application of radiology principles in the study of the teeth and their surrounding structures. Topics include: radiation safety, radiographic quality assurance, imaging theory, radiographic interpretation, radiographic need, and digital radiography principles and techniques.

**DHYG 1110 - Clinical Dental Hygiene I Lecture** (2 credit hour, 1500 minutes)

*(Prerequisites: DHYG 1040)*

*(Co-requisites: DHYG 1111)*

Continues the development of knowledge in patient care. Topics include: prevention, instrumentation, patient management, dental appliances, and treatment planning.

**DHYG 1111 - Clinical Dental Hygiene I Lab** (3 credit hours, 6750 minutes)

*(Prerequisites: DHYG 1050)*

*(Co-requisites: DHYG 1110)*

Continues the development of knowledge in patient care. Topics include: prevention, instrumentation, patient management, dental appliances, treatment planning, and applied techniques.

**DHYG 1206 - Pharmacology and Pain Control** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Introduces principles of basic pharmacology as they pertain to the practice of dentistry and dental hygiene. Emphasizes actions and reactions of medications commonly used in the dental office or taken by dental patients. Topics include: pharmaceutical referencing, legal and ethical considerations, drug effects, contraindications, drug related emergencies, dental related anesthesia, and pain control.

**DHYG 2010 - Clinical Dental Hygiene II Lecture** (2 credit hours, 1500 minutes)

*(Prerequisites: DHYG 1070, DHYG 1110)*

*(Co-requisites: DHYG 2020)*

Continues the development of student knowledge in treating patients and preventing oral disease. Topics include: instrument sharpening, patient assessment, antimicrobial use, pulp vitality testing, treatment of hypersensitivity, whitening, implant care, tobacco cessation, pit and fissure sealants, scaling, debridement and rootplaning, ultrasonics and air polishing and dietary analysis.

**DHYG 2020 - Clinical Dental Hygiene II Lab** (2 credit hours, 4500 minutes)

*(Prerequisites: DHYG 1070, DHYG 1090, DHYG 1111)*

*(Co-requisites: DHYG 2010)*

Continues the development of student knowledge in treating patients and preventing oral disease. Topics include: instrument sharpening, patient assessment, antimicrobial use, pulp vitality testing, treatment of hypersensitivity, whitening, implant care, tobacco cessation, pit and fissure sealants, scaling, debridement and root planning, ultrasonics and air polishing, dietary analysis, and applied techniques.

**DHYG 2050 - General & Oral Pathology/Pathophysiology** (3 credit hours, 2250 minutes)

*(Prerequisites: DHYG 1010, DHYG 1020)*

Introduces pathology as a specialty of dentistry and includes the etiology, pathogenesis, and recognition of various pathological

conditions. Emphasis is placed on oral and paraoral pathology and systemic conditions affecting the head and neck. Topics include: terminology and biopsy procedures, inflammation, repair, and regeneration, soft tissue and dental anomalies, pathogenesis of caries and pulpal pathology, cysts and tumors of the head and neck, systemic conditions that affect the oral structures, infectious diseases, diseases of the salivary glands, diseases of bone, blood dyscrasias, vesiculo-erosive and autoimmune diseases, and genetic diseases and syndromes of the head and neck.

**DHYG 2070 - Community Dental Health** (3 credit hours, 3750 minutes)

*(Prerequisites: DHYG 1110)*

Provides students with a broad understanding of the healthcare system and an objective view of the significant social, political, psychological, and economic forces directing the system. Prepares students to promote oral health and prevent oral disease in a community, by meeting specific dental health needs of community groups. Topics include: epidemiology, community dental care assessment, community dental care provision, preventive counseling for groups, group oral health education, terminology, dental care systems, biostatistics, and concepts of dental research.

**DHYG 2080 - Clinical Dental Hygiene III Lecture** (2 credit hours, 1500 minutes)

*(Prerequisites: DHYG 2010)*

*(Co-requisites: DHYG 2090)*

Continues the development of student knowledge necessary for treatment and prevention of oral diseases. Topics include: treatment of patients with special needs.

**DHYG 2090 - Clinical Dental Hygiene III Lab** (4 credit hours, 9000 minutes)

*(Prerequisites: DHYG 2020)*

*(Co-requisites: DHYG 2080)*

Continues the development of student skills necessary for treatment and prevention of oral disease. Topics include: special needs patients and applied techniques.

**DHYG 2110 - Biochemistry and Nutrition Fundamentals for the Dental Hygienist** (2 credit hours, 1500 minutes)

*(Prerequisites: Program admission)*

Provides a basic introduction to organic chemistry and biochemistry. Familiarizes students with the role of nutrition in the human body with an emphasis on the dental hygienist's role as a nutritional educator. Topics include: molecular structure, carbohydrates, proteins, nutrition and digestion, bioenergetics, nutritional aspects, nutritional disorders, and diet assessment.

**DHYG 2130 - Clinical Dental Hygiene IV Lecture** (2 credit hour, 1500 minutes)

*(Prerequisites: DHYG 2080)*

*(Co-requisites: DHYG 2140)*

Focuses on the dental hygiene field and presents the fundamental concepts and principles necessary for successful participation in the dental profession. Topics include: employability skills, State of Georgia Dental Practice Act, office management, expanded duties, legal aspects, ethics, dental hygiene practice settings, and dentistry and dental hygiene regulation.

**DHYG 2140 - Clinical Dental Hygiene IV Lab** (4 credit hours, 9000 minutes)

*(Prerequisites: DHYG 2090)*

*(Co-requisites: DHYG 2130)*

Continues the development of student skills necessary for treatment and prevention of oral disease. Topics include: applied techniques and time management.

**DHYG 2200 - Periodontology** (3 credit hours, 2250 minutes)

*(Prerequisites: DHYG 1010)*

Provides fundamental information on periodontal anatomy, pathogenesis of the periodontal diseases, and an introduction to modern rational periodontal therapy, including, preventative, non-surgical, and surgical methods. Topics include: tissues of the periodontium, periodontal pathology, periodontal diseases, assessment and treatment planning, periodontal disease therapy, and periodontal emergencies.

**DIET 1000 – Introduction to Diesel Technology, Tools, and Safety** (3 credit hours, 3975 minutes)

*(Prerequisites: Provisional admission)*

This course introduces basic knowledge and skills the student must have to succeed in the Diesel Equipment Technology field. Topics include an overview of diesel powered vehicles, diesel technology safety skills, basic tools and equipment, reference materials, measuring instruments, shop operation, mechanical fasteners, welding safety, and basic welding skills. Classroom and lab experiences on safety, precision measuring, and basic shop practices are highly emphasized.

**DIET 1010 – Diesel Electrical and Electronic Systems** (7 credit hours, 10500minutes)

*(Prerequisites: None)*

This course introduces students to electrical and electronic systems used on medium/heavy duty trucks and heavy equipment. Topics include: general electrical system diagnosis, battery diagnosis and repair, starting system diagnosis and repair, charging system diagnosis and repair, lighting system diagnosis and repair, gauges and warning devices, and an introduction and familiarization with electrical and electronic systems.

**DIET 1020 – Preventive Maintenance** (5 credit hours, 6050 minutes)

*(Prerequisites: None)*

This course introduces preventive maintenance procedures pertaining to medium/heavy duty trucks and heavy equipment. Topics include: engine systems; cab and hood; heating, ventilation and air conditioning (HVAC); electrical and electronics; frame and chassis.

**DIET 1030 – Diesel Engines** (6 credit hours, 9750 minutes)

*(Prerequisites: None)*

This course introduces diesel engines used in medium/heavy duty trucks and heavy equipment. Topics include: general engine diagnosis, cylinder head and valve train, engine block, engine lubrication system, hydraulic pumps, engine cooling, air induction, exhaust, fuel supply systems, electronic fuel management, and engine brakes. Using and interpreting test and measuring equipment is highly emphasized.

**DIET 1040 – Diesel Truck and Heavy Equipment HVAC Systems** (3 credit hours, 4500 minutes)

*(Prerequisites: None)*

This course introduces systems used in medium/heavy duty trucks and heavy equipment. Classroom instruction on HVAC theory and operation along with local, state, and federal regulations are strongly emphasized. Topics include: HVAC safety, HVAC system theory and operation, A/C system component diagnosis and repair, HVAC system diagnosis and repair, HVAC operating systems and related controls, and refrigeration recovery, recycling, and handling procedures.

**DIET 2000 – Truck Steering and Suspension Systems** (4 credit hours, 5100 minutes)

*(Prerequisites: None)*

This course introduces steering and suspension systems used on medium/heavy trucks. Classroom instruction on Federal Motor Vehicle Safety Standards (FMVSS) is strongly emphasized. Topics include: hydraulic assist steering systems; suspension systems; wheel alignment diagnosis, adjustment, and repair; wheels and tires; and frame and coupling devices.

**DIET 2001 – Heavy Equipment Hydraulics** (6 credit hours, 8400 minutes)

*(Prerequisites: None)*

This course introduces the student to basic hydraulic fundamentals, components, system servicing, symbols and schematics. The student will learn component operation and service techniques for maintaining a hydraulic system. The student will also learn to identify the ISO symbols used on hydraulic schematics and to trace the hydraulic schematics. Topics include: general system operation; basic hydraulic principles; hydraulic system components; hydraulic control valves; load sensing pressure control systems; pilot operated hydraulic system operation; and hydraulic actuators.

**DIET 2010 – Truck Brake Systems** (4 credit hours, 6350 minutes)

*(Prerequisites: None)*

This course introduces air and hydraulic brake systems used on medium/heavy duty trucks. Classroom theory on brake systems along Federal Motor Vehicle Safety Standards (FMVSS) is strongly emphasized. Topics include: introduction to hydraulic systems and safety; air brakes air supply and system service; air brakes mechanical service; parking brakes; hydraulic brake system and service; hydraulic brakes mechanical service; hydraulic brakes power assist units; anti-lock brake systems (ABS) and automatic traction control (ATC); and wheel bearings.

**DIET 2011 – Off Road Drivelines** (6 credit hours, 8170 minutes)

*(Prerequisites: None)*

This course introduces power trains used on heavy equipment such as bulldozers, excavators, wheel loaders, back-hoe loaders and skidders. Classroom and lab instruction on components and systems with use and interpreting testing and diagnosing equipment are highly emphasized. Topics include: power train theory and principles, clutches, manual transmissions, drive shafts, differentials, final drives, special drives, final drive failure analysis, torque converters, hydraulically shifted transmissions, electronic transmissions, hydrostatic transmissions, and transmission failure analysis.

**DIET 2020 – Truck Drive Trains** (4 credit hours, 5000 minutes)

*(Prerequisites: None)*

This course introduces power train systems used on medium/heavy duty trucks. Topics include: introduction to power trains, clutches and flywheels, powertrain electronic systems, auto-shift mechanical transmissions, power take-offs, truck drive lines, differentials and final drives, torque converters, and automatic transmissions.

**ECCE 1101 - Introduction to Early Childhood Care and Education** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Introduces concepts relating the responsibilities and procedures involved in a variety of early childhood care situations. Topics include: historical perspectives, professionalism, guidance, developmentally appropriate practices; learning environment including all children), cultural diversity, and licensing accreditation and credentialing.

**ECCE 1103 - Child Growth and Development** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Introduces the student to the physical, social, emotional, and cognitive development of the young child (prenatal through 12 years of age). The course provides for competency development in observing, recording, and interpreting growth and development stages in the young child; advancing physical and intellectual competence; supporting social and emotional development; and examining relationships between child development and positive guidance. Topics include developmental characteristics, prenatal through age 12, developmental guidance applications, observing and recording techniques, ages and stages of development, and introduction to children with special needs.

**ECCE 1105 - Health, Safety, and Nutrition** (3 credit hours, 3000 minutes)

*(Prerequisites: Provisional admission)*

Introduces the theory, practices, and requirements for establishing and maintaining a safe, healthy learning environment. Topics include CPR and first aid, health issues, safety issues, child abuse and neglect, and nutritional needs of children. A \$10 fee is associated with this course due to the cost of CPR/first aid card and training.

**ECCE 1112 - Curriculum and Assessment** (3 credit hours, 3000 minutes)

*(Prerequisites: ECCE 1101, ECCE 1103)*

*(Co-requisites: ECCE 1101, ECCE 1103)*

Provides student with an understanding of developmentally effective approaches to teaching, learning, observing, documenting and assessment strategies that promote positive development for young children. The course will enable the student to establish a learning environment appropriate for young children and to identify the goals, benefits, and uses of assessment in the development of curriculum for young children. Topics include observing, documenting, and assessing; learning environments; development of curriculum plans and materials; curriculum approaches; and instructional media.

**ECCE 1113 - Creative Activities for Children** (3 credit hours, 3000 minutes)

*(Prerequisites: Provisional admission)*

Introduces the concepts related to creativity in art, music, movement and creative drama, and facilitating children's creative expression across the curriculum. Topics include concepts of creativity and expression; theories of young children's creative development; facilitation of children's creative expression, media, methods and materials across the curriculum; appreciation of children's art processes and products; appreciation of children's creativity in music, movement and dance; appreciation of children's creative expression in play and creative drama; and art and music appreciation. A \$10 fee is associated with this course due to the cost of supplies for activities required in courses.

**ECCE 1121 - Early Childhood Care and Education Practicum I** (3 credit hours, 5250 minutes)

*(Prerequisites: ECCE 1105)*

*(Co-requisites: ECCE 1105)*

Provides the student with the opportunity to gain a supervised experience in a practicum placement site allowing demonstration of techniques obtained from course work. Practicum training topics include: promoting child development and learning, building family and community relationships, observing, documenting, and assessing to support young children and families, teaching and learning; becoming a professional; and guidance techniques and classroom management.

**ECCE 2115 - Language and Literacy** (3 credit hours, 3000 minutes)

*(Prerequisites: ECCE 1103)*

*(Co-requisites: ECCE 1103)*

Develops knowledge, skills, and abilities in supporting young children's literacy acquisition and development, birth through age twelve. Topics include developmental continuum of reading and writing, literacy acquisition birth to five years of age, literacy acquisition in kindergarten, literacy acquisition in early grades, and literacy acquisition in children who are culturally and linguistically diverse.

