

Course Descriptions

Opposite each course title are printed three code numbers, such as 4-2-5. The first number indicates the number of regular classroom hours for the course each week; the second number indicates the number of laboratory hours per week; and the third number indicates the semester hours of credit awarded for the successful completion of the course. The hours are based on a fifteen-week semester.

Learning support courses are numbered 0090 through 0999. Basic skills courses numbered 1000 through 1099 are certificate and diploma courses. General education courses numbered 1100 through 2999 are associate degree courses.

Some courses have prerequisites or co-requisites listed. A prerequisite must be taken prior to entering a course. A co-requisite must be taken prior to, or concurrently with, the course.

ACCT 1100 – FINANCIAL ACCOUNTING I (3-2-4)

Prerequisite: Program Admission or Advisor Approval

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 (3-2-4)

Prerequisite: ACCT 1100, Instructor Approval for Provisional Students

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 partnership, accounting for a corporation, statement of cash flows, and financial statement analysis. Laboratory work demonstrates theory presented in class.

ACCT 1115 – COMPUTERIZED ACCOUNTING (1-4-3)

Prerequisite: ACCT 1100

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 (2-4-4)

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 (2-2-3)

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.

COURSE DESCRIPTIONS**ACCT 1130 – PAYROLL ACCOUNTING (2-2-3)****Prerequisite: 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 (2-2-3)**Prerequisite: 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, 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 (0-12-4)**Prerequisite: 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 (0-24-8)**Prerequisite: 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 2110 – ACCOUNTING SIMULATION (1-4-3)**Prerequisites: ACCT 1105, ACCT 1115, ACCT 1120**

Students assume the role of a business owner where he/she can directly experience the impact and importance of accounting in a business. At the end of the simulation course, the student will have completed the entire accounting cycle for a service business, merchandising business and a corporation using an Accounting Information System software (different from software used in ACCT 1115 -Computerized Accounting). Emphasis placed on providing students with real-world opportunities for the application and demonstration of accounting skills by using Simulation Projects which will enable them to build a foundation for understanding and interpreting financial statements. Topics include company creation, chart of accounts, customer transactions, vendor transactions, banking activities, merchandise inventory, employees and payroll, financial statements, preparation of payroll tax forms and preparation of income tax forms. Laboratory work includes theoretical and technical application.

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ACCT 2120 – BUSINESS TAX ACCOUNTING (2-2-3)**Co-requisite: ACCT 1125**

Provides instruction for preparation of both state and federal partnership, corporation, and other business tax returns. Topics include organization form, overview of taxation of partnership, special partnership issues, corporate tax elections, adjustments to income and expenses, tax elections, forms and schedules, tax credits, reconciliation of book and tax income, tax depreciation methods, and tax calculations.

ACCT 2130 – INTEGRATED ACCOUNTING MANAGEMENT SYSTEMS (2-2-3)**Prerequisites: ACCT 1105, ACCT 1115, ACCT 1120**

Emphasizes use of database management packages, electronic spreadsheet packages, and accounting software packages for accounting/financial applications with more advanced systems. Topics include creation and management of database applications, creation and management of spreadsheet applications, and creation and management of accounting integrated software systems.

ACCT 2135 – INTRODUCTION TO GOVERNMENTAL AND NONPROFIT ACCOUNTING (3-0-3)**Prerequisite: ACCT 1105**

Provides an introduction to financial reporting and accounting principles for state/local governments and nonprofit entities.

ACCT 2140 – LEGAL ENVIRONMENT OF BUSINESS (3-0-3)**Prerequisite: 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.

ACCT 2145 – PERSONAL FINANCE (3-0-3)

Introduces practical applications of concepts and techniques used to manage personal finance. Topics include cash management, time value of money, credit, major purchasing decisions, insurance, investments, retirement, and estate planning.

ACCT 2150 – PRINCIPLES OF AUDITING (3-0-3)**Prerequisite: ACCT 1105**

Introduces the student to the auditor's responsibilities in the areas of professional standards, reports, ethics, and legal liability. Students learn about the technology of auditing, evidence gathering, audit/assurance processes, internal controls, and sampling techniques. The specific methods of auditing the revenue/receipts process, disbursement cycle, personnel and payroll procedures, asset changes, and debt and equity are learned. Finally, procedures related to attest engagements and internal auditing are reviewed.

ACCT 2155 – PRINCIPLES OF FRAUD EXAMINATION (3-0-3)**Prerequisite: Program Admission**

Provides instruction of the basic principles and theories of occupational fraud. Topics include fraud concepts, skimming, cash larceny, billing schemes, check tampering, payroll schemes, expense reimbursement schemes, register disbursement schemes, non-cash assets fraud, corruption schemes, and accounting principles and fraud.

COURSE DESCRIPTIONS**ACRP 1000 – INTRODUCTION TO AUTO COLLISION REPAIR (4-1-4)**

This course provides instruction in procedures and practices necessary for safe and compliant operation of auto collision repair facilities. It introduces the structural configuration and identification of the structural members of various unibodies and frames used for automobiles as well as equipment and hand tools used in collision repair tasks.

ACRP 1005 – AUTOMOBILE COMPONENT REPAIR AND REPLACEMENT (2-2-4)

This course provides instruction in removal and replacement methods of a variety of non-structural cosmetic and safety features of the automobile as well as bolt-on body panels.

ACRP 1010 – FOUNDATIONS OF COLLISION REPAIR (2-3-5)

This course introduces the materials, tools, and operations required to repair minor collision damage; and it provides instruction in non-metallic auto body repair techniques.

ACRP 1015 – FUNDAMENTALS OF AUTOMOTIVE WELDING (2-2-4)

Prerequisite: Program Admission

This course introduces welding and cutting procedures used in auto collision repair. Emphasis will be placed on MIG welding techniques through a variety of different procedures.

ACRP 1017 – MECHANICAL AND ELECTRICAL SYSTEMS I (2-2-4)

Prerequisite: Program Admission

Co-requisite: ACRP 1000

This course introduces suspension and steering, braking, and drive train systems found on vehicles typically requiring repair of damages incurred through automobile collisions.

ACRP 1019 – MECHANICAL AND ELECTRICAL SYSTEMS II (2-2-5)

Prerequisite: Program Admission

Co-requisite: ACRP 1000

This course introduces the various electrical, heating and AC, engine coding, fuel and intake, and restraint systems found on vehicles typically requiring repair of damages incurred through automobile collisions.

ACRP 2001 – INTRODUCTION TO AUTO PAINTING AND REFINISHING (3-2-5)

Co-requisites: ACRP 1000, ACRP 1010

This course covers the safety precautions followed during the painting and refinishing processes used in a shop during collision repairs. Basic surface preparations will be discussed and practiced. Spray gun types and basic operations will also be introduced.

ACRP 2002 – PAINTING AND REFINISHING TECHNIQUES (3-2-5)

Prerequisite: Program Admission

Co-requisites: ACRP 1000, ACRP 2001

The course covers the fundamental refinishing tasks of mixing, matching and applying various types of automotive paints. Paint defect causes and cures will be examined in depth. Final delivery detailing and tasks will also be practiced and discussed.

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ACRP 2009 – REFINISHING INTERNSHIP (0-2-2)**Prerequisite:** ACRP 1000**Co-requisites:** ACRP 2001, ACRP 2002

Provides occupation-based learning opportunities for students pursuing the Paint and Refinishing specialization. Students will be mentored by qualified professional technicians as they experience working in the Automotive Collision Repair profession in an industry standard commercial repair facility or industry standard simulated on-campus facility. Topics include sanding, priming, and paint preparation; special refinishing applications; urethane enamels; tint and match colors; and detailing.

ACRP 2010 – MAJOR COLLISION REPAIR (2-1-3)**Prerequisite:** ACRP 1000**Co-requisite:** ACRP 1005

This course introduces procedures and resources used in the identification and assessment of automotive collision damages. This course provides instruction on the hydraulic systems and for the diagnosis, straightening, measuring and alignment of automobile frames and bodies.

ACRP 2015 – MAJOR COLLISION REPLACEMENTS (3-2-5)**Prerequisite:** ACRP 1000

This course provides instruction in conventional/unibody automobile body structural panel repairs emphasizing a variety of removal and replacement techniques.

ACRP 2019 - MAJOR COLLISION REPAIR INTERNSHIP (0-2-2)**Prerequisite:** ACRP 1000**Co-requisite:** ACRP 2010, ACRP 2015

Provides occupation-based learning opportunities for students pursuing the Major Collision repair specialization. Qualified professional technicians will mentor students as they experience working in the Automotive Collision Repair profession in an industry standard commercial repair facility or industry standard simulated on-campus facility. Topics include conventional frame repair, unibody damage identification and analysis, unibody measuring and fixturing systems, unibody straightening systems and techniques, unibody welding techniques, unibody structural panel repair and replacement, conventional body structural panel repair, unibody suspension and steering systems, and bolt-on body panel removal and replacement.

AGRB 1100 – INTRODUCTION TO AGRIBUSINESS (1-0-1)

This course introduces students to agribusiness. This is an agribusiness awareness and identification course consisting of various topics associated with the importance of agribusiness.

AGRB 1110 – AGRIBUSINESS MANAGEMENT (3-0-3)

Basic managerial concepts procedures and techniques in agribusiness management. Importance is placed on planning, organizing, directing and controlling functions of management.

AGRB 1120 – LEADERSHIP IN AGRIBUSINESS (3-0-3)

This course serves as an opportunity for students to have a greater understanding of leadership as it pertains to agriculture. We will explore leadership models, roles of leaders and followers, concepts of effective leadership and ethical issues with special focus on leadership in teams, organizations, communities and society.