**ECCE 2116 - Math and Science** (3 credit hours, 3000 minutes)

*(Prerequisites: ECCE 1103)*

*(Co-requisites: ECCE 1103)*

Presents the process of introducing science and math concepts to young children. Includes planning and implementation of developmentally appropriate activities and development of math and science materials, media and methods. Topics include inquiry approach to learning; cognitive stages and developmental processes in developing math and science concepts with children birth to five; cognitive stages and developmental processes in developing math and science concepts with children in

kindergarten and primary grades; planning math and science activities; and development of math and science materials, media and methods. A \$10 fee is associated with this course due to the cost of supplies for activities required in courses.

**ECCE 2201 - Exceptionalities** (3 credit hours 2250 minutes)

*(Prerequisites: ECCE 1103)*

Provides for the development of knowledge and skills that will enable the student to understand individuals with special needs and appropriately guide their development. Special emphasis is placed on acquainting the student with programs and community resources and programs that serve families with children with special needs. Topics include inclusion/least restrictive environment (LRE), physical and motor impairments, gifted/talented, intellectual and cognitive disabilities, emotional and behavioral disorders, communication disorders in speech and language, autism spectrum disorders, visual impairments, deaf and hard of hearing, health impairments, multiple disabilities, and community resources.

**ECCE 2202 - Social Issues and Family Involvement** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Enables the student to become familiar with the social issues that affect families of today and to develop a plan for coping with these issues as they occur in the occupational environment. Students are introduced to local programs and agencies that offer services to those in need. Topics include: parent education and support, teacher-parent communication, professional responsibilities, family/social issues, community resources, community partnerships, social diversity and anti-bias issues, transitioning the child, and school family activities.

**ECCE 2203 - Guidance and Classroom Management** (3 credit hours, 2250 minutes)

*(Prerequisites: ECCE 1103)*

*(Co-requisites: ECCE 1103)*

Examines effective guidance practices in group settings based upon the application of theoretical models of child development and of developmentally appropriate practices. Focus will be given to individual, family, and cultural diversity. Topics will include developmentally appropriate child guidance (birth through 12); effective classroom management, including preventive and interventive techniques; understanding challenging behaviors; and implementing guidance plans.

**ECCE 2240 - Early Childhood Care/Education Internship** (12 credit hours, 27000 minutes)

*(Prerequisites: ECCE 1101, ECCE 1103 and ECCE 1105)*

*(Co-requisites: ECCE 1105)*

Provides the student with the opportunity to gain a supervised experience in an actual or simulated work site allowing demonstration of techniques obtained from course work. Practicum topics include promoting child development and learning; building family and community relationships; observing, documenting, and assessing to support young children and families; teaching and learning; becoming a professional; and guidance techniques and classroom management.

**ECCE 2310 - Paraprofessional Methods and Materials** (3 credit hours, 2250 minutes)

*(Prerequisites: ECCE 1103)*

*(Co-requisites: ECCE 1103)*

Develops the instructional skills to enable the student to work as a paraprofessional in a program for kindergarten through elementary age children. Topics include assessment and curriculum, instructional techniques, and methods for instruction in a learning environment.

**ECCE 2312 - Paraprofessional Roles and Practices** (3 credit hours, 2250 minutes)

*(Prerequisites: ECCE 1103)*

*(Co-requisites: ECCE 1103)*

Develops skills to enable the student to work as a paraprofessional in a program for kindergarten through elementary aged children. Topics include professional qualifications, professional and ethical conduct, professionalism and employment, and paraprofessional roles and responsibilities.

**ECCE 2320 - Program Administration and Facility Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides training in planning, implementation, and maintenance of an effective early childhood program and facility. Topics include: organization, mission, philosophy, goals of a program; types of programs; laws, rules, regulations, accreditation and program evaluation; needs assessment; administrative roles and board of directors; anti-bias program development; child development and developmentally appropriate practices; marketing, public and community relations, grouping, enrollment and retention; working with families; professionalism and work ethics; space management; money management; and program equipment, and supplies management.

**ECCE 2322 - Personnel Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides training in personnel management. Topics include: staff records; communication; personnel policies; managing payroll,

recruitment, interviewing, selection, hiring, motivating, and firing; staff retention; staff scheduling, staff development; staff supervision; conflict resolution; and staff evaluation; ethical responsibilities to employees; and time and stress management.

**ECCE 2340 - Family Childcare Program Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission, ECCE 1103)*

Provides the guidelines, responsibilities, and appropriate practices needed for successful management of a Family Child Care Home. Provides guidelines and responsibilities for professional business practices associated with the successful establishment and administration of a Family Child Care Home. Topics include business plans, budgeting, taxes, marketing, record keeping, and professional qualifications.

**ECCE 2342 - Family Childcare Business Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides guidelines and responsibilities for professional business practices associated with the successful establishment and administration of a Family Child Care Home. Topics include: business plans; budgeting; taxes; marketing, record keeping and professional qualifications.

**ECON 1101 - Principles of Economics** (3 credit hours, 2250 minutes)

*(Prerequisites: Regular Admission)*

Provides a description and analysis of economic operations in contemporary society. Emphasis is placed on developing an understanding of economic concepts and policies as they apply to everyday life. Topics include basic economic principles; economic forces and indicators; capital and labor; price, competition, and monopoly; money and banking; government expenditures, federal and local; fluctuations in production, employment, and income; and United States economy in perspective.

**ELCR 1005 - Soldering Technology** (1 credit hour, 1500 minutes)

*(Prerequisites: Provisional admission)*

Develops the ability to solder and de-solder connectors, components, and printed circuit boards using industry standards. Topics include: safety practices, soldering, de-soldering, anti-static grounding, and surface mount techniques.

**ELCR 1010 - Direct Current Circuits** (5 credit hours, 4500 minutes)

*(Prerequisites: Degree - MATH 1111, Diploma - MATH 1013)*

This course provides instruction in the theory and practical application of simple and complex direct current circuitry. Topics include laboratory safety practices and procedures, electrical laws and principles, DC test equipment, basic series, parallel and combination circuits, complex series and parallel circuits, and DC theorems.

**ELCR 1020 - Alternating Current Circuits** (7 credit hours, 6750 minutes)

*(Prerequisites: ELCR 1010)*

This course introduces the theory and application of varying sine wave voltages and current, and continues the development of AC concepts with emphasis on constructing, verifying, and troubleshooting reactive circuits using RLC theory and practical application. Topics include AC wave generation, frequency and phase relationship, impedance, admittance and conductance, power factors, reactive components, simple RLC circuits, AC circuit resonance, passive filters, and non-sinusoidal wave forms.

**ELCR 1030 - Solid State Devices** (5 credit hours, 4500 minutes)

*(Prerequisites: ELCR 1020)*

This course provides instruction in the theory and application of solid state devices in the electronics industry. Emphasis is placed on the physical characteristics and uses of solid state devices. Topics include PN diodes, power supplies, voltage regulation, bipolar junction theory and application, field effect transistors, and special applications.

**ELCR 1040 - Digital and Microprocessor Fundamentals** (5 credit hours, 5250 minutes)

*(Prerequisites: ELCR 1020)*

*(Co-requisites: ELCR 1030)*

This course is designed to provide sufficient coverage of digital electronics and microprocessor fundamentals. Digital fundamentals will introduce basic topics such as binary arithmetic, logic gates and truth tables, Boolean algebra and minimization techniques, logic families, and digital test equipment. Upon completion of the foundational digital requirements, a more advanced study of digital devices and circuits will include such topics as flip-flops, counters, multiplexers and de-multiplexers, encoding and decoding, displays, and analog to digital and digital to analog conversions. Students will also explore the basic architecture and hardware concepts of the microprocessor.

**ELCR 1060 - Linear Integrated Circuits** (3 credit hours, 3000 minutes)

*(Prerequisites: ELCR 1030)*

Provides in-depth instruction on the characteristics and applications of linear integrated circuits. Topics include: operational amplifiers, timers, and three-terminal voltage regulators.

**ELCR 2110 - Process Control** (3 credit hours, 3750 minutes)

*(Prerequisites: ELCR 1030)*

Introduces industrial process control applications with an emphasis on sensors and signal conditioning. Topics include: symbols and drawing standards, control techniques, sensors and signal conditioning, and ISA and other relevant standards.

**ELCR 2120 - Motor Controls** (3 credit hours, 3750 minutes)

*(Prerequisites: ELCR 1030)*

Introduces the application of motor controls in the industrial environment. Topics include: AC/DC motors, AC/DC drives, MCC and contractors, NEC and NEMA standards, ladder diagrams, and power sources.

**ELCR 2130 - Programmable Controllers** (3 credit hours, 3750 minutes)

*(Prerequisites: ELCR 1030)*

Provides the basic skills and techniques used in industrial application of programmable controls. Topics include: controller hardware, programming, PC applications, and troubleshooting.

**ELCR 2140 - Mechanical Devices** (2 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Develops knowledge and skills necessary to transmit mechanical power using common industrial linkage types. Emphasis is placed on use of mechanical devices in combination with electronic controls. Topics include: linkages, motion analysis, gear drives, and preventative maintenance.

**ELCR 2150 - Fluid Power** (2 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

Provides an overview of fluid power operation as applied to industrial electronics. Emphasis is placed on the interfacing of electronic and fluidic systems. Topics include: safety, fluid dynamics, hydraulics, pneumatics, air logic, and electrical interfacing.

**ELCR 2160 - Advanced Microprocessors and Robotics** (3 credit hours, 3000 minutes)

*(Prerequisites: ELCR 2130, ELCR 2140, ELCR 2150)*

This course continues an earlier study of microprocessor fundamentals and introduces robotic theory and application. Topics include the microprocessor instruction set, programming and debugging applications and troubleshooting, microprocessor applications for embedded systems, basic DSP concepts, robotic terminology and languages, and robotic programming.

**ELCR 2170 - Computer Hardware** (5 credit hours, 5250 minutes)

*(Prerequisites: Program admission)*

Provides an introduction to the fundamentals of installing, configuring, upgrading, troubleshooting, and repairing microcomputer systems. Topics include installation, configuration, upgrading, diagnosing, troubleshooting, preventive maintenance, basic hardware, printers, and basic networking.

**ELCR 2180 - Operating Systems Technologies** (5 credit hours, 5250 minutes)

*(Prerequisites: ELCR 2170)*

Provides an introduction to the fundamentals of Command Line Prompt and current/future Windows operating systems. Topics include operating system fundamentals, installation, configuration and upgrading, diagnosing and troubleshooting, and networks.

**ELCR 2190 - Networking I** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

Provides an introduction to networking technologies. Cover a wide range of material about networking, from careers in networking to local area networks, wide area networks, protocols, topologies, transmission media, and security. Focuses on operating network management systems and implementing the installation of networks. The course reviews cabling, connection schemes, the fundamentals of LAN and Wan technologies, TCP/IP configuration and troubleshooting, remote connectivity, and network maintenance and troubleshooting. Topics include: media and topologies, protocols and standards, network implementation, and network support.

**ELCR 2860 - CompTIA A+ Certification** (4 credit hours, 4000 minutes)

*(Prerequisites: ELCR 2170, ELCR 2180)*

Prepares the student for taking the CompTIA A+ examinations by reviewing the A+ Core and A+ Operating Systems objectives. Topics include A+ Core Hardware and A+ Operating System Technologies.

**ELTR 1020 - Electrical Systems Basics I** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

Introduces the theory and application of varying sine wave voltages and current. Topics include: magnetism, AC wave generation, AC test equipment, inductance, capacitance, and basic transformers. A \$10 fee is associated with this course due to the increased cost of copper and electrical components.

**ELTR 1060 - Electrical Prints, Schematics, and Symbols** (2 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Introduces electrical symbols and their use in construction blueprints, electrical schematics, and diagrams. Topics include: electrical symbols, component identification, print reading and scales and measurement.

**ELTR 1080 - Commercial Wiring I** (5 credit hours, 4500 minutes)

*(Prerequisites: None)*

*(Co-requisites: None)*

This course introduces commercial wiring practices and procedures. Topics include: industrial safety procedures, the National Electrical Code, commercial load calculations, three-phase power systems, and fundamentals of AC motor control.

**ELTR 1090 - Commercial Wiring II** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

*(Co-requisites: None)*

This course is a continuation of the study in commercial wiring practices and procedures. Topics include: transformer connections, an introduction to low voltage systems, conduit design and installation practices, and system design concepts. A \$15 fee is associated with this course due to the increased cost of electrical conduit and connectors.

**ELTR 1180 - Electrical Controls** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

*(Co-requisites: None)*

Introduces line and low voltage switching circuits, manual and automatic controls and devices, and circuits. Emphasis will be placed on switching circuits, manual and automatic controls and devices, line and low voltage switching circuits, and operation, application and ladder diagrams. Topics include: ladder and wire diagrams, switching circuits, manual controls and devices, automatic controls and devices, and application and operation of controllers and controls. A \$15 fee is associated with this course due to the increased cost of copper and electrical components.

**ELTR 1205 - Residential Wiring I** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

*(Co-requisites: None)*

Introduces residential wiring practices and procedures. Topics include: residential circuits, print reading, National Electrical Code, wiring materials determining the required number and location of lighting/receptacles and small appliance circuits, wiring methods (size and type conductors, box fill calculations and voltage drop), switch control of luminaries, receptacle installation including bonding, GFCI and AFCI circuits, special purposes outlets - ranges, cook tops, ovens, dryers, water heaters, sump pumps, and sizing OCPDs (circuit breakers and fuses). A \$15 fee is associated with this course due to the increased cost of copper and electrical components.

**ELTR 1210 - Residential Wiring II** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

*(Co-requisites: None)*

Provides additional instruction on wiring practices in accordance with the National Electrical Code. Topics include: residential single family service calculations, residential two family service calculations, load balancing, sub panels and feeders, residential single family service installation, residential two family service installation, concepts of TV and CATV installation, swimming pool installation, and remote control of lighting and intercom installation. A \$15 fee is associated with this course due to the increased cost of copper and electrical components.