COURSE DESCRIPTIONS**AGRB 1150 – AGRICULTURAL FINANCE AND CREDIT (3-0-3)**

Financial concepts used in agribusiness, farming, and financial institutions. Including analysis based on financial statements, risk, and investment opportunities. Needs, sources and problems associated with credit are examined as well.

AGRB 2100 – AGRIBUSINESS MARKETING (3-0-3)

Agribusiness marketing will provide an understanding of the various marketing functions, agencies, and institutions that assemble, process, and distribute agricultural commodities and products.

AGRB 2110 – FARM ORGANIZATION AND MANAGEMENT (3-0-3)

A study of farm programs and management for the purpose of determining methods to increase farm revenue. Emphasis will be placed on decision-making and efficient use of resources.

AGRB 2130 – AGRICULTURAL POLICY (3-0-3)

Local, state, national and international government policies affect agribusiness and rural economies. Policy alternatives aimed at solving problems for the food and agricultural industry are identified and evaluated.

AGRB 2140 – ISSUES OF AGRICULTURE AND NATURAL RESOURCES (3-0-3)

Includes many practical aspects and techniques of soil and water conservation. Students learn the nature of water and the need for conservation practices.

AGRB 2200 – PRINCIPLES OF AGRONOMY (3-0-3)

A course developed to increase a student's basic understanding of modern field crop production. Field crops of the Southeast are stressed. Organic production is also covered. Course covers planting to harvesting of crops.

AGRB 2250 – SURVEY OF THE ANIMAL INDUSTRY (3-0-3)

A course in the basic principles of animal selection, nutrition, growth and reproduction. Livestock and poultry economic importance is also stressed.

AGRB 2300 – PRECISION AGRICULTURAL SYSTEMS (4-0-4)

Explores precision agriculture tools, including Global Positioning Systems (GPS), Geographic Information Systems (GIS) and Variable Rate Technology (VRT). Through hands-on experiences, you will understand the basic components and operation of these tools in precision agriculture systems, and how they impact today's agriculture industry.

AGRB 2800 – AGRIBUSINESS INTERNSHIP (0-9-3)

The Agribusiness Internship provides the student with the opportunity to gain agribusiness management experience under appropriate supervision in an actual job setting. It is the student's responsibility to secure a position as an intern at an agricultural business approved by the instructor. Upon completion, the student should possess the basic knowledge and skills necessary for an entry-level position in the agribusiness industry.

COURSE DESCRIPTIONS**AGSC 2150 – GRASSES AND FORAGES IN AGRICULTURE (2-2-3)****Prerequisite:** AGRB 2250

Students will understand the breeding, feeding, and management of livestock.

AGSC 2270 – LIVESTOCK PRODUCTION AND MANAGEMENT (2-2-3)**Prerequisite:** AGRB 2250

Students will understand the breeding, feeding, and management of livestock.

AIRC 1005 – REFRIGERATION FUNDAMENTALS (3-3-4)**Co-requisite:** AIRC LAB

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 (3-3-4)**Co-requisite:** AIRC LAB

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, reclamation, evacuation, charging, and safety.

AIRC 1020 – REFRIGERATION SYSTEMS COMPONENTS (3-3-4)**Co-requisite:** AIRC LAB

This course provides the student with the skills and knowledge to install, test, and service major components of a refrigeration system. Topics include compressors, condensers, evaporators, metering devices, service procedures, refrigeration systems, EPA 608 Certification and safety.

AIRC 1030 – HVACR ELECTRICAL FUNDAMENTALS (3-3-4)**Co-requisite:** AIRC LAB

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 (3-3-4)**Co-requisite:** AIRC LAB

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 procedure, types of electric motors, electric motor service, and safety.

AIRC 1050 – HVACR ELECTRICAL COMPONENTS AND CONTROLS (3-3-4)**Co-requisite:** AIRC LAB

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.

COURSE DESCRIPTIONS**AIRC 1060 – AIR CONDITIONING SYSTEMS APPLICATION AND INSTALLATION (3-3-4)****Co-requisite: AIRC LAB**

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 (3-3-4)**Co-requisite: AIRC LAB**

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 (3-3-4)**Co-requisite: AIRC LAB**

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 (3-3-4)**Co-requisite: AIRC LAB**

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

AIRC 2070 – COMMERCIAL REFRIGERATION DESIGN (3-3-4)**Prerequisite: Program Instructor Approval Co-requisite: AIRC LAB**

Provides an increased level of concepts and theory beyond AIRC 1020. Students are introduced to more design theory in commercial refrigeration. Topics include refrigeration heat calculation, equipment selection, refrigeration piping, codes, and safety.

AIRC 2080 – COMMERCIAL REFRIGERATION APPLICATION (3-3-4)**Prerequisite: Program Instructor Approval Co-requisite: AIRC LAB**

Introduces the application of fundamental theories and concepts of refrigeration. Emphasis will be placed on equipment application and installation procedures. Topics include equipment application, installation procedures, cycle controls, energy management, and safety.

AIRC 2090 – TROUBLESHOOTING AND SERVICING COMMERCIAL REFRIGERATION (3-3-4)**Prerequisite: Program Instructor Approval Co-requisite: AIRC LAB**

Continues to provide experience in maintenance techniques in servicing light commercial refrigeration systems. Topics include system clearing, troubleshooting procedures, replacement of components, and safety.

AIRC 2500 – HVACR INTERNSHIP-PRACTICUM (1-8-4)**Prerequisite: Program Instructor Approval**

This course allows the student to gain real-world experience by working with a local industry in the appropriate field for a minimum of 135 hours during the term or, alternatively, an equivalent number of

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hours on real-world projects at the college.

ALHS 1011 – STRUCTURE AND FUNCTION OF THE HUMAN BODY (5-0-5)**Prerequisite: 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 (2-3-3)

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, and infection control/blood and air-borne pathogens. BLS and First Aid Certification required.

ALHS 1060 – DIET AND NUTRITION FOR ALLIED HEALTH SCIENCES (2-0-2)**Prerequisite: 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 (2-0-2)

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.

AMCA 2110 – CNC FUNDAMENTALS (2-4-4)

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 to programming of CNC machinery, and introduction to CAD/CAM.

AMCA 2130 – CNC MILL MANUAL PROGRAMMING (3-4-5)**Pre/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 (3-4-5)**Pre/Co-requisite: AMCA 2110**

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

AMCA 2170 – CNC PRACTICAL APPLICATIONS (1-64)**Prerequisites: AMCA 2110, AMCA 2130, 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

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manufacturing, and CNC part manufacturing.

AMCA 2190 – CAD/CAM PROGRAMMING (2-4-4)

Pre/Co-requisite: AMCA 2110

Emphasizes the development of skills in computer-aided design (CAD) and computer-aided manufacturing (CAM). The student will design and program parts to be machined on computer numerical controlled machines. Topics include hardware and software, drawing manipulations, tool path generation, program posting, and program downloading.

AMCA 2205 – DIE DESIGN I (2-8-5)

This course provides instruction in design, construction, selection, and safe use of dies required for mass production. Topics include die components, types of dies, types of presses, tool and die drafting, and related math.

AMCA 2210 – DIE CONSTRUCTION I (2-4-4)

This course provides practical application for theory and competency areas addressed in AMCA 2205, Die Design I. Students will be assigned the manufacture of punches and dies utilizing a variety of advanced machines. Topics include punches, dies, mounting die components, assembly and setup procedures, and safety.

AMCA 2230 – DIE DESIGN II (2-13-7)

This course provides a continuation of AMCA 2205, Die Design I. More advanced theory and projects will be presented. Topics include related formulas, calculation of bends, draw die calculations, fasteners, spring selection, and tool and die design.

AMCA 2240 – DIE CONSTRUCTION II (1-5-3)

Provides practical application of theory and competencies in AMCA 2230. Topics include application of related formulas, calculations and manufacture of bends, draw die manufacture, manufacture of fasteners, spring selection, and safety.

ARTS 1101 – ART APPRECIATION (3-0-3) (degree level)

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

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.

AUMF 1120 – PROGRAMMABLE CONTROLLERS (2-8-5)

This course studies basic programmable controller application skills and techniques, and programmable controllers in typical environments as an element of a complex manufacturing cell. Topics also discussed will include the hands-on development of the programming, operation, and maintenance of industrial PLC systems.

AUMF 1140 – ELECTRICAL MOTOR CONTROLS (2-5-4)

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

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and low voltage switching circuits, operation, application and ladder diagrams, AC and DC servo drives, and DC stepper drives. Topics include ladder and wire diagrams, switching circuits, manual controls and devices, automatic controls and devices, and application and operation of controllers and controls.

AUMF 1150 – INTRODUCTION TO ROBOTICS (2-3-3)

Prerequisite: IDSY 1120 or AUMF 1120

Explores basic robotic concepts. Studies robots in typical application environments. Topics include robot history and fundamentals, robot classification, power sources, robot applications in the workplace, robot control techniques, path control, end of arm tooling, robot operation and robot controllers, controller architecture in a system, robotic language programming, and human interface issues.

AUMF 1160 – INDUSTRIAL METALWORKING (2-5-4)

Prerequisite: Program Admission

This course provides the instruction for the fundamentals of metalworking in an industrial environment. Theory and working application concepts will be discussed. Topics include safety, hand and power tool fundamentals, oxyfuel cutting operation, plasma cutting operation, GMAW welding, SMAW welding, milling principles, lathe principles.