**ELTR 1220 - Industrial PLC's** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

Introduces operational theory, systems terminology, PLC installations, and programming procedures for programmable logic controls. Emphasis is placed on PLC programming, connections, installations, and start-up procedures. Topics include: PLC hardware and software, PLC functions and terminology, introductory numbering systems, PLC installation and setup, PLC programming basics, relay logic instructions, timers and counters, connecting field devices to I/O cards, and PLC safety procedures.

**ELTR 1270 - National Electric Code Industrial Applications** (4 credit hours, 4500 minutes)

*(Prerequisites: None)*

Provides instruction in industrial applications of the National Electrical Code. Topics include: rigid/IMC conduit installation, EMT conduit installation, busways installation, cable tray/wireway installation, and equipment installation (600 volts or less).

**ELTR 1510 - Electrical Worker** (3 credit hours, 3750 minutes)

*(Prerequisites: Provisional admission)*

Introduces work hazards present during the construction of manufacturing homes or construction sites. Emphasis is placed on the proper use of electrical tools and equipment and maintenance of these tools on the work site. Topics include hazards of electricity, safe use electrical tools and equipment, and the repair of electrical cords, plugs, lights, and switches.

**EMPL 1000 - Interpersonal Relations and Professional Development** (2 credit hours, 1500 minutes)

*(Prerequisites: Provisional admission)*

Emphasizes human relations and professional development in today's rapidly changing world that prepares students for living and working in a complex society. Topics include human relations skills, job acquisition skills and communication, job retention skills, job advancement skills, and professional image skills.

**EMSP 1010 - Emergency Medical Responder** (4 credit hours - 4500 minutes)

*(Prerequisites: Program admission)*

The Emergency Medical Responder (EMR) course prepares the student to provide initial stabilizing care to the sick or injured prior to the arrival of Emergency Medical Services Professionals (EMS), and to assist EMS personnel in transporting patients for definitive care at an appropriate hospital/facility. Major areas of instruction include Introductory Medical Terminology and Anatomy & Physiology; Responder Safety; Incident Command; Bloodborne Pathogen Training; Basic Physical Assessment; and Treatment of Trauma and Medical Emergencies; Cardiopulmonary Resuscitation and the use of Automatic External Defibrillators. The course is a blend of lecture, hands on lab/learning, and practical scenario based learning/testing. The course will include Healthcare Provider CPR/AED Certification from a Nationally Recognized Body (American Heart Association, Red Cross, etc.). If this course is also approved by the Georgia State Office of Emergency Medical Services and Trauma (SOEMST), successful completion will allow the student to be eligible to take the National Registry of Emergency Medical Technicians (NREMT) Emergency Medical Responder (EMR) certification. Topics include: Preparatory; Anatomy and Physiology; Medical Terminology; Pathophysiology; Life Span Development; Public Health; Pharmacology; Airway; Management; Respiration and Artificial Ventilation; Assessment; Medicine; Shock and Resuscitation; Trauma; Special Patient Populations; EMS Operations; and Integration of Patient Assessment and Management.

**EMSP 1110 - Introduction to the EMT Profession** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course serves as the introductory course to the Emergency Medical Services (EMS) profession. It orients the student to the prehospital care environment, issues related to the provision of patient care in both in-hospital and out-of-hospital circumstances. It further provides foundational information upon which subsequent curriculum content is based so that successful completion of this content increases the potential for success in subsequent courses and should allow students to apply the fundamental knowledge, skills, and attitudes gained in order to effectively communicate and function safely, ethically and professionally within the emergency medical services environment. Topics include: Anatomy and Physiology, Medical Terminology, Pathophysiology, CPR for HCP, EMS Systems, Research, Workforce Safety and Wellness, Documentation, EMS System Communication, Therapeutic Communication, Medical/Legal and Ethics, Public Health, Principles of Safely Operating a Ground Ambulance, Incident Management, Multiple Casualty Incidents, Air Medical, Vehicle Extrication, HazMat, MCI due to Terrorism/Disaster, and Life Span Development.

**EMSP 1120 - EMT Assessment/Airway Management and Pharmacology** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course prepares students for initial scene management and assessment of patients as well as management of the airway. Introduction to pharmacology is also covered. Includes application of scene information and patient assessment findings (scene size up, primary and secondary assessment, patient history, and reassessment) to guide emergency management. Topics include: Scene Size-Up; Primary Assessment; History Taking; Secondary Assessment; Monitoring Devices; Reassessment; Airway Management; Respiration; Artificial Ventilation; Principles of Pharmacology; Medication Administration; and Emergency Medications.

**EMSP 1130 - Medical Emergencies for the EMT** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course integrates pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan of cases involving non-traumatic medical emergencies. Topics include: Medical Overview; Neurology; Abdominal and Gastrointestinal Disorders; Immunology; Infectious Disease; Endocrine Disorders; Psychiatric; Cardiovascular; Toxicology; Respiratory; Hematology; Genitourinary/Renal; Non-Traumatic Musculoskeletal Disorders; Diseases of the Eyes, Ears, Nose, and Throat; and Medical Assessments.

**EMSP 1140 - Special Patient Populations** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course provides a fundamental knowledge of growth, development, and aging and assessment findings to provide basic

emergency care and transportation for a patient with special needs. Topics include: Obstetrics, Gynecology, Neonatal Care, Pediatrics, Geriatrics, Patients with Special Challenges, and Special Patient Populations - Assessments.

**EMSP 1150 - Shock and Trauma for the EMT** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course is designed to prepare the EMT student to apply pre-hospital emergency care to patients who have sustained injuries resulting from various mechanisms of injury including: Abdominal and Genitourinary trauma; Orthopedic trauma; Soft Tissue trauma; Head, Facial, Neck, and Spine Trauma and Nervous System trauma. Special considerations in trauma related injuries will be presented including the physiology of shock as well as multi-system trauma and environmental emergencies. Topics include: Shock and Resuscitation; Trauma Overview; Bleeding; Chest Trauma; Abdominal and Genitourinary Trauma; Orthopedic Trauma; Soft Tissue Trauma; Head, Facial, Neck, and Spine Trauma; Nervous System Trauma; Special Considerations in Trauma; Environmental Emergencies; and Multi-System Trauma.

**EMSP 1160 - Clinical and Practical Applications for the EMT** (1 credit hour, 2250 minutes)

*(Prerequisites: Program admission)*

This course provides supervised clinical experience in various clinical settings as well as opportunities to demonstrate critical thinking skills and assessment based management techniques through competency based evaluations relevant to the practice of an EMT. Topics include: Clinicals and Assessment Based Management.

**EMSP 1510 - Advanced Concepts for the AEMT** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course serves as the introductory course to the advanced level practice of the Advanced Emergency Medical Technician (AEMT). It expands on the information attained at the EMT level. Topics include: EMS Systems; Documentation; EMS System Communication; Therapeutic Communication; Principles of Pharmacology; Medication Administration; Emergency Medications; Airway Management; Respiration; Artificial Ventilation; Primary Assessment; and Secondary Assessment.

**EMSP 1520 - Advanced Patient Care for the AEMT** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course provides opportunities to apply fundamental knowledge of basic and selected advanced emergency care and transportation based on assessment findings for the following: an acutely ill patient; a patient in shock, respiratory failure or arrest, cardiac failure or arrest, and post resuscitation management; and an acutely injured patient. In addition, it provides a fundamental knowledge of growth, development, and aging and assessment findings to provide basic and selected advanced emergency care and transportation for a patient with special needs. Topics include: Geriatrics; Patients with Special Challenges; Medical Overview; Neurology; Immunology; Infectious Disease; Endocrine Disorders; Cardiovascular; Toxicology; Respiratory; Hematology; Genitourinary/Renal; Shock and Resuscitation; Chest Trauma; Abdominal and Genitourinary Trauma; Orthopedic Trauma; Head, Facial, Neck, and Spine Trauma; Nervous System Trauma; and Integration of Medical/Trauma Assessments.

**EMSP 1530 - Clinical Applications for the AEMT** (1 credit hour, 1500 minutes)

*(Prerequisites: Program admission)*

This course provides supervised clinical experience in various clinical settings. Topics include: Clinicals.

**EMSP 1540 - Clinical and Practical Applications for the AEMT** (3 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

This course provides supervised clinical experience in various clinical settings as well as opportunities to demonstrate critical thinking skills and assessment based management techniques through competency based evaluations relevant to the practice of an AEMT. Topics include: Clinicals and Assessment Based Management.

**EMSP 2110 - Foundations of Paramedicine** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course introduces the student to the role of the paramedic in today's healthcare system, with a focus on the prehospital setting. This course will also prepare the student to integrate scene and patient assessment findings with knowledge of epidemiology and Pathophysiology to form a field impression. This includes developing a list of differential diagnoses through clinical reasoning to modify the assessment and formulate a treatment plan. Topics include: EMS Systems; Research; Workforce Safety and Wellness; Documentation; EMS System Communication; Therapeutic Communication; Medical/Legal and Ethics; Life Span Development; Public Health; Incident Management; Air Medical; Scene Size-Up; Primary Assessment; History Taking; Secondary Assessment; Monitoring Devices; and Reassessment.

**EMSP 2120 - Applications of Pathophysiology for Paramedics** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

This course expands the concepts of pathophysiology as it correlates to disease processes. This course will enable the student to apply the general concepts of pathophysiology to the assessment and management of patients in the emergency setting. Topics include: Pathophysiology.

**EMSP 2130 - Advanced Resuscitative Skills for Paramedics** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course will equip the paramedicine student with an expanded knowledge of pharmacology, as well as skills used to manage the respiratory system. Students will learn to use these advanced resuscitative skills to mitigate patient care emergencies, and to improve the overall health of the patient. Topics include: Principles of Pharmacology; Medication Administration; Emergency Medications; Airway Management; Respiration; and Artificial Ventilation.

**EMSP 2140 - Advanced Cardiovascular Concepts** (4 credit hours, 3750 minutes)

*(Prerequisites: Program admission)*

This course equips the paramedicine student with an expanded knowledge of the anatomy, physiology, and electrophysiology of the cardiovascular system. Students will also examine the epidemiology of cardiovascular disease, and will begin to integrate advanced assessment skills (including ECG interpretation) into the assessment of cardiac patients. Topics include: Anatomy, Physiology, and Electrophysiology of the Cardiovascular System; Epidemiology of Cardiovascular Disease; Assessment of the Cardiac Patient; Electrocardiographic (ECG) interpretation.

**EMSP 2310 - Therapeutic Modalities of Cardiovascular Care** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

This course will enable the student to integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient experiencing a cardiovascular emergency. Topics include: Cardiovascular Emergencies and Advanced Cardiovascular Life Support (ACLS).

**EMSP 2320 - Therapeutic Modalities of Medical Care** (5 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

This course will enable the student to integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient experiencing a medical emergency. Topics include: Medical Overview; Neurology; Abdominal and Gastrointestinal Disorders; Immunology; Infectious Disease; Endocrine Disorders; Psychiatric; Toxicology; Respiratory; Hematology; Genitourinary/Renal; Non-Traumatic Musculoskeletal Disorders; Diseases of the Eyes, Ears, Nose, and Throat; and Assessment of Medical Emergencies.

**EMSP 2330 - Therapeutic Modalities of Trauma Care** (4 credit hours, 3750 minutes)

*(Prerequisites: Program admission)*

This course will enable the student to integrate a comprehensive knowledge of causes and pathophysiology into the management of traumatic: cardiac arrest and peri-arrest states; shock, respiratory failure or arrest with an emphasis on early intervention to prevent arrest. This course will also include integrating assessment findings with principles of epidemiology and pathophysiology to formulate a field impression to implement a comprehensive treatment/disposition plan for an acutely injured patient. Topics include: Shock and Trauma Resuscitation; Trauma Overview; Bleeding; Chest Trauma; Abdominal and Genitourinary Trauma; Orthopedic Trauma; Soft Tissue Trauma; Head, Facial, Neck, and Spine Trauma; Nervous System Trauma; Special Considerations in Trauma; Environmental Emergencies; Multi- System Trauma; and Assessment of Trauma Emergencies.

**EMSP 2340 - Therapeutic Modalities for Special Patient Populations** (4 credit hours, 3750 minutes)

*(Prerequisites: Program admission)*

This course will enable the student to integrate assessment findings with principles of pathophysiology and knowledge of psychosocial needs to formulate a field impression and implement a comprehensive treatment/disposition plan for various special patient populations. Topics include: Obstetrics; Gynecology; Neonatal Care; Pediatrics; Geriatrics; and Patients with Special Challenges.

**EMSP 2510 - Clinical Applications for the Paramedic - I** (2 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2510 Clinical Applications for the Paramedic - I is one in a series of courses that also includes: EMSP 2520, EMSP 2530, EMSP 2540, EMSP 2550, EMSP 2560 and EMSP 2570. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2520 - Clinical Applications for the Paramedic - II** (2 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2520 Clinical Applications for the Paramedic - II is one in a series of courses that also includes: EMSP 2510, EMSP 2530, EMSP 2540, EMSP 2550, EMSP 2560 and EMSP 2570. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2530 - Clinical Applications for the Paramedic - III** (2 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2530 Clinical Applications for the Paramedic - III is one in a series of courses that also includes: EMSP 2510, EMSP 2520, EMSP 2540, EMSP 2550, EMSP 2560 and EMSP 2570. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2540 - Clinical Applications for the Paramedic - IV** (1 credit hour, 2250 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2540 Clinical Applications for the Paramedic - IV is one in a series of courses that also includes: EMSP 2510, EMSP 2520, EMSP 2530, EMSP 2550, EMSP 2560 and EMSP 2570. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2550 - Clinical Applications for the Paramedic - V** (1 credit hour, 2250 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2550 Clinical Applications for the Paramedic - V is one in a series of courses that also includes: EMSP 2510, EMSP 2520, EMSP 2530, EMSP 2540, EMSP 2560 and EMSP 2570. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2560 - Clinical Applications for the Paramedic - VI** (1 credit hour, 2250 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2560 Clinical Applications for the Paramedic - VI is one in a series of courses that also includes: EMSP 2510, EMSP 2520, EMSP 2530, EMSP 2540, EMSP 2550 and EMSP 2570. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2570 - Clinical Applications for the Paramedic - VII** (1 credit hour, 2250 minutes)

*(Prerequisites: Program admission)*

This course provides the paramedicine student with supervised clinical experience in various clinical settings. EMSP 2570 Clinical Applications for the Paramedic - VII is one in a series of courses that also includes: EMSP 2510, EMSP 2520, EMSP 2530, EMSP 2540, EMSP 2550 and EMSP 2560. The successful completion of all of these will result in meeting all clinical standards required by the State Office of Emergency Medical Services and Trauma (SOEMST). Topics include: Clinicals.