AUMF 1170 – AC/DC CIRCUIT FUNDAMENTALS (2-5-4)

This course introduces direct current concepts and applications, alternating current theory and application of varying sine wave voltages and current, and the physical characteristics and applications of solid-state devices. Topics include electrical laws and principles, magnetism, series, parallel, and simple combination circuits, inductance and capacitance, diodes and amplifiers, and semiconductor fundamentals.

AUMF 1190 – FLUID POWER AND PIPING SYSTEMS (-1-5-3)

Prerequisite: Program Admission

This course provides instruction for the fundamentals of how to safely operate hydraulic, pneumatic, and pump and piping systems. Theory and practical application concepts will be discussed. Topics include hydraulic system principles and components, pneumatic system principles and components, and the installation, maintenance, and troubleshooting of pump and piping systems.

AUMF 1220 – HMI'S AND INDUSTRIAL NETWORKING (2-5-4)

Prerequisites: AUMF 1120 or IDSY 1120 or IDSY 1220

This course provides hands-on development of programming skills for industrial Human Machine Interface (HMI) components used in automated industrial systems. Emphasis is placed on applying skills developed in previous courses for programmable logic controls (PLCs) to an industrial setting. This course includes advanced skills and techniques students can apply to HMI applications as well as communication and networking in an industrial environment. Emphasis is placed on relevant industrial networks within the geographical service area.

AUMF 2060 – WORK CELL DESIGN LABORATORY (1-2-2)

Prerequisite: Program Admission

Allows students to work in instructor-supervised teams, assembling and operating an automated production system's cell. Students will select equipment, write specifications, design fixtures and interconnects, integrate systems/provide interfaces, and operate the assigned system. Topics include work cell requirement analysis, work cell specifications, work cell assembly, work cell programming,

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work cell debugging/troubleshooting, and prototype or demonstration work cell operation.

AUMF 2200 – MECHATRONIC SYSTEMS PROGRAMMING AND TROUBLESHOOTING (1-4-5)

This course introduces the operational theory, systems terminology, PLC installation, and programming procedures for Programmable Logic Controllers. Emphasis is placed on PLC programming connections, installation, and start-up procedures. Other topics include timers and counters, relay logic instructions, and hardware and software applications.

AUMF 2210 – SMART FACTORY NETWORKING AND SENSORS (1-3-4)

This course introduces the operational theory, systems terminology, systems for Ethernet, wireless communication, and network security training. Each of the eight stations features a smart sensor or component such as: pneumatic/ vacuum, ultrasonic, photo eye, stack light, electrical current, and analog pressure smart sensors.

AUMF 2500 – MANUFACTURING OPERATIONS INTERNSHIP/PRACTICUM (0-9-3)**Prerequisite: Program Admission**

This course allows the student to gain real-world experience by working with a local industry in the appropriate field for a minimum of 135 hours during the term or, alternatively, an equivalent number of hours on real-world projects at the college.

AUTT 1010 – AUTOMOTIVE TECHNOLOGY INTRODUCTION (1-2-2)**Co-requisite: AUTT 1020**

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 workflow systems.

AUTT 1020 – AUTOMOTIVE ELECTRICAL SYSTEMS (2-14-7)**Co-requisite: AUTT 1010**

Introduces automotive electrical systems emphasizing the basic operating principles, diagnosis, and service/ repair of batteries, starting systems, charging systems, lighting systems, instrument cluster and driver information systems, and body electrical systems.

AUTT 1021 - AUTOMOTIVE ELECTRICAL SYSTEMS I (1-8-4)**Co-requisite: AUTT 1010**

This course introduces automotive electrical systems emphasizing the basic principles, diagnosis, and service/ repair of batteries, starting systems, starting system components, and basic lighting systems.

AUTT 1022 - AUTOMOTIVE ELECTRICAL SYSTEMS II (1-6-3)**Co-requisite: AUTT 1021**

This course emphasizes the basic principles, diagnosis, and service/repair of charging systems, advanced lighting systems, instrument cluster and driver information systems, and body electrical systems.

AUTT 1030 – AUTOMOTIVE BRAKE SYSTEMS (2-5-4)**Pre/Co-requisites: AUTT 1010, AUTT 1020**

Introduces brake systems theory and its application to automotive braking systems and anti-lock

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brake system (ABS). Topics include hydraulic system diagnosis and repair; drum brake diagnosis and repair; disc brake diagnosis and repair; power assist units diagnosis and repair; related systems (wheel bearings, parking brakes, electrical, etc.) diagnosis and repair; and electronic brake control systems.

AUTT 1040 – AUTOMOTIVE ENGINE PERFORMANCE (2-13-7)

Pre/Co-requisite: 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, and emission control systems diagnosis and repair.

AUTT 1050 – AUTOMOTIVE SUSPENSION AND STEERING SYSTEMS (1-7-4)

Pre/Co-requisite: 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; and wheel and tire diagnosis and repair.

AUTT 1060 – AUTOMOTIVE CLIMATE CONTROL SYSTEMS (3-4-5)

Prerequisite: AUTT 1020

Introduces the theory and operation of automotive heating, ventilation, and air conditioning (HVAC) 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; and refrigerant recovery, recycling, and handling.

AUTT 2010 – AUTOMOTIVE ENGINE REPAIR (2-10-6)

Pre/Co-requisite: AUTT 1010

This course introduces the student 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; and lubrication and cooling systems diagnosis and repair.

AUTT 2020 – AUTOMOTIVE MANUAL DRIVE TRAIN AND AXLES (2-5-4)

Pre/Co-requisite: AUTT 1010

This course introduces basics of rear-wheel drive, front-wheel drive, and four-wheel drive line operation, diagnosis, service, and related electronic controls. Topics include general drive train diagnosis; clutch diagnosis and repair; manual transmission/transaxles diagnosis and repair; drive shaft and half shaft, universal and constant velocity (CV) joint diagnosis and repair; drive axle diagnosis and repair; and four-wheel drive/all-wheel drive component diagnosis and repair.

AUTT 2030 – AUTOMOTIVE AUTOMATIC TRANSMISSIONS AND TRANSAXLES (2-7-5)

Prerequisite: 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

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transmission and transaxle diagnosis in vehicle and off vehicle transmission and transaxle maintenance, adjustment and repair.

AUTT 2110 – AUTO LIGHT DUTY DIESEL ENGINES (2-9-6)

Prerequisite: AUTT 2010

This course allows students in the auto service tech programs to learn about the basic systems and service procedures on modern light duty diesel vehicles. Topics include diesel engine operating principles and diagnostics; diesel fuel induction systems; diesel air induction systems; diesel exhaust and emissions systems; and basic preventive maintenance procedures followed for these types of vehicles in most service shops.

BIOL 1111 – BIOLOGY I (3-0-3) (degree level)

Prerequisite: Regular Admission

Co-requisite: 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, biotechnology, and evolution.

BIOL 1111L – BIOLOGY LAB I (0-3-1) (degree level)

Prerequisite: Regular Admission

Co-requisite: 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, biotechnology, and evolution.

BIOL 1112 – BIOLOGY II (3-0-3) (degree level)

Prerequisites: BIOL 1111, BIOL 1111L

Co-requisite: BIOL 1112L

Provides an introduction to basic 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 classification and characterizations of organisms, plant structure and function, animal structure and function, principles of ecology, and biosphere.

BIOL 1112L – BIOLOGY LAB II (0-3-1) (degree level)

Prerequisites: BIOL 1111, BIOL 1111L

Co-requisite: BIOL 1112

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

BIOL 2113 – ANATOMY AND PHYSIOLOGY I (3-0-3) (degree level)

Prerequisite: Regular Admission

Co-requisite: BIOL 2113L

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

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system, muscular system, and nervous and sensory systems. Emphasis placed on the identification of anatomical structures.

BIOL 2113L – ANATOMY AND PHYSIOLOGY LAB I (0-3-1) (degree level)

Prerequisite: Regular Admission

Co-requisite: BIOL 2113

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. Emphasis placed on the identification of anatomical structures.

BIOL 2114 – ANATOMY AND PHYSIOLOGY II (3-0-3) (degree level)

Prerequisites: BIOL 2113, BIOL 2113L

Co-requisite: 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 (0-3-1) (degree level)

Prerequisites: BIOL 2113, BIOL 2113L

Co-requisite: 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 (3-0-3) (degree level)

Prerequisites: BIOL 2113 and BIOL 2113L; or BIOL 1111 and BIOL 1111L

Co-requisite: 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, and microorganisms and human disease.

BIOL 2117L – INTRODUCTORY MICROBIOLOGY LAB (0-3-1) (degree level)

Prerequisites: BIOL 2113 and BIOL 2113L; or BIOL 1111 and BIOL 1111L

Co-requisite: 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 1240 – OFFICE PROCEDURES (2-2-3)

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 1300 – INTRODUCTION TO BUSINESS (3-0-3)

Introduces organization and management concepts of the business world and in the office

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environment. Topics include business in a global economy, starting and organizing a business, enterprise management, marketing strategies and financial management.

BUSN 1340 – CUSTOMER SERVICE EFFECTIVENESS (2-2-3)

This course emphasizes the importance of customer service throughout all business. Topics include customer service challenges and problem solving strategies for successful customer service, effective communication and dealing with difficult customers; empowerment, motivation, and leadership; customer retention and satisfaction measurement and excellence in customer service.

BUSN 1450 – COMPUTER APPLICATIONS FOR THE BUSINESS PROFESSIONAL (2-4-4)

This course covers the basic skills required to use word processing, spreadsheet and database management software through course demonstration, laboratory exercises and projects.

BUSN 1460 – KEYBOARDING AND DOCUMENTATION FORMATTING (1-6-4)

This course introduces and reinforces the touch system of keyboarding; placing emphases on establishing correct techniques and building speed and accuracy. In addition, this course introduces and applies document formatting skills including production of memos, email messages and letter from scratch using various styles and special features. Focus includes using correct grammar, spelling, punctuation, capitalization, number expressions, etc.

BUSN 1470 – PROFESSIONAL COMMUNICATION SKILLS (2-2-4)

This course equips participants with the tools to communicate and interact more effectively in person and in writing. Participants learn how to work in teams to create a collaborative environment for accomplishing goals. This course consists of the following: language of business, communication skills, working with information, business writing, team and collaborative skills, and resolving interpersonal conflict. This course incorporates the use of presentation software throughout to support the mission of professional communication skill development.

BUSN 2130 – EXPERT SPREADSHEET ANALYSIS (1-4-3)

Prerequisite: BUSN 1450

This course expands on basic spreadsheet software knowledge and skills. Topics will include: advanced workbook options and setting, applying custom formats and layouts, creating and applying advanced formulas and creating advanced charts and tables. This course is designed to prepare the student to take the related Microsoft Office Specialist certification exam.

BUSN 2140 – EXPERT WORD PROCESSING (2-2-4)

Prerequisite: BUSN 1450

This course expands on basic word processing knowledge and skills. Topics will include managing document options and settings, creating advanced documents and using advanced tools to create documents elements and references. This course is designed to prepare the student to take the related Microsoft Office Specialist certification exam.

BUSN 2150 – SOCIAL MEDIA AND ELECTRONIC COMMUNICATION (2-2-3)

Provides an overview of digital technology used for conducting business, such as, the fundamentals of communicating with others inside and outside the organization. Students will learn the application of business activities using various digital platforms. Emphasis is placed on Professional Social Media

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Conduct and Workplace Computer Security and Safety.

BUSN 2190 – BUSINESS DOCUMENT PROOFREADING AND EDITING (2-2-4)

Prerequisite: ENGL 1010 or ENGL 1101

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

BUSN 2240 – BUSINESS ADMINISTRATIVE ASSISTANT INTERNSHIP I (0-12-4)

Prerequisite: Must be in last semester of program; with advisor approval, may take concurrently with the last semester courses

Provides student work experience in a 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 Technology program faculty and/or persons designated to coordinate work experience arrangements.

BUSN 2250 – BUSINESS ADMINISTRATIVE ASSISTANT INTERNSHIP II (0-18-6)

Prerequisite: Must be in last semester of program; with advisor approval, may take concurrently with the last semester courses

Provides student work experience in a 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 Technology program faculty and/or persons designated to coordinate work experience arrangements.

BUSN 2290 – APPLIED BUSINESS TECHNOLOGY (2-23)

Prerequisite: BUSN 1240, BUSN 1460, BUSN 2130, BUSN 2140

This course focuses on applying knowledge and skills learned in prior courses taken in the program. Topics include: communication skills, records management skills, office management skills and career readiness. This course serves as a capstone course.

CHEM 1151 – SURVEY OF INORGANIC CHEMISTRY (3-0-3) (degree level)

Co-requisites: CHEM 1151L, MATH 1101 or MATH 1103 or MATH 1111

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 – SURVEY OF INORGANIC CHEMISTRY LAB (0-3-1) (degree level)

Co-requisites: CHEM 1151, MATH 1101 or MATH 1103 or MATH 1111

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.

CHEM 1152 – SURVEY OF ORGANIC CHEMISTRY AND BIOCHEMISTRY (3-0-3) (degree level)

Prerequisites: CHEM 1151, CHEM 1151L **Co-requisite:** CHEM 1152L

Provides an introduction to organic chemistry and biochemistry. This survey will include an overview of the properties, structure, nomenclature, reactions of hydrocarbons, alcohols, phenols, ethers, halides,

aldehydes, ketones, carboxylic acids, esters, amines, amides, the properties, structure, and function of carbohydrates, lipids, proteins, and enzymes, as well as intermediary metabolism. Topics include basic principles, hydrocarbons, hydrocarbon derivatives, heterocyclic rings and alkaloids, carbohydrates, lipids and fats, proteins, nucleic acids, and intermediary metabolism.

CHEM 1152L – SURVEY OF ORGANIC CHEMISTRY AND BIOCHEMISTRY LAB (0-3-1) (degree level)

Prerequisites: CHEM 1151, CHEM 1151L **Co-requisite:** CHEM 1152

Selected laboratory exercises paralleling the topics in CHEM 1152. The laboratory exercises for this course include basic principles of organic chemistry, hydrocarbons, hydrocarbon derivatives, heterocyclic rings and alkaloids, carbohydrates, lipids and fats, proteins, nucleic acids, and intermediary metabolism.

CHEM 1211 – CHEMISTRY I (3-0-3) (degree level)

Prerequisite: MATH 1101 or MATH 1103 or MATH 1111

Co-requisite: CHEM 1211L

Provides an introduction to basic chemical principles and concepts which explain the behavior of matter. Topics include measurement, physical and chemical properties of matter, atomic structure, chemical bonding, nomenclature, chemical reactions, and stoichiometry and gas laws.

CHEM 1211L – CHEMISTRY LAB 1 (0-3-1) (degree level)

Prerequisite: MATH 1101 or MATH 1103 or MATH 1111

Co-requisite: CHEM 1211

Selected laboratory exercises paralleling the topics in CHEM 1211. The laboratory exercises for this course include measurement, physical and chemical properties of matter, atomic structure, chemical bonding, nomenclature, chemical reactions, stoichiometry and gas laws.

CHEM 1212 – CHEMISTRY II (3-0-3) (degree level)

Prerequisites: CHEM 1211, CHEM 1211L

Co-requisite: CHEM 1212L

Continues the exploration of basic chemical principles and concepts. Topics include equilibrium theory, kinetics, thermodynamics, solution chemistry, acid-base theory, and nuclear chemistry.

CHEM 1212L – CHEMISTRY LAB II (0-3-1) (degree level)

Prerequisites: CHEM 1211, CHEM 1211L

Co-requisite: CHEM 1212

Selected laboratory exercises paralleling the topics in CHEM 1212. The laboratory exercises for this course include equilibrium theory, kinetics, thermodynamics, solution chemistry, acid-base theory, and nuclear chemistry.

CIST 1001 – COMPUTER CONCEPTS (2-4-4)

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), and mobile computing.

COURSE DESCRIPTIONS**CIST 1122 – HARDWARE INSTALLATION AND MAINTENANCE (2-5-4)****Prerequisite: 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 1130 – OPERATING SYSTEMS CONCEPTS (1-4-3)

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). This will include operating system fundamentals; installing, configuring, and upgrading operating systems; managing storage, file systems, hardware and system resources; troubleshooting, diagnostics, and maintenance of operating systems; and networking.

CIST 1220 – STRUCTURED QUERY LANGUAGE (SQL) (2-5-4)

Includes basic database design concepts and solving database retrieval and modification problems using the SQL language. Topics include database vocabulary, relational database design, data retrieval using SQL, data modification using SQL, developing and using SQL procedures.

CIST 1305 – PROGRAM DESIGN AND DEVELOPMENT (2-2-3)

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 three logic structures, file processing concepts, and arrays.

CIST 1306 – PROGRAMMING FOUNDATIONS (2-1-3)

Learn key computing concepts, building a solid foundation in programming with Swift. Learn about the impact of computing and apps on society, economies, and cultures while exploring iOS app development, including the app design process: brainstorming, planning, prototyping, and evaluating an app design of their own.

CIST 1401 – COMPUTER NETWORKING FUNDAMENTALS (2-4-4)**Prerequisite: 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.

COURSE DESCRIPTIONS**CIST 1510 – WEB DEVELOPMENT I (2-2-4)**

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 (2-2-4)

Prerequisite: 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 1601 – INFORMATION SECURITY FUNDAMENTALS (2-2-3)

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

CIST 1602 – SECURITY POLICIES AND PROCEDURES (3-0-3)

This course provides knowledge and experience to develop and maintain security policies and procedures. Students will explore the legal and ethical issues in information security and the various security layers, physical security, personnel security, operating systems, network, software, communication, and database security. Students will develop an information Security Policy and an Acceptable Use Policy.

CIST 2301 – APPLICATION DEVELOPMENT IN SWIFT I (2-2-4)

Build fundamental iOS app development skills with Swift. Master the core concepts and practices that professional programmers use daily and build a basic fluency in Xcode source and UI editors. Create iOS apps that adhere to standard practices, including the use of stock UI elements, layout techniques, and common navigation interfaces. Explore app design by brainstorming, planning, prototyping, and evaluation of an application

CIST 2302 – APPLICATION DEVELOPMENT IN SWIFT II (2-2-4)

Expand on the knowledge and skills developed in Swift Fundamentals by extending work in iOS app development, creating more complex and capable apps. Work with data from a server and explore new iOS APIs that allow for much richer app experiences including displaying large collections of data in multiple formats. Build an app in Xcode from the ground up with step-by-step.

CIST 2341 – C# PROGRAMMING I (2-5-4)

Prerequisite: CIST 1305

This course is designed to teach the basic concepts and methods of objected-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 Objects, and C#.NET Graphics.