**EMSP 2710 - Field Internship for the Paramedic** (2 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

Provides supervised field internship experience in the prehospital advanced life support setting. Topics include: Field Internship.

**EMSP 2720 - Practical Applications for the Paramedic** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

Allows opportunities to demonstrate critical thinking skills and assessment based management techniques through competency based evaluations relevant to the practice of a Paramedic. Topics include: Assessment Based Management for Paramedics.

**ENGL 0090 – Learning Support English** (3 institutional credit hours, 2250 minutes)

*(Prerequisites: None)*

This course uses a modular approach to emphasize the rules of grammar, punctuation, capitalization, subject/verb agreement, correct verb forms, spelling, writing, and revising skills for basic paragraph development. Students progress at their own pace to master each module.

**ENGL 1010 - Fundamentals of English I** (3 credit hours, 2250 minutes)

*(Prerequisites: ENGL 0097 OR Appropriate Placement Test Score AND READ 0097 OR Appropriate Placement Test Score)*

Emphasizes the development and improvement of written and oral communication abilities. Topics include analysis of writing, applied grammar and writing skills, editing and proofreading skills, research skills, and oral communication skills.

**ENGL 1012 - Fundamentals of English II** (3 credit hours, 2250 minutes)

*(Prerequisites: ENGL 1010)*

Provides knowledge and application of written and oral communications found in the workplace. Topics include writing fundamentals and speaking fundamentals.

**ENGL 1101 - Composition and Rhetoric** (3 credit hours, 2250 minutes)

*(Prerequisites: Appropriate English Placement Test Score AND Appropriate Reading Placement Test Score)*

Explores the analysis of literature and articles about issues in the humanities and in society. Students practice various modes of writing, ranging from exposition to argumentation and persuasion. The course includes a review of standard grammatical and stylistic usage in proofreading and editing. An introduction to library resources lays the foundation for research. Topics include writing analysis and practice, revision, and research. Students write a research paper using library resources and using a formatting and documentation style appropriate to the purpose and audience.

**ENGL 1102 - Literature and Composition** (3 credit hours, 2250 minutes)

*(Prerequisites: ENGL 1101)*

Emphasizes the student's ability to read literature analytically and meaningfully and to communicate clearly. Students analyze the form and content of literature in historical and philosophical contexts. Topics include reading and analysis of fiction, poetry, and drama; research; and writing about literature.

**ENGL 2130 - American Literature** (3 credit hours, 2250 minutes)

*(Prerequisites: ENGL 1101)*

Emphasizes American literature as a reflection of culture and ideas. A survey of important works in American literature. Includes a variety of literary genres: short stories, poetry, drama, nonfiction, and novels. Topics include literature and culture, essential themes and ideas, literature and history, and research skills.

**FORS 1030 - Dendrology** (3 credit hours, 5250 minutes)

*(Prerequisites: Provisional admission)*

Provides the basis for a fundamental understanding of the taxonomy and identification of trees and shrubs. Topics include tree and shrub classification, tree and shrub identification, tree and shrub structure identification, and leaf structure identification.

**FWMT 1000 - Introduction to Wildlife Management** (3 credit hours, 3000 minutes)

*(Prerequisites: Provisional admission)*

This course introduces the principles of wildlife management, including basic terminology, safety and orientation, and employment. Topics include compass and mapping techniques, first aid and CPR training, hunter safety and boating safety, organizations and agencies, and careers in natural resource management. A \$10 fee is associated with this course due to the cost of CPR/first aid card and training.

**FWMT 1010 - Equipment Use** (3 credit hours, 3000 minutes)

*(Prerequisites: Provisional admission)*

This course provides an introduction to equipment operation, safety, and maintenance as well as firearm use and safety. Topics include tractor and ATV operation and maintenance, power boat operation, the use of hand tools and power tools including chain saws. Upon completion, students should be able to safely operate equipment and perform routine maintenance and repair required in a career in wildlife management.

**FWMT 1020 - Wildlife Policy and Law** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

This course includes laws, policies, and jurisdiction of natural resources. Topics include policy and law; game, non-game and endangered species; public relations and cultural aspects of natural resource management; and law enforcement procedures. Upon completion students should be able to describe and assess the influences of policies, laws, and society on natural resource management.

**FWMT 1030 - Terrestrial Ecology** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

This course introduces fundamental ecological principles with emphasis on climate and biomes, life history patterns, populations, species interactions, biodiversity, basic statistics, and the longleaf pine ecosystem. Upon completion, students should understand basic ecological principles and also the ecology and management of longleaf pine forests.

**FWMT 1040 - Aquatic Ecology** (3 credit hours, 3750 minutes)

*(Prerequisites: None)*

This course introduces ecological concepts related to aquatic resources. Topics include the river basins of Georgia, water quality testing and monitoring, stream ecology, macro invertebrates, and conservation. Upon completion, students should have an understanding of aquatic ecology and demonstrate stream sampling techniques.

**FWMT 1050 - Ichthyology** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

This course introduces the freshwater fish species of North America with emphasis placed on the identification, biology, and ecology. Upon completion, students should be able to recognize the common freshwater fish of Georgia and demonstrate knowledge of their biology and ecology.

**FWMT 1060 - Ornithology** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

This course covers the biology, ecology, and management of birds of North America with emphasis placed on the study of waterfowl and upland game birds. Upon completion, students should understand the biology and ecology of game birds and explain management practices for sustainable harvest.

**FWMT 1070 - Mammology** (3 credit hours, 3750 minutes)

*(Prerequisites: Provisional admission)*

This course covers the taxonomy, biology, ecology, and management of game and non-game mammals. Topics include identification, biology and ecology, behavior, collection of age, sex, and reproduction data, and management. Upon completion students should be able to identify mammal species and demonstrate knowledge of their biology, ecology, and management.

**FWMT 2020 - Habitat Manipulation** (4 credit hours, 5250 minutes)

*(Prerequisites: Provisional admission)*

This is an applied course covering habitat management practices beneficial to wildlife. Emphasis is placed on methods for increasing quality food production and cover, and developing and executing management plans. Upon completion students should develop, interpret, and execute management plans to establish, maintain, and improve quality habitat.

**FWMT 2010 - Wildlife Management Techniques** (4 credit hours, 4500 minutes)

*(Prerequisites: Provisional admission)*

This course takes an applied approach in covering the methods commonly used in wildlife population management. Topics include identification, measurement of population parameters, wildlife damage management, collection of age, sex, and reproductive data, radio telemetry, and investigations into causes of mortality. Upon completion students should understand and administer common population management techniques. A \$12 fee is associated with this course due to liability insurance fee.

**FWMT 2030 - Fish Pond Management** (3 credit hours, 3800 minutes)

*(Prerequisites: Provisional admission)*

This course covers the management of fish ponds. Emphasis is placed on the techniques used to maintain a healthy and productive pond for sport and recreation fishing. Upon completion students should be familiar with pond management techniques.

**HIST 1111 – World History I** (3 credit hours, 2250 minutes)

*(Pre-requisites: Appropriate Degree Level Writing (English) and reading Placement Test Scores)*

*(Co-requisites: None)*

Emphasizes the study of intellectual, cultural, scientific, political, and social contributions of the civilizations of the world and the evolution of these civilizations during the period from the prehistoric era to early modern times. Topics include the Prehistoric Era, the Ancient Near East, Ancient India, Ancient China, Ancient Rome, Ancient Africa, Islam, the Americas, Japan, Ancient Greece, the Middle Ages, and the Renaissance.

**HIST 1112 – World History II** (3 credit hours, 2250 minutes)

*(Pre-requisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)*

*(Co-requisite: None)*

Emphasizes the study of the intellectual, cultural, scientific, political, and social contributions of the world and the evolution of these civilizations during the period from early modern times to the present. Topics include transitions to the Modern World, scientific revolution and the Enlightenment, political modernization, economic modernization, imperialism, and the Twentieth Century.

**HIST 2111 – U. S. History I** (3 credit hours, 2250 minutes)

*(Pre-requisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)*

*(Co-requisites: None)*

Emphasizes the study of U. S. History to 1877 to include the post-Civil War period. The course focuses on the period from the Age of Discovery through the civil War to include geographical, intellectual, political, economic and cultural development of the American people. It includes the history of Georgia and its constitutional development. Topics include colonization and expansion; the Revolutionary Era; the New Nation; nationalism, sectionalism, and reform; the Era of Expansion; and crisis, Civil War, and reconstruction.

**HIST 2112 – U. S. History II** (3 credit hours, 2250 minutes)

*(Prerequisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)*

*(Co-requisites: None)*

Emphasizes the study of the social, cultural, and political history of the United States from 1865 to the beginning of the twenty-first century and will equip the student to better understand the problems and challenges of the contemporary world in relation to events and trends in modern American history. The course also provides an overview of the history of Georgia and the development of its constitution. Topics include the Reconstruction Period; the great West, the new South, and the rise of the debtor; the Gilded Age; the progressive movement; the emergence of the U. S. in world affairs; the Roaring Twenties; the Great Depression; World War I; World War II; the Cold War and the 1950's; the Civil Rights Movement; the 1960's and 1970's; and America since 1980.

**IDFC 1007 - Industrial Safety Procedures** (2 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides an in-depth study of the health and safety practices required for maintenance of industrial, commercial, and home electrically operated equipment. Topics include: introduction to OSHA regulations; safety tools, equipment, and procedures; and first aid and cardiopulmonary resuscitation.

**IDFC 1011 - Direct Current I** (3 credit hours, 3000 minutes)

*(Prerequisites: None)*

*(Co-requisites: None)*

Introduces direct current (DC) concepts and applications. Topics include: electrical principles and laws; batteries; DC test equipment; series, parallel, and simple combination circuits; and laboratory procedures and safety practices. A \$10 fee is associated with this course due to the increased cost of copper and electrical components.

**MAST 1010 - Legal and Ethical Concerns in the Medical Office** (2 credit hours, 1500 minutes)

*(Prerequisites: ENGL 1010, MATH 1012, PSYC 1010, ALHS 1011, ALHS 1040, ALHS 1090, COMP 1000)*

*(Co-requisites: MAST 1060, BUSN 1440)*

Introduces the basic concept of medical assisting and its relationship to the other health fields. Emphasizes medical ethics, legal aspects of medicine, and the medical assistant's role as an agent of the physician. Provides the student with knowledge of medical jurisprudence and the essentials of professional behavior. Topics include: introduction to medical assisting; introduction to medical law; physician/patient/assistant relationship; medical office in litigation; as well as ethics, bioethical issues and HIPAA.

**MAST 1030 - Pharmacology in the Medical Office** (4 credit hours, 3000 minutes)

*(Prerequisites: ALHS 101, ALHS 109, MATH 1012, ALHS 104)*

*(Co-requisites: MAST 1090, MAST 1110)*

Introduces medication therapy with emphasis on safety, classification of medications, their actions, side effects, medication and food interactions, and adverse reactions. Also introduces the basic concept of arithmetic used in the administration of medications. Topics include: introduction to pharmacology; dosage calculation; sources and forms of medications; medication classification; and medication effects on the body systems.

**MAST 1060 - Medical Office Procedures** (4 credit hours, 3750 minutes)

*(Prerequisites: ENGL 1010, MATH 1012, PSYC 1010, ALHS 1011, ALHS 1040, ALHS 1090, COMP 1000)*

*(Co-requisites: MAST 1010, BUSN 1440)*

Emphasizes essential skills required for the medical practice. Topics include: office protocol, time management, appointment scheduling, medical office equipment, medical references, mail services, medical records, and professional communication.

**MAST 1080 - Medical Assisting Skills I** (4 credit hours, 6750 minutes)

*(Prerequisites: ENGL 1010, MATH 1012, PSYC 1010, ALHS 1011, ALHS 1040, ALHS 1090, COMP 1000, BUSN 1440)*

*(Co-requisites: MAST 1100, 1120)*

Introduces the skills necessary for assisting the physician with a complete history and physical in all types of medical practices. The course includes skills necessary for sterilizing instruments and equipment and setting up sterile trays. The student also explores the theory and practice of electrocardiography. Topics include: infection control and related OSHA guidelines; prepare patients/assist physician with age and gender-specific examinations and diagnostic procedures; vital signs/mensuration; medical office surgical procedures and electrocardiography. A \$20 fee is associated with this course due to the increased cost of items used for lab: for example, testing kits.

**MAST 1090 - Medical Assisting Skills II** (4 credit hours, 6750 minutes)

*(Prerequisites: MAST 1080)*

*(Co-requisites: MAST 1030, MAST 1110)*

Further student knowledge of the more complex activities in a physician's office. Topics include: collection/examination of specimens and CLIA regulations/risk management; urinalysis; venipuncture; hematology and chemistry evaluations; advanced reagent testing (Strep Test, HcG, etc.); administration of medications; medical office emergency procedures and emergency

preparedness; respiratory evaluations; principles of IV administration; rehabilitative therapy procedures; principles of radiology safety and maintenance of medication and immunization records. A \$25 fee is associated with this course due to the increased cost of items used for lab: for example, testing kits.

**MAST 1100 - Medical Insurance Management** (2 credit hours, 3000 minutes)

*(Prerequisites: ENGL 1010, MATH 1012, PSYC 1010, ALHS 1011, ALHS 1040, ALHS 1090, COMP 1000, BUSN 1440)*

*(Co-requisites: MAST 1080, MAST 1120)*

Emphasizes essential skills required for the medical practice. Topics include: managed care, reimbursement, and coding.