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CIST 2342 – C# PROGRAMMING II (2-5-4)**Prerequisite: CIST 2341**

This course is an intermediate course in C#.NET Programming. It is assumed that the student knows the C#.NET syntax as well as basic object-oriented concepts. Intermediate C#.NET teaches client-server systems, n-tier development environments, relational databases, use of SQL to access data, the use of ADO.NET objects, methods and properties to access and update relational databases. Advanced features of C# window programming are explored.

CIST 2351 – PHP PROGRAMMING I (2-5-4)**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 2352 – PHP PROGRAMMING II (2-5-4)**Prerequisite: CIST 2351**

Reinforces and extends the concepts learned in PHP Programming I. Topics include database retrieval and updating, multiple form handling, regular expressions, and advanced array processing.

CIST 2371 – JAVA PROGRAMMING I (2-5-4)**Prerequisite: 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 2372 – JAVA PROGRAMMING II (2-5-4)**Prerequisite: CIST 2371**

This course is an intermediate course in Java Programming. It is assumed that the student knows the Java syntax as well as basic object-oriented concepts. The student will use classes and objects provided by the core Java API. They will use these classes to accomplish tasks such as database access, file access, exception handling, running threads, using sockets to talk across a network, and remotely calling methods using RMI techniques.

CIST 2411 – MICROSOFT CLIENT (2-4-4)**Prerequisite: Program Admission**

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

CIST 2412 – MICROSOFT SERVER INSTALLATION AND MAINTENANCE (2-4-4)**Prerequisite: 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

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maintain servers, application and data provisioning, and business continuity and high availability.

CIST 2413 – MICROSOFT SERVER NETWORKING (2-4-4)**Prerequisite: Program Admission**

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

CIST 2414 – WINDOWS SERVER IDENTITY SERVICES (2-4-4)**Prerequisite: Program Admission**

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

CIST 2550 – WEB DEVELOPMENT II (2-2-4)**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 2601 – IMPLEMENTING OPERATING SYSTEMS SECURITY (2-4-4)**Prerequisite: CIST 1601**

This course will provide knowledge and the practical experience necessary to configure the most common server platforms. Lab exercises will provide students with experience of establishing operating systems security for the network environment.

CIST 2602 – NETWORK SECURITY (2-4-4)**Prerequisite: CIST 1601**

This course provides knowledge and the practical experience necessary to evaluate, implement and manage secure information transferred over computer networks. Topics include network security, intrusion detection, types of attacks, methods of attacks, security devices, basics of cryptography and organizational security elements.

CIST 2611 – NETWORK DEFENSE AND COUNTERMEASURES (2-4-4)

Students will learn how to plan, design, install and configure firewalls that will allow key services while maintaining security. This will include protecting the Internal IP services, configuring a firewall for remote access, managing a firewall, and detecting and preventing network intrusions.

CIST 2612 – COMPUTER FORENSICS (2-4-4)**Prerequisites: CIST 1122, CIST 1601**

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.

COURSE DESCRIPTIONS**CIST 2613 – ETHICAL HACKING AND PENETRATION TESTING (2-4-4)****Prerequisite: CIST 1601**

This course teaches students the skills needed to obtain entry-level security specialist jobs. It provides a hands-on introduction to ethical hacking, and penetration testing. It is for individuals who want to enhance their information security skill set and help meet the growing demand for security professionals. Topics include network and computer attacks, footprinting and social engineering, port scanning, enumeration, OS vulnerabilities, hacking web servers, hacking wireless networks, cryptography and network protection systems.

CIST 2921 – IT ANALYSIS, DESIGN, AND PROJECT MANAGEMENT (2-5-4)

IT Analysis, Design, and Project Management provides 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 (1-4-3)**Prerequisite: 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 (0-9-3)

Provides the instructor and student a 3-credit-hour opportunity to develop special learning environments. Instruction is delivered through occupational work experiences, practicums, advanced projects, industry sponsored workshops, seminars, or specialized and/or innovative learning arrangements. To attain additional internship credit hours, the student can take CIST 2992 (4 credit hours) and/or CIST 2993 (5 credit hours).

COFC 1080 – CONSTRUCTION TRADES CORE (3-3-4)

This course introduces the student to the basic fundamentals of the construction trades. Topics include basic safety, construction math, hand and power tools, construction drawings, rigging, materials handling, and job-site communication and work ethic skills.

COLL 1010 – COLLEGE AND CAREER SUCCESS SKILLS (2-3-3)

Prerequisite: This course must be taken during the students first or second term of enrollment. North Georgia Technical College will grant credit if the student meets one of the following criteria: earned an AAS or higher degree, received "C" or better in a college success course of at least 3 credit hours, military credit of at least 3 credit hours, completion of 30 or more successful (grade of "C" or above) credit hours from a regionally accredited post-secondary institution other than NGTC, or completion of 30 or more successful (grade of "C" or above) credit hours from North Georgia Technical College prior to Fall 2015 (201612).

This course is designed to assist the learner to acquire skills necessary to achieve academic, personal, and professional success and to improve student retention. Areas of importance include getting off to a good start, learning and personality styles, time and personal financial management, stress management and wellness, studying and test taking skills, communication skills, career planning and goal setting, computer applications/ technology skills and employability/professional skills.

COURSE DESCRIPTIONS**COSM 1000 – INTRODUCTION TO COSMETOLOGY THEORY (4-0-4)****Prerequisite: Program Admission**

Introduces both fundamental theory and practices of 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 (1-5-3)**Prerequisite: COSM 1000, COSM 1020**

Provides instruction in the chemistry and chemical reactions of permanent wave solutions and relaxers and 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.

COSM 1020 – HAIR CARE AND TREATMENT (1-4-3)**Co-requisite: 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 (1-6-3)**Prerequisites: COSM 1000, COSM 1020**

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

COSM 1040 – STYLING (1-5-3)**Prerequisites: COSM 1000, COSM 1020**

Introduces the fundamental theory and skills required to create shaping, pin curls, finger waves, roller placement, blow dry styling, thermal curling, thermal pressing, thermal waving, artificial hair and augmentation, and comb-outs. Laboratory training includes styling training on manikin. Topics include braiding/intertwining hair, styling principles, pin curls, roller placement, finger waves, 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 (1-5-3)**Prerequisites: COSM 1000, COSM 1020**

Introduces the theory and application of temporary, semi-permanent, demi-permanent deposit only, and permanent hair coloring, hair lightening, and color removal products and application. Topics include principles of color theory, hair structure, color, and tone, classifications of color, hair lightening, color removal, application procedures, safety precautions, client consultation, product knowledge, hair color challenges, corrective solutions, and special effects.

COURSE DESCRIPTIONS**COSM 1060 – FUNDAMENTALS OF SKIN CARE (1-6-3)****Prerequisite: 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 (1-26-3)**Prerequisite: 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 (1-6-3)**Prerequisites: COSM 1000, COSM 1020**

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 scalp and hair treatments; haircutting; styling; dispensary; reception; safety precautions/ decontamination; and Hazardous Duty Standards Act compliance.

COSM 1090 – HAIR SERVICES PRACTICUM I (1-6-3)**Prerequisites: COSM 1000, COSM 1020**

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; scalp and hair 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 and Regulations guidelines, and State Board foundation prep.

COSM 1100 – HAIR SERVICES PRACTICUM II (1-6-3)**Prerequisites: COSM 1000, COSM 1010, COSM 1020, COSM 1030, COSM 1040, COSM 1050**

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; scalp, and hair treatment; haircutting; styling; dispensary; reception; safety precautions/decontamination; and Hazardous Duty Standards Act compliance.

COSM 1110 – HAIR SERVICES PRACTICUM III (1-6-3)**Prerequisites: COSM 1000, COSM 1010, COSM 1020, COSM 1030, COSM 1040, COSM 1050**

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

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requirements for this course may be met in a laboratory setting. Topics include permanent waving and relaxers; hair color and lightening; scalp and hair treatments; haircutting; dispensary; styling; reception; safety precautions/decontamination; Hazardous Duty Standards Act compliance; and state licensure preparation.

COSM 1115 – HAIR SERVICES PRACTICUM IV (0-6-2)

Prerequisites: COSM 1000, COSM 1010, COSM 1020, COSM 1030, COSM 1040, COSM 1050

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 (3-0-3)

Co-requisites: COSM 1000

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

COSM 1125 – SKIN AND NAIL CARE PRACTICUM (0-6-2)

Prerequisites: COSM 1000, 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 (3-0-3)

Prerequisite: Program 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 (3-0-3)

Prerequisite: 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; and security systems at work: putting it all together.

CRJU 1030 – CORRECTIONS (3-0-3)

Prerequisite: Program Admission

Provides an analysis of all phases of the American correctional system and practices, including its

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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; alternative sentencing; rehabilitation; community involvement; and staffing.

CRJU 1040 – PRINCIPLES OF LAW ENFORCEMENT (3-0-3)**Prerequisite: Program Admission**

This course examines the principles of the organization, administration, and 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 1043 – PROBATION AND PAROLE STANDARDS (3-0-3)**Prerequisite: Program Admission**

This course will cover the history of both juvenile and adult probation as well as the history of parole. The probation and parole systems will be covered generally with a special emphasis on the Georgia systems and related laws. Topics include history and philosophy of probation and parole; function of the probation and parole systems; Georgia law related to probation and parole; characteristics and roles of probation and parole officers; and special issues and programs of probation and parole.

CRJU 1062 – METHODS OF CRIMINAL INVESTIGATION (3-0-3)**Prerequisite: 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 for investigating various crimes.

CRJU 1063 – CRIME SCENE PROCESSING (1-4-3)**Prerequisite: CRJU 1010**

This course presents students with practical exercises dealing with investigating crime scenes and gathering various forms of physical evidence. Emphasis is placed on crime scene assessment, search, fingerprinting, and evidence collection. Topics include crime scene management, evidence characteristics, identification, documentation, and collection as well as techniques for developing and lifting latent fingerprints.

CRJU 1068 – CRIMINAL LAW FOR CRIMINAL JUSTICE (3-0-3)**Prerequisite: 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 Offenses; 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 1075 – REPORT WRITING (3-0-3)**Prerequisite: Program Admission**

Explains and demonstrates the effectiveness of the entire criminal investigation process by the quality of notes, reports, and accurate documentation. An examination of what goes into the preparation,

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content, elements, mechanics, and format of documenting the criminal investigation process. Topics include field notes, initial information, observations, evidence, victims, witnesses, property, neighborhood canvass, crime scene, laboratory analysis and results, investigative follow-up, suspect statements, and the characteristics essential to quality report writing.

CRJU 1400 – ETHICS AND CULTURAL PERSPECTIVES FOR CRIMINAL JUSTICE (3-0-3)**Prerequisite: Program Admission**

This course provides an exploration of ethics and cultural perspectives 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 profession 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 2020 – CONSTITUTIONAL LAW FOR CRIMINAL JUSTICE (3-0-3)**Prerequisite: CRJU 1010**

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

CRJU 2050 – CRIMINAL PROCEDURE (3-0-3)**Prerequisite: CRJU 1010**

Introduces the procedural law of the criminal justice system that 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 on the State and Federal level.

CRJU 2060 – CRIMINOLOGY (3-0-3)**Prerequisite: Program Admission**

Introduces the nature, extent, and factors related to criminal behavior and the etiology of criminal offenses and offenders. Topics include sociological, psychological, and biological causes of crime; effectiveness of theories in explaining crime; theory integration; and application of theory to selected issues.

CRJU 2070 – JUVENILE JUSTICE (3-0-3)**Prerequisite: CRJU 1010**

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 (0-9-3)**Prerequisite: Completion of all Required CRJU Courses with grade of C or higher**

Provides experiences necessary for further professional development and exposure to related agencies

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in the criminal justice field. The student will pursue a professional research project supervised by the instructor. Topics include criminal justice theory applications.

CRJU 2100 – CRIMINAL JUSTICE INTERNSHIP/EXTERNSHIP (0-9-3)

Prerequisite: Completion of all Required CRJU Courses with grade of C or higher

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 applications.

CTDL 1010 – FUNDAMENTALS OF COMMERCIAL DRIVING (3-0-3)

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 and emphasis on safety that will continue throughout the program.

CTDL 1021 – COMBINATION VEHICLE BASIC OPERATION AND RANGE WORK (1-4-3)

Co-requisite: 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 1031 – COMBINATION VEHICLE ADVANCED OPERATIONS (1-4-3)

Co-requisite: CTDL 1021

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.

CUUL 1000 – FUNDAMENTALS OF CULINARY ARTS (3-2-4)

Provides an overview of the professionalism in culinary arts, culinary career opportunities, chef history, pride, and esprit de corps. Introduces principles and practices necessary to include food, supply, and equipment selection; procurement; receiving; storage; and distribution. Topics include cuisine, food service organizations, career opportunities, food service styles, basic culinary management techniques, professionalism, culinary work ethics, quality factors, food tests, pricing procedures, cost determination and control, selection, procurement, receiving, storage, and distribution. Laboratory demonstration and student experimentation parallel class work.

CUUL 1110 – CULINARY SAFETY AND SANITATION (1-3-2)

Emphasizes fundamental kitchen and dining room safety, sanitation, maintenance, and operation procedures. Topics include cleaning standards, O.S.H.A., M.S.D.S. guidelines, sanitary procedures following SERV-SAFE guidelines, HACCAP, safety practices, basic kitchen first aid, operation of equipment, cleaning and maintenance of equipment, dishwashing, and pot and pan cleaning. Laboratory practice parallels class work.

COURSE DESCRIPTIONS**CUUL 1120 – PRINCIPLES OF COOKING (2-10-6)****Pre/Co-requisite: CUUL 1110**

This course introduces fundamental food preparation terms, concepts, and methods. Course content reflects American Culinary Federation Educational Institute apprenticeship training objectives. Topics include weights and measures, conversions, basic cooking principles, methods of food preparation, recipe utilization, and nutrition. Laboratory demonstrations and student experimentation parallel class work.

CUUL 1122 – FOUNDATIONS OF COOKING PRINCIPLES (1-5-3)

Introduces fundamental food preparation terms, concepts, and methods. Course content reflects American Culinary Federation Educational Institute apprenticeship training objectives. Topics include weights and measures, conversions, basic cooking principles, methods of food preparation, recipe utilization, and nutrition. Laboratory demonstrations and student experimentation parallel class work.

CUUL 1124 – FOUNDATIONS OF COOKING TECHNIQUES (1-5-3)

This course introduces fundamental food preparation terms, concepts, and methods. Course content reflects American Culinary Federation Educational institute apprenticeship training objectives. Topics include weights and measures, conversions, methods of food preparations, classical knife cuts, kitchen aromatics, regional cuisine history, and introduction to safe food preparations, recipe utilization, and nutrition. Laboratory demonstrations student experimentations and parallels class work. Course Capstone is based on The American Culinary Federations Certifications: Certified Culinarian written and practical exams.

CUUL 1129 – FUNDAMENTALS OF RESTAURANT OPERATIONS (2-5-4)**Prerequisite: CUUL 1120**

Introduces the fundamentals of dining and beverage service and experience in preparation of a wide variety of quantity foods. Course content reflects American Culinary Federation Educational Institute apprenticeship training objectives. Topics include dining service/guest service, dining service positions and functions, international dining services, restaurant business laws, preparation and setup, table side service, beverage service and setup, kitchen operational procedures, equipment use, banquet planning, recipe conversion, food decorating, safety and sanitation, and production of quantity food. Laboratory practice parallels class work.

CUUL 1220 – BAKING PRINCIPLES (2-7-5)**Prerequisite: CUUL 1120**

Baking Principles presents the fundamental terms, concepts, and methods involved in preparation of yeast and quick breads and baked products. Emphasis is placed on conformance of sanitation and hygienic work habits with health laws. Course content reflects American Culinary Federation Educational Institute cook and pastry apprenticeship training objectives, along with Retail Bakery Association training program. Topics include baking principles; science and use of baking ingredients for breads, desserts, cakes, pastries; weights, measures, and conversions; preparation of baked goods; baking sanitation and hygiene; baking supplies; and equipment. Laboratory demonstrations and student experimentation parallel class work.

CUUL 1320 – GARDE MANGER (1-8-4)**Prerequisite: CUUL 1120**

Introduces basic pantry manger principles, utilization, preparation, and integration into other kitchen

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operations. Course content reflects American Culinary Federation Educational Institute apprenticeship pantry, garnishing, and presentation training objectives. Topics include pantry functions; garnishes, carving, and decorating; buffet presentation; cold preparations; hot/cold sandwiches; salads, dressings and relishes; breakfast preparation; hot/ cold hors d'oeuvres; chaudfroids, gelees, and molds; and pats and terrines. Laboratory practice parallels class work.

CUUL 1370 – CULINARY NUTRITION AND MENU DEVELOPMENT (1-5-3)

Prerequisite: CUUL 1120

This course emphasizes menu planning for all types of facilities, services, and special diets. Topics include menu selection, menu development and pricing, nutrition, special diets, cooking nutritional foods, and organics. Laboratory demonstrations and student management and supervision parallel class work.

CUUL 2130 – CULINARY PRACTICUM (1-15-6)

Prerequisites: CUUL 1220, CUUL 1320

This course familiarizes the student with the principles and methods of sound decision-making in the hospitality industry and provides the student with the opportunity to gain management/supervisory experience in an actual job setting. Students will be placed in an appropriate restaurant, catering, or other food service business for four days per week throughout the semester. On-the-job training topics include restaurant management/on-off premise catering/food service business, supervisory training and management training, on-off premise catering/ food service business, supervisory training and management training, on-off premise catering, hotel kitchen organization, kitchen management, restaurant kitchen systems, institutional food systems, kitchen departmental responsibilities, and kitchen productivity.

CUUL 2140 – ADVANCED BAKING AND INTERNATIONAL CUISINE (2-10-6)

Prerequisites: CUUL 1220, CUUL 1320

This course introduces international cuisine and acquisition of advanced cookery techniques. Course content reflects American Culinary Federation Educational Institute cook apprenticeship training objectives and provides background for those aspiring to become chefs. Topics include international cuisine, advanced grill cookery, advanced vegetable cookery, advanced meat cookery, advanced line cookery, advanced fry cookery, and nutrition. Laboratory practice parallels class work. Provide in-depth experience in preparing many types of baked goods commonly found in restaurants and hotels. Course content reflects American Culinary Federation and Retail Bakery Association training objectives and provides background for those aspiring to become pastry chefs or bakery supervisors. Topics include breads, pies, cakes, pastry dough, puff pastry, icing, filling, and candy. Laboratory practice parallels class work.

CUUL 2160 – CONTEMPORARY CUISINE (1-8-4)

Prerequisites: CUUL 1220, CUUL 1320

This course emphasizes all modern cuisine and introduces management concepts necessary to the functioning of a commercial kitchen. Topics include international cuisine, cuisine trends, kitchen organization, kitchen management, kitchen supervision, competition entry, nutrition, menu selection, layout and design, and on/off premise catering. Laboratory demonstration and student experimentation parallel class work.