**MAST 1110 - Administrative Practice Management** (3 credit hours, 4500 minutes)

*(Prerequisites: MAST 1100)*

*(Co-requisites: MAST 1030, MAST 1090)*

Emphasizes essential skills required for the medical practice in the areas of computers and medical transcription. Topics include: medical transcription/electronic health records; application of computer skills; integration of medical terminology; accounting procedures; and application of software.

**MAST 1120 - Human Diseases** (3 credit hours, 2250 minutes)

*(Prerequisites: ALHS 1011, ALHS 1040, ALHS 1090 ENGL 1010, MATH 1012, PSYC 1010, COMP 1000, BUSN 1440)*

*(Co-requisites: MAST 1080, MAST 1100)*

Provides fundamental information concerning common diseases and disorders of each body system. For each system, the disease or disorder is highlighted including: description, etiology, signs and symptoms, diagnostic procedures, treatment, management, prognosis, and prevention. Topics include: introduction to diseases and diseases of body systems.

**MAST 1170 - Medical Assisting Externship** (6 credit hours, 13,500 minutes)

*(Prerequisites: Completion of all required coursework prior to externship/practicum, a 2.0 cumulative grade point average, no unresolved grades of "F" or "I" from previous courses, and good academic standing)*

*(Co-requisites: MAST 1180)*

Provides students with an opportunity for in-depth application and reinforcement of principles and techniques in a medical office job setting. This clinical practicum allows the student to become involved in a work setting at a professional level of technical application and requires concentration, practice, and follow-through. Topics include: application of classroom knowledge and skills; functioning in the work environment.

**MAST 1180 - Medical Assisting Seminar** (3 credit hours, 2250 minutes)

*(Prerequisites: Completion of all required courses except MAST 1170)*

*(Co-requisites: MAST 1170)*

Seminar focuses on job preparation and maintenance skills and review for the certification examination. Topics include: letters of application, resumes, completing a job application, job interviews, follow-up letter/call, letters of resignation and review of program competencies for employment and certification.

**MAST 1510 - Medical Billing and Coding I** (2 credit hours, 2250 minutes)

*(Prerequisites: ALHS 1011, ALHS 1090, ENGL 1010, MATH 1012, PSYC 1010, ALHS 1011, ALHS 1040, ALHS 1090, COMP 1000)*

Provides an introduction to medical coding skills and application of international coding standards for billing of health care services. Topics include: international classification of diseases, code books formats, guidelines and conventions, and coding techniques.

**MAST 1520 - Medical Billing and Coding II** (3 credit hours, 3750 minutes)

*(Prerequisites: MAST 1510)*

Continues development of skills and knowledge presented in MAST 1510: Medical Billing and Coding I and provides for patient disease and medical procedure coding for billing purposes by health care facilities. Topics include: medical records coding techniques, coding linkage and compliance; third-party reimbursement issues; and ethics in coding including fraud and abuse.

**MAST 1530 - Medical Procedural Coding** (2 credit hours, 2250 minutes)

*(Prerequisites: MAST 1510)*

*(Co-requisites: MAST 1520)*

Provides the knowledge and skills to apply the coding of procedures for billing using the Physician's Current Procedural Terminology (CPT) manual. Topics include: format of a CPT manual, CPT manual coding guidelines, and coding using the CPT manual.

**MATH 0090 Learning Support Mathematics** (3 institutional credit hours, 2250 minutes)

*(Prerequisites: None)*

This course uses the modular approach to emphasize in-depth arithmetic skills, basic and intermediate algebra skills. Topics include number theory, whole numbers, fractions, decimals, percent, ratio-proportion, measurement, geometry, application problems, introduction to real numbers, algebraic expressions, solving linear equations, graphs of linear equations, polynomial operations, polynomial factoring, inequalities, rational expressions and equations, linear graphs, slope systems of equations, radical expressions and equations, and quadratic equations, and applications involving previously listed topics. Students progress at their own pace to master each module.

**MATH 1011 - Business Math** (3 credit hours, 2250 minutes)

*(Prerequisites: MATH 0097 OR Appropriate arithmetic placement test score.)*

Emphasizes mathematical concepts found in business situations. Topics include basic mathematical skills, mathematical skills in business-related problem solving, mathematical information for documents, graphs, and mathematical problems.

**MATH 1012 - Foundations of Mathematics** (3 credit hours, 2250 minutes)

*(Prerequisites: MATH 0097 OR Appropriate arithmetic placement test score.)*

Emphasizes the application of basic mathematical skills used in the solution of occupational and technical problems. Topics include fractions, decimals, percents, ratios and proportions, measurement and conversion, geometric concepts, technical applications, and basic statistics.

**MATH 1013 - Algebraic Concepts** (3 credit hours, 2250 minutes)

*(Prerequisites: MATH 0098 OR Appropriate algebra placement test score.)*

Emphasizes concepts and operations which are applied to the study of algebra. Topics include basic mathematical concepts, basic algebraic concepts, and intermediate algebraic concepts.

**MATH 1017 - Trigonometry** (3 credit hours, 2250 minutes)

*(Prerequisites: MATH 1013)*

Emphasizes trigonometric concepts, logarithms, and exponential functions. Topics include trigonometric concepts, logarithms and exponentials.

**MATH 1101 – Mathematical Modeling** (3 credit hours, 2250 minutes)

*(Prerequisites: Appropriate algebra placement test score)*

Emphasizes functions using real-world applications as models. Topics include fundamental concepts of algebra; functions and graphs; linear, quadratic polynomial, exponential, and logarithmic functions and models; systems of equations; and optional topics in algebra.

**MATH 1111 - College Algebra** (3 credit hours, 2250 minutes)

*(Prerequisites: Appropriate algebra placement test score)*

Emphasizes techniques of problem solving using algebraic concepts. Topics include fundamental concepts of algebra, equations and inequalities, functions and graphs, and systems of equations; optional topics include sequences, series, and probability or analytic geometry.

**MATH 1113 - Pre-Calculus** (3 credit hours, 2250 minutes)

*(Prerequisites: Regular Admission and MATH 1111)*

Prepares students for calculus. The topics discussed include an intensive study of polynomial, rational, exponential, logarithmic, and trigonometric functions and their graphs. Applications include simple maximum and minimum problems, exponential growth and decay.

**MCHT 1012 – Blueprint for Machine Tool** (3credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

*(Co-requisite: MCHT 1013)*

Introduces the fundamental concepts necessary to develop blueprint reading competencies, interpret drawings, and produce sketches for machine tool applications. Topics include: interpretation of blueprints, sketching, sectioning, geometric dimensioning and tolerancing, and assembly drawings.

**MCHT 1013 – Machine Tool Math** (3credit hours, 3750 minutes)

*(Prerequisites: Program admission)*

*(Co-requisite: MCHT 1012)*

This course develops mathematical competencies as applied to machine tool technology. Emphasis is placed on the use of machining formulas by incorporating algebraic, geometric, and trigonometric functions. Topics include machining algebra and geometry, applied geometry, and applied trigonometry.

**MGMT 1100 - Principles of Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Develops skills and behaviors necessary for successful supervision of people and job responsibilities. Emphasis will be placed on real life concepts, personal skill development, applied knowledge and managing human resources. Course content is intended to help managers and supervisors deal with a dramatically changing workplace being affected by technology changes, a more competitive and global marketplace, corporate restructuring and the changing nature of work and the workforce. Topics include: Understanding the manager's job and work environment, building an effective organizational culture, leading, directing, and the application of authority, planning, decision-making, and problem-solving, human resource management, administrative management, organizing, and controlling.

**MGMT 1105 - Organizational Behavior** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides a general knowledge of the human relations aspects of the senior-subordinate workplace environment. Topics include: employee relations principles, problem solving and decision making, leadership techniques to develop employee morale, human values and attitudes, organizational communications, interpersonal communications, and employee conflict.

**MGMT 1110 - Employment Rules and Regulations** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Develops a working knowledge of the laws of employment necessary for managers. Topics include: Employment Law, the Courts, Alternative Dispute Resolution (ADR Discrimination Law, Selecting Applicants Under the Law, OSHA and Safety, Affirmative Action, AT-Will Doctrine, Right to Privacy, Fair Labor Standards Act (FLSA), Family Medical Leave Act (FMLA), Worker's Compensation, Unemployment Compensation, and National Labor Relations Act.

**MGMT 1115 - Leadership** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

This course familiarizes the student with the principles and techniques of sound leadership practices. Topics include: characteristics of effective leadership styles, history of leadership, leadership models, the relationship of power and leadership, team leadership, the role of leadership in affecting change.

**MGMT 1120 - Introduction to Business** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

This course is designed to provide the student with an overview of the functions of business in the market system. The student will gain an understanding of the numerical decisions that must be made by managers and owners of businesses. Topics include: the market system, the role of supply and demand, financial management, legal issues in business, employee relations, ethics, and marketing.

**MGMT 1125 - Business Ethics** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides students with an overview of business ethics and ethical management practices with emphasis on the process of ethical decision-making and working through contemporary ethical dilemmas faced by business organizations, managers, and employees. The course is intended to demonstrate to the students how ethics can be integrated into strategic business decisions and can be applied to their own careers. The course uses a case study approach to encourage the student in developing analytical, problem-solving, critical thinking and decision-making skills. Topics include: An overview of business ethics, moral development and moral reasoning, corporate codes of ethics and effective ethics programs, business and society, consumers and the environment, ethical issues in the workplace, business ethics in a global and multicultural environment, business ethics in cyberspace, and business ethics and the rule of law.

**MGMT 1135 - Managerial Accounting and Finance** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

The focus of this course is to acquire the skills and concepts necessary to use accounting information in managerial decision making. Course is designed for those who use, not necessarily prepare, accounting information. Those applications include the use of information for short and long term planning, operational control, investment decisions, cost and pricing products and services. An overview of financial accounting and basic concepts of finance provides an overview of financial statement analysis.

**MGMT 2115 - Human Resource Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

This course is designed as an overview of the Human Resource Management (HRM) function and the manager and supervisor's role in managing the career cycle from organizational entry to exit. It acquaints the student with the authority, responsibility, functions, and problems of the human resource manager, with an emphasis on developing familiarity with the real world applications required of employers and managers who increasingly are in partnership with HRM generalists and specialists in their organizations. Topics include: strategic human resource management, contemporary issues in HRM; ethics, diversity and globalization; the human resource/supervisor partnership; human resource planning and productivity; job description analysis,

development, and design; recruiting, interviewing, and selecting employees; performance management and appraisal systems; employee training and development; disciplinary action and employee rights; employee compensation and benefits; labor relations and employment law; and technology applications in HRM.

**MGMT 2120 - Labor Management Relations** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Provides a student with an overview of the relationship of rank and file employees to management in business organizations. The nature of the workplace, the economic foundations of work organizations, and the history of the relationship between management and labor is examined. The course acquaints the student with the principles of developing positive relationships between management and labor within the context of the legal environment governing labor relations. Topics include: the nature of the American workplace; the economic history of business organizations; the historical roots of labor-management relations; adversarial and cooperative approaches to labor relations; the legal framework of labor relations; employee-employer rights; collective bargaining and union organizing processes; union and nonunion grievance procedures; international labor relations; and the future of labor-management relations in a changing economy. Case studies, readings, and role-plays are used to simulate workplace applications in labor relations.

**MGMT 2125 - Performance Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Develops an understanding of how fostering employer/employee relationships in the work setting improves work performance. Develops legal counseling and disciplinary techniques to use in various workplace situations. Topics include: the definitions of coaching, counseling, and discipline; importance of the coaching relationship; implementation of an effective counseling strategy; techniques of effective discipline; and performance evaluation techniques.

**MGMT 2130 - Employee Training and Development** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Addresses the challenges of improving the performance and career potential of employees, while benefiting the student in their own preparation for success in the workplace. The focus is on both training and career and personal development. Shows the student how to recognize when training and development is needed and how to plan, design and deliver an effective program of training for employees. Opportunities are provided for the student to develop their own career plans, assess their work-related skills, and practice a variety of skills desired by employers. Topics include: developing a philosophy of training; having systems approach to training and development; the context of training; conducting a needs analysis; critical success factors for employees; learning principles; designing and implementing training plans; conducting and evaluating training; human resource development and careers; personal career development planning; and applications in interpersonal relationships and communication.

**MGMT 2135 - Management Communication Techniques** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Emphasizes developing the full range of communication strategies required to become a successful manager and prepares managers for the skills required to communicate effectively in business today. Topics include: Organizational/Strategic Communication, Interpersonal Communication, Presentation Techniques, Presentation Technology & Application, Team/Group Communication, Intercultural Communication, External Stakeholder Communication and Using Spreadsheet Application for Business Problem Solving.

**MGMT 2150 - Small Business Management** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

This course introduces the essentials of starting, managing, and growing a small business. Topics include: the role of the entrepreneur, pricing, advertising, financing, layout of facilities, inventory control, staffing, purchasing, vendor selection, and relevant laws affecting small businesses.

**MGMT 2205 - Service Sector Management** (3 credit hours, 2250 minutes)

*(Prerequisites: None)*

This course focuses on supervision in the service sector with special emphasis on team building, quality management, and developing a customer focus. The challenge of providing world-class customer service is addressed through sections on principles of service industry supervision, career development, problem solving, stress management, and conflict resolution. Topics include: principles of service industry supervision, team building, customer service operations, TQM in a service environment, business software applications, communication in the service sector, introduction to information systems, selling principles and sales management, retail management, and legal issues in the service sector.

**MGMT 2215 - Team Project** (3 credit hours, 2250 minutes)

*(Prerequisites: Program admission)*

This course utilizes team methodologies to study the field of management. It encourages students to discuss their perception of management practices which have been studied during the management program. Topics include: current issues and problems in

management and supervision and state-of-the-art management and leadership techniques. Students will be put into teams, will work on team projects to demonstrate their understanding of the competencies of this course, and will do peer evaluation.

**MUSC 1101 - Music Appreciation** (3 credit hours; 2250 minutes)

*(Prerequisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)*

*(Co-requisites: None)*

Explores the formal elements of musical composition, musical form and style, and the relationship of music to historical periods. The course includes listening and analysis of well-known works of music. This course encourages student interest in musical arts beyond the classroom.

**NAST 1100 - Nurse Aide Fundamentals** (6 credit hours, 6750 minutes)

*(Prerequisites/Co-requisites: ALHS 1040, ALHS 1090, ALHS 1060)*

Introduces student to the role and responsibilities of the Nurse Aide. Emphasis is placed on understanding and developing critical thinking skills, as well as demonstrating knowledge of the location and function of human body systems and common disease processes; responding to and reporting changes in a residents /patient's condition, nutrition, vital signs; nutrition and diet therapy; disease processes; vital signs; observing, reporting and documenting changes in a residents condition; emergency concerns; ethics and legal issues and governmental agencies that influence the care of the elderly in long term care settings; mental health and psychosocial well-being of the elderly; use and care of mechanical devices and equipment; communication and interpersonal skills and hands-on skills competency based on federal guidelines. Specific topics include: roles and responsibilities of the Nurse Aide; communication and interpersonal skills; topography, structure, and function of the body systems; injury prevention and emergency preparedness; residents' rights; basic patient care skills; personal care skills; and restorative care.

**PHAR 1000 - Pharmaceutical Calculations** (4 credit hours, 3000 minutes)

*(Prerequisites: All required General Education and Health Science Core Classes)*

Develops knowledge and skills in pharmaceutical calculations procedures. Topics include: systems of measurement, medication dispensing calculations, pharmacy mathematical procedures, and calculation tools and techniques.

**PHAR 1010 - Pharmacy Technology Fundamentals** (5 credit hours, 4500 minutes)

*(Prerequisites: Provisional admission)*

Provides an overview of the pharmacy technology field and develops the fundamental concepts and principles necessary for successful participation in the pharmacy field. Topics include: safety, chemistry, orientation of the pharmacy technology field, ethics and laws, definitions and terms, and reference sources.

**PHAR 1020 - Principles of Dispensing Medications** (4 credit hours, 4500 minutes)

*(Prerequisites: PHAR 1000, PHAR 1010)*

Introduces the students to the principles of receiving, storing, and dispensing medications. Topics include: purchasing, packaging and labeling drugs, pharmacy policies and procedures, distribution systems, documentation, inventory and filing systems, pharmacy equipment, compounding, storage and control, contamination control, and the health care organizational structure. This course provides lab.

**PHAR 1030 - Principles of Sterile Medication Preparation** (4 credit hours, 4500 minutes)

*(Prerequisites: PHAR 1000, PHAR 1010)*

Continues the development of student knowledge and skills in aseptic preparation and preparing medication, processing glassware, and maintaining an aseptic environment. Topics include: aseptic and sterile techniques, parental admixtures, hyperalimentation, chemotherapy, filtering, disinfecting, contamination, ophthalmic preparations, infection control, USP 797 and quality control.

**PHAR 1040 - Pharmacology** (4 credit hours, 3000 minutes)

*(Prerequisites: Program admission)*

Introduces principles and knowledge about classifications of medication. Topics include: disease states and treatment modalities, pharmaceutical side effects and drug interactions, controlled substances, specific drugs, compounding, and drug addiction and abuse.

**PHAR 1050 - Pharmacy Technology Practicum** (5 credit hours, 11250 minutes)

*(Prerequisites: PHAR 1000, PHAR 1010)*

Introduces students to the clinical environment and provides experiences with the skills necessary for the pharmacy technician. Topics include: dispensing and automation, storage and control, documentation, inventory, filing, extemporaneous compounding, durable medical equipment, customer service, inventory and billing, medication delivery, and other community pharmacy techniques.

**PHAR 2060 - Advanced Pharmacy Technology Principles** (3 credit hours, 3000 minutes)

*(Prerequisites: PHAR 1030, PHAR 1050)*

Presents the advanced concepts and principles needed in the pharmacy technology field and readiness for certification. Topics include: pharmaceutical side effects, controlled substances, physician orders, patient profiles, pharmacy data systems, job readiness, legal requirements, pharmacology and pharmaceutical calculations review.

**PHAR 2070 - Advanced Pharmacy Technology Practicum** (5 credit hours, 11250 minutes)

*(Prerequisites: PHAR 1030, PHAR 1050)*

Continues the development of knowledge and skills applicable to pharmacy technology practice through additional onsite practice. Topics include: institutional dispensing responsibilities, patient profiles, physician orders, controlled substances, aseptic technique and IV preparation, chemotherapy, pharmacy data systems, ophthalmic preparations, and other institutional/hospice/home health pharmacy techniques.

**PHLT 1030 - Introduction to Venipuncture** (3 credit hours, 3000 minutes)

*(Prerequisites: All program curriculum courses excluding PHLT 1050, no exceptions without approval of Dean of Health Sciences)*

Provides an introduction to blood collecting techniques and processing specimens. Emphasis is placed on the knowledge and skills needed to collect all types of blood samples from hospitalized patients. Topics include: venipuncture procedure, safety and quality assurance; isolation techniques, venipuncture problems, and definitions; lab test profiles and patient care areas; other specimen collections and specimen processing; test combinations, skin punctures and POCT; professional ethics and malpractice; and certification and licensure. A \$35 fee is associated with this course due to gloves, various blood drawing tubes, needles, including vacutainer, butterfly & syringes; lancets for finger sticks, and bandaging supplies.

**PHLT 1050 - Clinical Practice** (5 credit hours, 11250 minutes which equal 200 hours of clinical)

*(Prerequisites: All program curriculum courses including PHLT 1030, no exceptions without approval of Dean of Health Sciences)*

Provides work experiences in a clinical setting. Emphasis is placed on enhancing skills in Venipuncture techniques. Topics include: introduction to clinical policies and procedures and work ethics; routine collections: adult, pediatric, and newborn; and special procedures.

**PNSG 2010 - Introduction to Pharmacology and Clinical Calculations** (2 credit hours, 3000 minutes)

*(Prerequisites: Program Admission)*

Applies fundamental mathematical concepts and includes basic drug administration. Emphasizes critical thinking skills. Topics include: systems of measurement, calculating drug problems, resource materials usage, fundamental pharmacology, administering medications in a simulated clinical environment, principles of IV therapy techniques, and client education.

**PNSG 2030 - Nursing Fundamentals** (6 credit hours, 8250 minutes)

*(Prerequisites: Program Admission)*

An introduction to the nursing process. Topics include: nursing as a profession; ethics and law; client care which is defined as using the nursing process, using critical thinking, and providing client education and includes principles and skills of nursing practice, documentation, and an introduction to physical assessment; customer/client relationships; standard precautions; basic life support; infection control/blood-borne/airborne pathogens; and basic emergency care/first aid and triage.

**PNSG 2035 - Nursing Fundamentals Clinical** (2 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

An introduction to nursing practice in the clinical setting. Topics include but are not limited to: history taking, physical assessment, nursing process, critical thinking, activities of daily living, documentation, client education, and standard precautions; hygiene and personal care; mobility and biomechanics; fluid and electrolytes; oxygen care; and perioperative care.

**PNSG 2210 - Medical Surgical Nursing I** (4 credit hours, 3750 minutes)

*(Prerequisites: Program Admission)*

Focuses on client care including using the nursing process, performing assessments, using critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. Topics include: health management and maintenance; prevention of illness; care of the individual as a whole; immunology; as well as pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to the cardiovascular, respiratory, and hematological and immunological systems.

**PNSG 2220 - Medical Surgical Nursing II** (4 credit hours, 3750 minutes)

*(Prerequisites: Program Admission)*

This second course in a series of four focuses on client care including using the nursing process, performing assessments, using critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. Topics include: health management and maintenance and the prevention of illness, care of the individual as a

whole; as well as pathological disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to the endocrine, gastrointestinal, and urinary system.

**PNSG 2230 - Medical Surgical Nursing III** (4 credit hours, 3750 minutes)

*(Prerequisites: Program Admission)*

This third course in a series of four focuses on client care including using the nursing process, performing assessments, using critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. Topics include: health management and maintenance and the prevention of illness, care of the individual as a whole, mental health; as well as pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to the neurological, sensory, and musculoskeletal systems.

**PNSG 2240 - Medical Surgical Nursing IV** (4 credit hours, 3750 minutes)

*(Prerequisites: Program Admission)*

This fourth course in a series of four focuses on client care including using the nursing process, performing assessments, using critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. Topics include: health management and maintenance and the prevention of illness, care of the individual as a whole, oncology; as well as pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to the integumentary and reproductive systems.

**PNSG 2250 - Maternity Nursing** (3 credit hour, 2250 minutes)

*(Prerequisites: Program Admission)*

Focuses on clinical patient care aspects health management and maintenance and the prevention of illness, care of the individual as a whole, and deviations from the normal state of health. The definition of client care includes using the nursing process, performing assessments, using critical thinking, and providing client education displaying cultural competence across the life span and with attention to special populations. Topics include: health management and maintenance and prevention of illness; care of the individual as a whole; and deviations from the normal state of health in the reproductive system, pathological and nonpathological concerns in obstetric clients, and the newborn; client care, treatment, pharmacology, medication administration, and diet therapy related to obstetric clients, and the newborn; and standard precautions.

**PNSG 2255 - Maternity Nursing Clinical** (1 credit hour, 2250 minutes)

*(Prerequisites: Program Admission)*

Focuses on clinical health management and maintenance and the prevention of illness, care of the individual as a whole, and deviations from the normal state of health. The definition of client care includes using the nursing process, performing assessments, using critical thinking, providing client education, displaying cultural competence across the life span and with attention to special populations. Topics include: health management and maintenance and prevention of illness, care of the individual as a whole, pathological and nonpathological concerns in obstetric clients and the newborn; client care, treatments, pharmacology, and diet therapy related to obstetric clients and the newborn; and standard precautions.

**PNSG 2310 - Medical Surgical Nursing Clinical I** (2 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

This first clinical course, in a series of four medical-surgical clinical courses, focuses on clinical client care including using the nursing process, performing assessments, applying critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. At the completion of the four-part sequence of these medical-surgical clinical courses students will have completed a minimum of 375 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 pediatric and 37.5 mental health experiences. Topics include: health management and maintenance; prevention of illness; care of the individual as a whole; hygiene and personal care; mobility and biomechanics; fluid and electrolytes; oxygen care; perioperative care; immunology; mental health; and oncology. In addition, pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to cardiovascular, hematological, immunological, respiratory, neurological, sensory, musculoskeletal, endocrine, gastrointestinal, urinary, integumentary and reproductive systems.

**PNSG 2320 - Medical Surgical Nursing Clinical II** (2 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

This second clinical course, in a series of four medical-surgical clinical courses, focuses on clinical client care including using the nursing process, performing assessments, applying critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. At the completion of the four-part sequence of these medical-surgical clinical courses students will have completed a minimum of 375 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 pediatric and 37.5 mental health experiences. Topics include: health management and maintenance; prevention of illness; care of the individual as a whole; hygiene and personal care; mobility and biomechanics; fluid and electrolytes; oxygen care; perioperative care; immunology; mental health; and oncology. In addition, pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard

precautions with regard to cardiovascular, hematological, immunological, respiratory, neurological, sensory, musculoskeletal, endocrine, gastrointestinal, urinary, integumentary and reproductive systems.

**PNSG 2330 - Medical Surgical Nursing Clinical III** (2 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

This third clinical course, in a series of four medical-surgical clinical courses, focuses on clinical client care including using the nursing process, performing assessments, applying critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. At the completion of the four-part sequence of these medical-surgical clinical courses students will have completed a minimum of 375 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 pediatric and 37.5 mental health experiences. Topics include: health management and maintenance; prevention of illness; care of the individual as a whole; hygiene and personal care; mobility and biomechanics; fluid and electrolytes; oxygen care; perioperative care; immunology; mental health; and oncology. In addition, pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to cardiovascular, hematological, immunological, respiratory, neurological, sensory, musculoskeletal, endocrine, gastrointestinal, urinary, integumentary and reproductive systems.

**PNSG 2340 - Medical Surgical Nursing Clinical IV** (2 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

This fourth clinical course, in a series of four medical-surgical clinical courses, focuses on clinical client care including using the nursing process, performing assessments, applying critical thinking, engaging in client education and displaying cultural competence across the life span and with attention to special populations. At the completion of the four-part sequence of these medical-surgical clinical courses students will have completed a minimum of 375 hours of clinical experience including 300 hours of comprehensive medical-surgical 37.5 pediatric and 37.5 mental health experiences. Topics include: health management and maintenance; prevention of illness; care of the individual as a whole; hygiene and personal care; mobility and biomechanics; fluid and electrolytes; oxygen care; perioperative care; immunology; mental health; and oncology. In addition, pathological diseases, disorders and deviations from the normal state of health, client care, treatment, pharmacology, nutrition and standard precautions with regard to cardiovascular, hematological, immunological, respiratory, neurological, sensory, musculoskeletal, endocrine, gastrointestinal, urinary, integumentary and reproductive systems.

**PNSG 2410 - Nursing Leadership** (1 credit hour, 750 minutes)

Builds on the concepts presented in prior nursing courses and develops the skills necessary for successful performance in the job market. Topics include: application of the nursing process, supervisory skills, client education methods, group dynamics and conflict resolution.

**PNSG 2415 - Nursing Leadership Clinical** (2 credit hour, 4500 minutes)

Builds on the concepts presented in prior nursing courses and develops the skills necessary for successful performance in the job market, focusing on practical applications. Topics include: application of the nursing process, critical thinking, supervisory skills, client education methods, and group dynamics.

**POLS 1101 – American Government** (3 credit hour, 2250 minutes)

*(Prerequisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)*

*(Co-Requisite: None)*

Emphasizes study of government and politics in the United States. The focus of the course will provide an overview of the Constitutional foundations of the American political processes with a focus on government institutions and political procedures. The course will examine the constitutional framework, federalism, civil liberties and civil rights, public opinion, the media, interest groups, political parties, and the election process along with the three branches of government. In addition, this course will examine the processes of Georgia state government.

Topics include foundations of government, political behavior, and governing institutions.

**PSYC 1010 - Basic Psychology** (3 credit hours, 2250 minutes)

*(Prerequisites: Provisional admission)*

Presents basic concepts within the field of psychology and their application to everyday human behavior, thinking and emotion. Emphasis is placed on students understanding basic psychological principles and their application within the context of family, work, and social interactions. Topics include an overview of psychology as a science, the nervous and sensory systems, learning and memory, motivation and emotion, intelligence, lifespan development, personality, psychological disorders and their treatment, stress and health, and social relations.