COURSE DESCRIPTIONS**CUUL 2180 – IRISH CUISINE AND CULTURE (1-5-3)****Prerequisites: CUUL 1110, CUUL 1120**

Emphasis is on terms, concepts, and methods necessary to Irish Cuisine and its culture. Topics include historical overview of the development of Irish gastronomy/cuisine, the role of contemporary figures of Irish gastronomy/ cuisine, introduction to the use of indigenous ingredients and Irish local Artisan food produces, regional cooking principles and history, and methods of Irish regional food preparation. Students will write a reflective essay based on their International culinary experiences. Laboratory demonstrations and student experimentation parallel class.

CUUL 2190 – PRINCIPLES OF CULINARY LEADERSHIP (3-0-3)

Familiarizes the student with principles, skills, methods, and behaviors necessary for sound leadership of people in their 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 leaders, managers, and supervisors deal with a dramatically changing workplace that is affected by technology changes, a more competitive and global marketplace, corporate restructuring, and the changing nature of work and the workforce. Topics include Leadership Principles, Leadership Relative to the Function of Management; Decision Making Process; Building and Effect Organizational Culture; Human Resource Management; and Delegating Management, Organization, and Control.

CUUL 2250 – ADVANCED BAKING PRINCIPLES (2-10-6)**Prerequisite: CUUL 1220**

Provides in-depth experience in preparing many types of baked goods found in restaurants, country clubs, and hotels. Course content reflects American Culinary Federation and Retail Bakery Association training objectives and provides background for those aspiring to become Executive Pastry Chefs, Working Pastry Chefs and Bakers. Topics include Artisan Breads, Tarts, Tortes, Pastry Dough, Puff Pastry, Icing (buttercreams and meringues), Filling (sauces and coulis), Sugar, Chocolates, and Confections. Laboratory practice parallels class work.

ECCE 1101 – INTRODUCTION TO EARLY CHILDHOOD CARE AND EDUCATION (3-0-3)

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 (3-0-3)

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 (2-2-3)

Introduces the theory, practices, and requirements for establishing and maintaining a safe, healthy learning environment. Topics include Health issues, safety issues, child abuse and neglect, and nutritional needs of children. This course requires CPR and First Aid certification.

COURSE DESCRIPTIONS**ECCE 1112 – CURRICULUM AND ASSESSMENT (2-2-3)****Pre/Co-requisite: 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 (2-2-3)

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.

ECCE 1121 – EARLY CHILDHOOD CARE AND EDUCATION PRACTICUM (1-6-3)**Co-requisite: 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. 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 (2-2-3)**Pre/Co-requisite: 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 (2-2-3)**Pre/Co-requisite: ECCE 1103**

Presents the process of introducing math and science 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.

ECCE 2201 – EXCEPTIONALITIES (3-0-3)**Pre-requisite: ECCE 1103**

Provides for the development of knowledge and skills that will enable the student to understand

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individuals with special needs and appropriately guide their development. Special emphasis is placed on acquainting the student with programs and community resources 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 (3-0-3)

Enables the student to value the complex characteristics of children's families and communities and to develop culturally responsive practices which will support family partnerships. Students use their understanding to build reciprocal relationships which promote children's development and learning. Students are introduced to local programs and agencies that offer services to children and families within the community. Topics include professional responsibilities, family/social issues, community resources, family education and support, teacher- family communication, community partnerships, social diversity and anti-bias concerns, successful transitions, and school-family activities.

ECCE 2203 – GUIDANCE AND CLASSROOM MANAGEMENT (3-0-3)

Co-requisite: 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 include developmentally appropriate child guidance (birth through 12); effective classroom management, including preventive and interceptive techniques; understanding challenging behaviors; and implementing guidance plans.

ECCE 2245 – EARLY CHILDHOOD CARE AND EDUCATION INTERNSHIP I (0-18-6)

Pre-requisites: ECCE 1101, ECCE 1103

Co-requisite: 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. Topics include promoting child development and learning; building family and community relations; observing, documenting, and assessing to support young children and families; using developmentally effective approaches; using content knowledge to build meaningful curriculum; and becoming a professional.

ECCE 2310 – PARAPROFESSIONAL METHODS AND MATERIALS (3-0-3)

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 (3-0-3)

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 professionalism and employment and paraprofessional roles and responsibilities.

ECCE 2320 - PROGRAM ADMINISTRATION AND FACILITY MANAGEMENT (3-0-3)

Provides training in planning, implementation, and maintenance of an effective early childhood

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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 (3-0-3)

Provides training in early childhood 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; staff evaluations; ethical responsibilities to employees; and time and stress management.

ECCE 2340 – FAMILY CHILD CARE PROGRAM MANAGEMENT (3-0-3)**Prerequisites: 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 CHILD CARE BUSINESS MANAGEMENT (3-0-3)

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 (3-0-3) (degree level)**Prerequisite: 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 1900 – INTRODUCTION TO ELECTRICAL LINEWORKER (3-0-3)

This course provides a comprehensive summary of lineworker requirements. Topics include general electrical safety, effective communication skills, positive work ethics, problem solving, and job interview skills.

ELCR 1920 – ELECTRICAL LINEWORKER SKILLS (1-2-3)

This course familiarizes the student with the fundamental skills needed for an electrical lineworker. Topics include hand tools, power tools, and basic electric fundamentals. Students also participate in lineman simulations and completes an observation-based instruction activity.

ELCR 1940 – CDL WITH PINTLE HOOK RESTRICTION: RANGE AND ROAD WORK (1-3-4)

This course familiarizes students with truck instruments, controls, and performing basic maneuvers required to drive safely in a Class A vehicle with a pintle hook restriction. Each student must demonstrate proficiency in performing range operations such as operating a truck through clearance

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maneuvers, backing, turning, parallel parking and coupling/non-coupling while on the range. Each student must also demonstrate proficiency when driving on the road under a multitude of conditions.

ELTR 1020 – ALTERNATING CURRENT FUNDAMENTALS (2-2-3)

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.

ELTR 1060 – ELECTRICAL PRINTS, SCHEMATICS, AND SYMBOLS (1-2-2)

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 (3-2-4)

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 (1-4-3)

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.

ELTR 1150 – INTERPRETING THE NATIONAL CODE (5-0-5)

This course facilitates the reading and interpretation of the National Electrical Code, and is designed for students with some experience in electrical wiring and use of the NEC. Students with an interest in electrical wiring and the NEC will, upon completion of the course, be able to find information in the Code needed to do residential, commercial, farm, and industrial wiring and to be successful with electrical licensing examinations.

ELTR 1180 – ELECTRICAL CONTROLS (2-4-4)

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, operation, application, and ladder diagrams. Topics include ladder and wire diagrams, switching circuits, manual controls and devices, automatic controls and devices, application and operation of controllers and controls, and variable speed controls.

ELTR 1205 – RESIDENTIAL WIRING I (2-2-3)

Introduces residential wiring practices and procedures. Topics include print reading, National Electrical Code, wiring materials and methods, and control of luminaries and receptacle installation.

ELTR 1210 – RESIDENTIAL WIRING II (2-2-3)

Provides additional instruction on wiring practices in accordance with the National Electrical Code. Topics include single and multi-family load calculations, single and multi-family service installations, sub-panels and feeders, and specialty circuits.

COURSE DESCRIPTIONS**ELTR 1520 – GROUNDING AND BONDING (1-2-2)**

Presents the theory and practical applications for grounding and bonding systems. Emphasis will be placed on the use of the requirements of the National Electrical Code. Topics include branch circuit grounding, equipment grounding/bonding, service grounding/bonding, and earth connections.

ELTR 1525 – PHOTOVOLTAIC SYSTEMS (3-4-5)

This class introduces techniques and method on how to install residential and commercial photovoltaic systems.

EMSP 1110 – INTRODUCTION TO THE EMT PROFESSION (2-2-3)

Prerequisite: Program Admission

Co-requisites: EMSP 1120, EMSP 1150

This course serves as the introductory course to the Emergency Medical Services (EMS) profession. It orients the student to the pre-hospital 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 (2-2-3)

Prerequisite: Program Admission

Co-requisites: EMSP 1110, EMSP 1150

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 (2-2-3)

Prerequisites: EMSP 1110, EMSP 1120, EMSP 1150

Co-requisites: EMSP 1140, EMSP 1160

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 assessment.

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EMSP 1140 – SPECIAL PATIENT POPULATIONS (2-2-3)**Prerequisites:** EMSP 1110, EMSP 1120, EMSP 1150**Co-requisites:** EMSP 1130, EMSP 1160

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 (2-2-3)**Prerequisite:** Program Admission**Co-requisites:** EMSP 1110, EMSP 1120

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 (0-3-1)**Prerequisites:** EMSP 1110, EMSP 1120, EMSP 1150**Co-requisites:** EMSP 1130, EMSP 1140

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 clinical and assessment-based management.

EMSP 1510 – ADVANCED CONCEPTS FOR THE AEMT (2-2-3)**Prerequisite:** Completion of EMT Certificate or the equivalent OR hold a current GA State EMT, EMT-I license**Co-requisites:** EMSP 1520, EMSP 1530, EMSP 1540

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 (2-2-3)**Prerequisite:** Completion of EMT Certificate or the equivalent OR hold a current GA State EMT, EMT-I license**Co-requisites:** EMSP 1510, EMSP 1530, EMSP 1540

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

COURSE DESCRIPTIONS

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 (0-2-1)

Prerequisite: Completion of EMT Certificate or the equivalent OR hold a current GA State EMT, EMT-I license

Co-requisites: EMSP 1510, EMSP 1520, EMSP 1540

This course provides supervised clinical experience in various clinical settings.