**PSYC 1101 - Introductory Psychology** (3 credit hours, 2250 minutes)

*(Prerequisites: Appropriate Degree Level Writing (English) and Reading Placement Test Scores)*

Introduces the major fields of contemporary psychology. Emphasis is on fundamental principles of psychology as a science. Topics include research design, the organization and operation of the nervous system, sensation and perception, learning and

memory, motivation and emotion, thinking and intelligence, lifespan development, personality, psychopathology and interventions, stress and health, and social psychology.

**PSYC 2103 – Human Development** (3 credit hours, 2250 minutes)

*(Prerequisites: PSYC 1101)*

Emphasizes changes that occur during the human life cycle beginning with conception and continuing through late adulthood and death and emphasizes the scientific basis of our knowledge of human growth and development and the interactive forces of nature and nurture. Topics include but are not limited to theoretical perspectives and research methods, prenatal development and child birth, stages of development from infancy through late adulthood, and death and dying.

**RADT 1010 - Introduction to Radiology** (4 credit hours, 3750 minutes)

*(Prerequisites: Program Admission)*

*(Co-requisites: RADT 1030, RADT 1320)*

Introduces a grouping of fundamental principles, practices, and issues common to many specializations in the health care profession. In addition to the essential skills, students explore various delivery systems and related issues. Provides the student with an overview of radiography and patient care. Students will be oriented to the radiographic profession as a whole. Emphasis will be placed on patient care with consideration of both physical and psychological conditions. Introduces a grouping of fundamental principles, practices, and issues common to many specializations in the health care profession. In addition to the essential skills, students explore various delivery systems and related issues. Topics include: ethics, medical and legal considerations, Right to Know Law, professionalism, basic principles of radiation protection, basic principles of exposure, equipment introduction, health care delivery systems, hospital and departmental organization, hospital and technical college affiliation, medical emergencies, pharmacology/contrast agents, media, OR and mobile procedures patient preparation, death and dying, body mechanics/transportation, basic life support/CPR, and patient care in radiologic sciences.

**RADT 1030 - Radiographic Procedures I** (3 credits hours, 3750 minutes) \*Fall Curriculum

*(Prerequisites: Prerequisites for degree students are Program Admission, BIOL 2114, and BIOL 2114L. RADT 1010 must be taken as either a pre-requisite or Co-requisites)*

*(Co-requisites: RADT 1010)*

Introduces the knowledge required to perform radiologic procedures applicable to the human anatomy. Emphasis will be placed on the production of quality radiographs, and laboratory experience will demonstrate the application of theoretical principles and concepts. Topics include: introduction to radiographic procedures; positioning terminology; positioning considerations; procedures, anatomy, and topographical anatomy related to body cavities, bony thorax, upper extremities, shoulder girdle; and lower extremities.

**RADT 1030 - Radiographic Procedures I (version 201412L)** (3 credits hours, 3750 minutes)

*(Prerequisites: Prerequisites for degree students are Program Admission, BIOL 2114, and BIOL 2114L. RADT 1010 must be taken as either a pre-requisite or Co-requisites)*

*(Co-requisites: RADT 1010)*

Introduces the knowledge required to perform radiologic procedures applicable to the human anatomy. Emphasis will be placed on the production of quality radiographs, and laboratory experience will demonstrate the application of theoretical principles and concepts. Topics include: introduction to radiographic procedures; positioning terminology; positioning considerations; procedures, anatomy, and topographical anatomy related to chest and abdomen cavities, bony thorax, upper extremities, shoulder girdle; and lower extremities.

**RADT 1060 - Radiographic Procedures II** (3 credit hours, 3750 minutes) \*Fall Curriculum

*(Prerequisites: RADT 1010, RADT 1030)*

*(Co-requisites: RADT 1330)*

Continues to develop the knowledge required to perform radiographic procedures. Topics include: anatomy and routine projections of the pelvic girdle; anatomy and routine projections of the spine, gastrointestinal (GI) procedures; genitourinary (GU) procedures; biliary system procedures; and minor procedures.

**RADT 1060 - Radiographic Procedures II (version 201412L)** (3 credit hours, 3750 minutes)

*(Prerequisites: RADT 1010, RADT 1030)*

*(Co-requisites: RADT 1330)*

Continues to develop the knowledge required to perform radiographic procedures. Topics include: anatomy and routine projections of the pelvic girdle; anatomy and routine projections of the spine, gastrointestinal (GI) procedures; genitourinary (GU) procedures; biliary system procedures.

**RADT 1065 – Radiologic Science (version 201412L)** (2 credit hours, 1500 minutes)

*(Prerequisites: Program Admission; Program Instructor Approval)*

Content of this course is designed to establish a basic knowledge of atomic structure and terminology. Other topics include the nature and characteristics of x-radiation; ionizing and non-ionizing radiation; x-ray production; the properties of x-rays and the fundamentals of x-ray photon interaction with matter.

**RADT 1070 - Principles of Imaging I** (6 credit hours, 5250 minutes)

*(Prerequisites: Prerequisites for degree students are Program Admission and MATH 1111)*

Content is designed to establish a basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Factors that govern the image production process, film imaging with related accessories, and a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Actual images will be included for analysis.

**RADT 1075 – Radiographic Imaging (version 201412L)** (4 credit hours, 3750 minutes)

*(Prerequisites: Program Admission; Program Instructor Approval)*

The content of this course introduces factors that govern and influence the production of the radiographic image using analog and digital radiographic equipment found in diagnostic radiology. Emphasis will be placed on knowledge and techniques required to produce high quality diagnostic radiographic images. Topics include: Image quality (radiographic density; radiographic contrast; recorded detail; distortion; grids; image receptors and holders (analog and digital); processing considerations (analog and digital); image acquisition (analog, digital, and PACS); image analysis; image artifacts (analog and digital); Guidelines for selecting exposure factors and evaluating images within a digital system will assist students to bridge between film-based and digital imaging systems. Factors that impact image acquisition, display, archiving and retrieval are discussed. Laboratory experiences will demonstrate applications of theoretical principals and concepts.

**RADT 1085 – Radiologic Equipment (version 201412L)** (3 credit hours, 3000 minutes)

*(Prerequisites: Program admission; Program Instructor Approval)*

Content establishes a knowledge base in radiographic, fluoroscopic and mobile equipment requirements and design. The content also provides a basic knowledge of Automatic Exposure Control (AEC) devices, beam restriction, filtration, quality control, and quality management principles of analog and digital systems. Laboratory experiences will demonstrate applications of theoretical principles and concepts.

**RADT 1160 - Principles of Imaging II** (6 credit hours, 5250 minutes)

*(Prerequisites: RADT 1070)*

Content is designed to impart an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Guidelines for selecting exposure factors and evaluating images within a digital system assist students to bridge between film-based and digital imaging systems, with a knowledge base in radiographic, fluoroscopic, mobile and tomographic equipment requirements and design. This content also provides a basic knowledge of quality control, principles of digital system quality assurance and maintenance are presented. Content is designed to provide entry-level radiography students with principles related to computed tomography (CT) imaging, and other imaging modalities (i.e., MRI, US, NM, Mammography) in terms of purpose, principles, equipment/material, and procedure. Topics include: imaging equipment, digital image acquisition and display, and basic principles of CT and other imaging modalities. Topics include: imaging equipment, digital image acquisition and display, and basic principles of CT and other imaging modalities.

**RADT 1200 - Principles of Radiation Biology and Protection** (3 credit hours, 2250 minutes) \*Fall Curriculum

*(Prerequisites: Program Admission)*

Provides instruction on the principles of cell radiation interaction. Radiation effects on cells and factors affecting cell response are presented. Acute and chronic effects of radiation are discussed. Topics include: radiation detection and measurement; patient protection; personnel protection; absorbed dose equivalencies; agencies and regulations; introduction to radiation biology; cell anatomy, radiation/cell interaction; and effects of radiation.

**RADT 1200 - Principles of Radiation Biology and Protection (version 201003L)** (2 credit hours, 1500 minutes)

*(Prerequisites: Program Admission)*

Provides instruction on the principles of cell radiation interaction. Radiation effects on cells and factors affecting cell response are presented. Acute and chronic effects of radiation are discussed. Topics include: radiation detection and measurement; patient protection; personnel protection; absorbed dose equivalencies; agencies and regulations; introduction to radiation biology; cell anatomy, radiation/cell interaction; and effects of radiation.

**RADT 1320 - Clinical Radiography I** (4 credit hours, 9000 minutes)

*(Prerequisites: RADT 1030)*

*(Co-requisites: RADT 1030)*

Introduces students to the hospital clinical setting and provides an opportunity for students to participate in or observe radiographic procedures. Topics include: orientation to hospital areas and procedures; orientation to mobile/surgery; orientation to radiography and fluoroscopy; participation in and/or observation of procedures related to body cavities, the shoulder girdle, and upper extremities. Activities of students are under direct supervision.

**RADT 1330 - Clinical Radiography II** (7 credit hours, 15750 minutes)

*(Prerequisites: RADT 1010, RADT 1030, RADT 1320)*

*(Co-requisites: RADT 1060)*

Continues introductory student learning experiences in the hospital setting. Topics include: equipment utilization; exposure techniques; attend to and/or observation of routine projections of the lower extremities, pelvic girdle, and spine; attend to and/or observation of procedures related to the gastrointestinal (GI), genitourinary (GU), and biliary systems; and attend to and/or observation of procedure related to minor radiologic procedures. Execution of radiographic procedures will be conducted under direct and indirect supervision.

**RADT 2090 - Radiographic Procedures III** (2 credit hours, 3000 minutes) \*Fall Curriculum

*(Prerequisites: RADT 1060)*

*(Co-requisites: RADT 1330, RADT 2340)*

Continues to develop the knowledge required to perform radiographic procedures. Topics include: anatomy and routine projections of the cranium; anatomy and routine projections of the facial bones; anatomy and routine projections of the sinuses; sectional anatomy of the head, neck, thorax and abdomen.

**RADT 2090 - Radiographic Procedures III (version 201412L)** (2 credit hours, 3000 minutes)

*(Prerequisites: RADT 1060)*

*(Co-requisites: RADT 1330, RADT 2340)*

Continues to develop the knowledge required to perform radiographic procedures. Topics include: anatomy and routine projections of the cranium; anatomy and routine projections of the facial bones; anatomy and routine projections of the sinuses; special radiographic procedures, pathological considerations of the cranium, facial bones, sinuses and special procedures.

**RADT 2190 - Radiographic Pathology** (2 credit hours, 1500 minutes)

*(Prerequisites: Pre-requisites for degree students are Program Admission, BIOL 2114 and BIOL 2114L. Pre-requisites for diploma students are Program Admission and ALHS 1011.)*

Content is designed to introduce the student to concepts related to disease and etiological considerations. Pathology and disease as they relate to various radiographic procedures are discussed with emphasis on radiographic appearance of disease and impact on exposure factor selection. Topics include: fundamentals of pathology, trauma/physical injury, and systematic classification of disease.

**RADT 2260 - Radiologic Technology Review** (3 credit hours, 2250 minutes)

*(Prerequisites: RADT 1160, RADT 1200, RADT 2090, RADT 2350)*

*(Co-requisites: RADT 2360)*

Provides a review of basic knowledge from previous courses and helps the student prepare for national certification examinations for radiographers. Topics include: image production and evaluation; radiographic procedures; anatomy, physiology, pathology, and terminology; equipment operation and quality control; radiation protection; and patient care and education.

**RADT 2340 - Clinical Radiography III** (6 credit hours, 13500 minutes)

*(Prerequisites: RADT 1330)*

Provides students with continued hospital setting work experience. Students continue to develop proficiency in executing procedures introduced in Radiographic Procedures. Topics include: patient care; behavioral and social competencies; performance and/or observation of minor special procedures, special equipment use, and participation in and/or observation of cranial and facial radiography. Execution of radiographic procedures will be conducted under direct and indirect supervision.

**RADT 2350 - Clinical Radiography IV** (7 credit hours, 15750 minutes)

*(Prerequisites: RADT 1010, RADT 2090, RADT 2340)*

Provides students with continued hospital setting work experience. Students continue to develop proficiency in executing procedures introduced in Radiographic Procedures. Topics include: sterile techniques; participation in and/or observation of minor special procedures, special equipment use, and genitourinary system procedures; and participation in and/or observation of cranial and facial radiography; and competency completion evaluation. Execution of radiographic procedures will be conducted under direct and indirect supervision.

**RADT 2360 - Clinical Radiography V** (9 credit hours, 20250 minutes) \*Fall Curriculum

*(Prerequisites: RADT 2350)*

*(Co-requisites: RADT 2260)*

Provides students with continued hospital setting work experience. Students demonstrate increased proficiency levels in skills introduced in all of the radiographic procedures courses and practiced in previous clinical radiography courses. Topics include: patient care; behavioral and social competency; advanced radiographic anatomy; equipment utilization; exposure techniques; sterile techniques; integration of procedures and/or observation of angiographic, interventional, minor special procedures; integration of procedures and/or observation of special equipment use; integration of procedures and/or observation of routine and special radiographic procedures; and final completion of all required clinical competencies. Execution of radiographic procedures will be conducted under direct and indirect supervision.

**RADT 2360 - Clinical Radiography IV (version 201412L)** (9 credit hours, 20250 minutes)

*(Prerequisites: RADT 2340)*

*(Co-requisites: RADT 2260)*

Provides students with continued hospital setting work experience. Students demonstrate increased proficiency levels in skills introduced in all of the radiographic procedures courses and practiced in previous clinical radiography courses. Topics include: patient care; behavioral and social competency; advanced radiographic anatomy; equipment utilization; exposure techniques; sterile techniques; integration of procedures and/or observation of angiographic, interventional, minor special procedures; integration of procedures and/or observation of special equipment use; integration of procedures and/or observation of routine and special radiographic procedures; and final completion of all required clinical competencies. Execution of radiographic procedures will be conducted under direct and indirect supervision.

**RADT 2520 – Mammographic Anatomy, Physics, & Positioning** (6 credit hours, 4500 minutes)

*(Prerequisites: Program Admission)*

The student should have a pre-existing knowledge and skills gained during and entry-level radiography educational experience and reinforced through professional practice. The content in this course is intended to aid technologists in preparing for post primary practice of mammography. The course provides the student with an overview of the following topics: Breast anatomy and mammographic correlation, breast viability and pathology, correlative physical breast assessment, department organization and regulation, equipment, interventional procedures mammography quality management, positioning, sonomammography, and Technical applications.

**RADT 2530 – Clinical Mammography** (6 credit hours, 13500 minutes)

*(Prerequisites: Program Admission)*

Content and clinical practice experiences should sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories used to perform radiologic procedures in mammography. Through structured, sequential, competency-based clinical assignments, students discuss, examine and evaluate concepts of team practice, patient-centered clinical practice and professional development. Clinical practice experience should teach students to provide care and assessment and competently perform radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, and after the radiologic procedure. Topics include: mammography clinical practice, patient preparation and education, mammographic procedure, quality control, interventional special procedures, and positioning.

**READ 0090 - Learning Support Reading** (3 institutional credit hours, 2250 minutes)

*(Pre-requisites: None)*

This course uses a modular approach to emphasize the strengthening of fundamental reading competencies, vocabulary, comprehension skills, critical reading skills, study skills, and content area reading skills. Students progress at their own pace to master each module.

**RNSG 1005 - Foundations of Nursing** (6 credit hours, 6750 minutes)

*(Prerequisites: Program Admission, BIOL 2117/2117L, PSYC 2130)*

*(Co-requisites: RNSG 1010)*

This course introduces the student to the client, the role of the professional nurse, and the healthcare delivery system. The course prepares the student for subsequent nursing courses. Theoretical and historical content foundational to nursing practice is also introduced. The nursing process is taught as the framework to organize and deliver nursing care. Throughout the course, opportunities are provided to develop competencies necessary to meet the needs of individuals throughout the lifespan with an emphasis placed on developing critical thinking, caring, and fundamental nursing skills. Clinical and nursing skill opportunities are provided in the nursing laboratory and acute care settings. **Clinical practice-based learning activities and interactions will be offered to allow professional development through praxis, reflection, critical thinking, problem-solving, decision-making, accountability, provision and coordination of care, advocacy, and collaboration.**

**RNSG 1018 – Pharmacological Concepts & Drug Calculation** (3 credit hours, 2250 minutes)

*(Prerequisites: Program Admission, BIOL 2117/2117L, PSYC 2130)*

*(Co-requisites: RNSG 1000)*

This course introduces the student to basic principles of pharmacology and the basic mathematical concepts utilized in calculating medication dosages for safe administration to patients throughout the lifespan. The concepts of legal implications, pharmacokinetics, calculation of drug dosages, and medication preparation will be areas of focus. The student is also introduced to the role of the nurse in assessment, planning intervention, and evaluation of the patient receiving pharmacologic therapy.

**RNSG 1020 – Medical – Surgical Nursing I** (7 credit hours, 9000 minutes)

*(Prerequisites: Program Admission, RNSG 1000, RNSG 1010)*

*(Co-requisites: RNSG 1030)*

This course reinforces theory and fundamental nursing skills and introduces the student to the concepts of adult health nursing. The nursing process is used as a framework to organize content and deliver nursing care. Students use critical thinking as the basis for decision regarding planning, intervention and evaluation when caring for clients with medical- surgical disorders. Pharmacological principles are integrated throughout the course. Simulated laboratory and clinical settings provide an opportunity to develop competency in nursing skills and caring in nursing practice. Clinical opportunities are provided in a variety of medical- surgical settings. **Clinical practice-based learning activities and interactions will be offered to allow professional development through praxis, reflection, critical thinking, problem-solving, decision-making, accountability, provision and coordination of care, advocacy, and collaboration.**

**RNSG 1030 – Maternal – Child Nursing** (6 credit hours, 7500 minutes)

*(Prerequisites: Program Admission, RNSG 1000, RNSG 1010)*

*(Co-requisites: RNSG 1020)*

This course focuses on the childbearing women, families, and the care of infants and children. Focus is placement on the nursing process, critical thinking, and caring in relation to concepts of child and family development from conception through adolescence, and common, recurring pediatric illnesses. Pharmacological principles are integrated in the course. The laboratory experiences focus on the assessment of the pregnant women, the newborn and application of growth and development principles. Clinical opportunities are provided in the community and acute care settings. **Clinical practice-based learning activities and interactions will be offered to allow professional development through praxis, reflection, critical thinking, problem-solving, decision-making, accountability, provision and coordination of care, advocacy, and collaboration.**

**RNSG 2000 – Medical – Surgical Nursing II** (8 credit hours, 8250 minutes)

*(Prerequisites: Program Admission, RNSG 1000, RNSG 1010, RNSG 1020, RNSG 1030)*

*(Co-requisites: RNSG 2010)*

This course in medical-surgical nursing continues to build on previous medical- surgical content and is expanded to include higher level clinical decision-making, patient teaching, and coordination of care in the healthcare environment. Pharmacological principles are integrated throughout the course. Campus laboratory experiences allow the student to practice more complex psychomotor skills. Clinical experiences in the acute care facilities provide the students the opportunity to implement a more sophisticated knowledge base and skill level. **Clinical practice-based learning activities and interactions will be offered to allow professional development through praxis, reflection, critical thinking, problem-solving, decision-making, accountability, provision and coordination of care, advocacy, and collaboration.**

**RNSG 2005 – Mental Health Nursing** (3 credit hours, 3750 minutes)

*(Prerequisites: RNSG 1000, RNSG 1010, RNSG 1020, RNSG 1030)*

*(Co-requisites: RNSG 2000)*

This course focuses on application of the nursing process to meet the needs of patients/ clients experiencing psychiatric or maladaptive behaviors. Emphasis is on integration of therapeutic communication and mental health assessment in the healthcare environment. Pharmacological principles are integrated. Clinical opportunities are provided in in-patient and outpatient mental health, long-term care, outpatient rehabilitation, as well as but not limited to home health, hospice, and public health settings. **Clinical practice-based learning activities and interactions will be offered to allow professional development through praxis, reflection, critical thinking, problem-solving, decision-making, accountability, provision and coordination of care, advocacy, and collaboration.**

**RNSG 2020 – Medical – Surgical Nursing III/Transition to Practice** (5 credit hours, 8250 minutes)

*(Prerequisites: Program Admission, RNSG 1000, RNSG 1010, RNSG 1020, RNSG 1030, RNSG 2000, RNSG 2010)*

*(Co-requisites: RNSG 2030)*

This course builds on the didactic and clinical experiences learned in previous adult health courses, and introduces the student to the concepts of advanced medical-surgical disorders in the adult. In order to facilitate transition into the role of a professional nurse, the student will have the opportunity to develop independence in caring for groups of patients under the direction of faculty and a preceptor. In both simulated and clinical laboratory settings, the student applies the nursing process by demonstrating competency, caring, critical thinking, and decision-making skills for clients with complex illnesses. Pharmacological principles are taught as they relate to the illness. Clinical opportunities are provided in a variety of settings and

preceptor experiences. Program exit competency exam will be taken. **Clinical practice-based learning activities and interactions will be offered to allow professional development through praxis, reflection, critical thinking, problem-solving, decision-making, accountability, provision and coordination of care, advocacy, and collaboration.**

**RNSG 2030 – Trends & Issues in Nursing & Health Care** (2 credit hours, 1500 minutes)

*(Prerequisites: Program Admission, RNSG 1000, RNSG 1010, RNSG 1020, RNSG 1030, RNSG 2000, RNSG 2010)*

*(Co-requisites: RNSG 2020)*

This is a non-clinical course that will assist students in developing a broader perspective in nursing by exploring current professional nursing issues. The focus is on current trends and issues, work ethics, systems, and mechanisms of case management, effective delegation, nursing informatics, and competencies required for licensure as a professional nurse.

**SOCI 1101 - Introduction to Sociology** (3 credit hours, 2250 minutes)

*(Prerequisites: Appropriate Degree Level Writing (English) and Reading Placement Scores)*

Explores the sociological analysis of society, its culture, and structure. Sociology is presented as a science with emphasis placed on its methodology and theoretical foundations. Topics include basic sociological concepts, socialization, social interaction and culture, social groups and institutions, deviance and social control, social stratification, social change, and marriage and family.

**SPCH 1101 - Public Speaking** (3 credit hours, 2250 minutes)

*(Prerequisites: ENGL 1101- Institutional Requirement)*

Introduces the student to the fundamentals of oral communication. L Topics include selection and organization of materials, preparation and delivery of individual and group presentations, analysis of ideas presented by others, and professionalism.

**WELD 1000 - Introduction to Welding Technology** (4 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

Provides an introduction to welding technology with an emphasis on basic welding laboratory principles and operating procedures. Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards.

**WELD 1010 - Oxyfuel Cutting and Plasma Arc Cutting** (4 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

Introduces fundamental principles, safety practices, equipment, and techniques necessary for metal heating and oxyfuel cutting. Topics include: metal heating and cutting principles, safety procedures, use of cutting torches and apparatus, metal heating techniques, metal cutting techniques, manual and automatic oxyfuel cutting techniques, and oxyfuel pipe cutting. Practice in the laboratory is provided. A \$20 fee is associated with this course due to the increased cost of acetylene and mild steel.

**WELD 1030 - Blueprint Reading for Welders** (4 credit hours, 4500 minutes)

*(Prerequisites: Program admission)*

Introduces the knowledge and skills necessary for reading welding and related blueprints and sketches. Topics include: basic lines; sketching; basic and sectional views; dimensions, notes, and specifications; isometrics; and detail and assembly of prints.

**WELD 1040 - Flat Shielded Metal Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: Program admission)*

Introduces the fundamental theory, safety practices, equipment, and techniques required for shielded metal arc welding (SMAW) in the flat position. Qualification tests, flat position, are used in the evaluation of student progress toward making industrial standard welds. Topics include: SMAW safety and health practices, fundamental SMAW theory, basic electrical principles, SMAW machines and set up, electrode identification and selection, materials selection and preparation, and production of beads and joints in the flat position. A \$30 fee is associated with this course due to the increased cost of welding rods and steel.

**WELD 1050 - Horizontal Shielded Metal Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: WELD 1040)*

Introduces the major theory, safety practices, and techniques required for shielded metal arc welding (SMAW) in the horizontal position. Qualification tests, horizontal position, are used in the evaluation of student progress toward making industrial standard welds. Topics include: horizontal SMAW safety and health practices, selection and applications of electrodes, selection and applications for horizontal SMAW, horizontal SMAW joints, and horizontal SMAW to specification. A \$20 fee is associated with this course due to the increased cost of welding rods and steel.

**WELD 1060 - Vertical Shielded Metal Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: WELD 1040)*

Introduces the major theory, safety practices, and techniques required for shielded metal arc welding (SMAW) in the vertical position. Qualification tests, vertical position, are used in the evaluation of student progress toward making industrial standard welds. Topics include: vertical SMAW safety and health practices, selection and applications of electrodes for vertical SMAW,

vertical SMAW joints, and vertical SMAW to specification. A \$20 fee is associated with this course due to the increased cost of welding rods and steel.

**WELD 1070 - Overhead Shielded Metal Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: WELD 1040)*

Introduces the major theory, safety practices, and techniques required for shielded metal arc welding (SMAW) in the overhead position. Qualification tests, overhead position, are used in the evaluation of student progress toward making industrial standard welds. Topics include: overhead SMAW safety and health practices, selection and applications of electrodes for overhead SMAW, overhead SMAW joints, and overhead SMAW to specification.

**WELD 1090 - Gas Metal Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: Program admission)*

Provides knowledge of theory, safety practices, equipment and techniques required for successful gas metal arc welding. Qualification tests, all positions, are used in the evaluation of student progress toward making industrial standard welds. Topics include: GMAW safety and health practices; GMAW theory, machines, and set up; transfer modes; wire selection; shielded gas selection; and GMAW joints in all positions. A \$50 fee is associated with this course due to the increased cost of welding wire and steel.

**WELD 1110 - Gas Tungsten Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: Program admission)*

Provides knowledge of theory, safety practices, inert gas, equipment, and techniques required for successful gas tungsten arc welding. Qualification tests, all positions, are used in the evaluating of student progress toward making industrial standard welds. Topics include: GTAW safety and health practices; shielding gases; metal cleaning procedures; GTAW machines and set up; selection of filler rods; GTAW weld positions; and production of GTAW beads, bead patterns, and joints. A \$20 fee is associated with this course due to the increased cost of welding rods and steel.

**WELD 1120 - Preparation for Industrial Qualification** (4 credit hours, 4500 minutes)

*(Prerequisites: WELD 1000, 1010, 1030, 1040, 1050, 1060, 1070, 1090, 1110, 1153)*

Introduces industrial qualification methods, procedures, and requirements. Students are prepared to meet the qualification criteria of selected national welding codes and standards. Topics include: test methods and procedures, national industrial codes and standards, fillet and groove weld specimens, and preparation for qualifications and job entry.

**WELD 1150 – Advance Gas Tungsten Arc Welding** (3 credit hours, 3750 minutes)

Provides knowledge of theory, safety practices, inert gas, equipment, and techniques for successful advanced gas tungsten arc welding. Qualification tests, all positions, are used in the evaluating of student progress toward making advanced industrial standard welds. Topics include: GTAW safety and health practices, shielding gases, metal cleaning procedures, GTAW machines and set up, selection of filler rods, GTAW Weld positions, and advanced production of GTAW beads, bead patterns, and joints.

**WELD 1153 - Flux Cored Arc Welding** (4 credit hours, 5000 minutes)

*(Prerequisites: Program admission)*

Provides knowledge of theory, safety practices, equipment, and techniques required for successful flux cored arc welding (FCAW). Qualification tests, all positions, are used in the evaluation of student progress toward making industrial standards welds. Topics include: FCAW safety and health practices, FCAW theory, machine set up and operation, shielded gas selection, and FCAW joints in all positions.