EMSP 1540 – CLINICAL AND PRACTICAL APPLICATIONS FOR THE AEMT (0-2-1)

Prerequisite: Completion of EMT Certificate or the equivalent OR hold a current GA State EMT, EMT-I license

Co-requisites: EMSP 1510, EMSP 1520, EMSP 1530

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 clinical and assessment-based management.

EMSP 2110 – FOUNDATIONS OF PARAMEDICINE (2-2-3)

Prerequisite: Completion of EMT Certificate or the equivalent OR hold a current GA State EMT, EMT-I license, AEMT, or Cardiac Tech license

Co-requisites: EMSP 2120, EMSP 2130, EMSP 2510, EMPS 2520

This course introduces the student to the role of the paramedic in today's healthcare system, with a focus on the pre-hospital 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 (3-0-3)

Co-requisites: EMSP 2110, EMSP 2130, EMSP 2510, EMSP 2520

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 (2-2-3)

Co-requisites: EMSP 2110, EMSP 2120, EMSP 2510, EMSP 2520

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

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Management, Respiration; and Artificial Ventilation.

EMSP 2140 – ADVANCED CARDIOVASCULAR CONCEPTS (3-2-4)

Co-requisites: EMSP 2310, EMSP 2320, EMSP 2530, EMSP 2540

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 (2-2-3)

Co-requisites: EMSP 2140, EMSP 2320, EMSP 2530, EMSP 2540

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 (4-2-5)

Co-requisites: EMSP 2140, EMSP 2310, EMSP 2530, EMSP 2540

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 (3-2-4)

Co-requisites: EMSP 2340, EMSP 2550, EMSP 2560, EMSP 2570, EMSP 2710, EMSP 2720

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. During this course, the student will complete a nationally recognized pre-hospital trauma course (i.e. PHTLS, ITLS, ATT< etc.). 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 (3-2-4)

Co-requisites: EMSP 2330, EMSP 2550, EMSP 2560, EMSP 2570, EMSP 2710, EMSP 2720

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. During this course, the student will also complete a nationally recognized pediatric course (i.e. EPC, PALS, PEPP, etc.). Topics include

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Obstetrics; Gynecology; Neonatal Care; Pediatrics; Geriatrics; and Patients with Special Challenges.

EMSP 2510 – CLINICAL APPLICATIONS FOR THE PARAMEDIC I (0-6-2)

Co-requisites: EMSP 2110, EMSP 2120, EMSP 2130, EMSP 2520

This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2520 – CLINICAL APPLICATIONS FOR THE PARAMEDIC II (0-6-2)

Co-requisites: EMSP 2110, EMSP 2120, EMSP 2130, EMSP 2510

This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2530 – CLINICAL APPLICATIONS FOR THE PARAMEDIC III (0-6-2)

Co-requisites: EMSP 2140, EMSP 2310, EMSP 2320, EMSP 2330, EMSP 2540

This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2540 – CLINICAL APPLICATIONS FOR THE PARAMEDIC IV (0-3-1)

Co-requisites: EMSP 2140, EMSP 2310, EMSP 2320, EMSP 2530

This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2550 – CLINICAL APPLICATIONS FOR THE PARAMEDIC V (0-3-1)

Co-requisites: EMSP 2330, EMSP 2340, EMSP 2560, EMSP 2570, EMSP 2710, EMSP 2720

This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2560 – CLINICAL APPLICATIONS FOR THE PARAMEDIC VI (0-3-1)

Co-requisites: EMSP 2330, EMSP 2340, EMSP 2550, EMSP 2570, EMSP 2710, EMSP 2720

This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2570 – CLINICAL APPLICATIONS FOR THE PARAMEDIC VII (0-3-1)

Co-requisites: EMSP 2330, EMSP 2340, EMSP 2550, EMSP 2560, EMSP 2710, EMSP 2720

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This course provides the paramedicine student with supervised clinical experience in various clinical settings. This is 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).

EMSP 2710 – FIELD INTERNSHIP FOR THE PARAMEDIC (0-6-2)

Co-requisites: EMSP 2330, EMSP 2340, EMSP 2550, EMSP 2560, EMSP 2570, EMSP 2720

Provides supervised field internship experience in the pre-hospital advanced life support setting. Topics include Field Internship.

EMSP 2720 – PRACTICAL APPLICATIONS FOR THE PARAMEDIC (2-2-3)

Co-requisites: EMSP 2330, EMSP 2340, EMSP 2550, EMSP 2560, EMSP 2570, EMSP 2710

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 0988 – INTERMEDIATE READING AND WRITING (2-3-3) (institutional credit only)

This course integrates academic reading and writing skills to prepare students to be career and college ready. Topics include reading and writing processes, study strategies, critical thinking strategies, and research skills. Upon successful completion of this course, students will be able to apply these skills toward understanding and composing unified, coherent, and well-developed texts at a career and college-ready level. The course fulfills the requirements for the highest level of learning support reading and/or English and prepares students for ENGL 1101.

ENGL 1010 – FUNDAMENTALS OF ENGLISH I (3-0-3) (Basic Skills – non-degree level)

Prerequisites: ENGL 0090 or Appropriate Writing (English) Placement Test Score and READ 0090 or Appropriate Reading 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 1101 – COMPOSITION AND RHETORIC (3-0-3) (degree level)

Prerequisites: Appropriate Degree Level Writing (English) and 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 (3-0-3) (degree level)

Prerequisite: ENGL 1101 with C or better

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.

COURSE DESCRIPTIONS**ENGL 1105 – WORKPLACE AND TECHNICAL COMMUNICATION (3-0-3) (degree level)****Prerequisite: ENGL 1101 with C or better**

Emphasizes practical knowledge of technical communications techniques, procedures, and reporting formats used in industry and business. Topics include reference use and research, device and process description, formal technical report writing, business correspondence, and technical report presentation.

ENGL 2130 – AMERICAN LITERATURE (3-0-3) (degree level)**Prerequisite: ENGL 1101 with C or better**

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.

ESCI 1020 – INTRODUCTION TO GIS (3-0-3)

Introduction to the theory and applications of geospatial information technology. Topics include remote sensing, GPS data collection, GIS data types, editing GIS data, and spatial data analysis with emphasis on applications to natural resources.

ESCI 1080 – SURVEY OF ENVIRONMENTAL ETHICS (3-0-3)

This course examines the ethical dilemmas faced by human cultures throughout history in their use of land and natural resources. Topics include: the environmental ethics of game and wildlife management, natural resource use, water management, biological diversity, fisheries, ocean protection, and agriculture production. Discussions will focus on different perspectives of the environment and ways to resolve ethical disputes over land management and resource use, as well as professional societies and their impacts on environmental ethics.

ESCI 1130 – INTRODUCTION TO FISH AND WILDLIFE MANAGEMENT (3-0-3)

A discussion of the principles governing conservation and management of fish and wildlife resources and the interrelation of wildlife management and other forest uses. Topics include: the history of fish and wildlife management; professional opportunities and responsibilities; fundamental ecological concepts of sound management; basic management concepts, procedures, and techniques; fundamentals of habitat management; people, public policy, and public relations.

ESCI 2030 – FOREST, STREAM, AND WETLAND ECOLOGY (2-3-3)

This course evaluates forests, streams, rivers, and wetlands from an ecosystem perspective, including stream development, biological communities, ecological processes, and methods of assessment as applied to evaluation of common environmental problems.

ESCI 2060 – ADVANCED WILDLIFE MANAGEMENT (2-5-4)

An in-depth analysis of management principles and processes for wildlife and wildlife habitats. Evaluates wildlife physiology and its relationship to wildlife management. Topics include forested ecosystems; stand level management; habitat management for major game species of the southeast; habitat management for non-game and endangered species; management at the landscape level; plant species identification; and reproductive, genetic, and nutritional physiology.

COURSE DESCRIPTIONS**ESCI 2070 – WILDLIFE DAMAGE (2-5-4)**

This course teaches the theory and practice of assessing and controlling damage done by wild and feral vertebrate animals. Topics include wildlife damage identification and assessment; the practical and biological basis for pest control; use of traps, toxicants, repellents, and exclusions; human-wildlife conflicts; and wildlife diseases.

ESCI 2080 – WILDLIFE TECHNIQUES (1-7-4)

This course teaches techniques in wildlife management and research. Topics include experimental design and planning; species, sex, and age identification; indices of physiological and nutritional condition; population estimation, age structure, and sex ratio; capturing and handling wild animals; and radio telemetry.

ESCI 2105 – FISHERIES MANAGEMENT (2-5-4)

This course teaches the science and management of fishery resources. Topics include basic principles for managing fish populations; economic, political, and social forces that influence management; methods of research and management; and farm pond, stream, and still water management.

ESCI 2110 – FISHERIES TECHNIQUES (2-5-4)

This course teaches techniques for fisheries research and management. Topics include fish physiology; population dynamics and assessment; habitat restoration, enhancement, and modification; identification, life history, and environmental requirements of major commercial and sport fishes; and sampling techniques and equipment.

ESCI 2120 – QUANTITATIVE FIELD SAMPLING AND ANALYSIS (2-5-4)

This course instructs students in the process of data collection in the field. The focus is on field techniques in lentic and lotic aquatic habitat assessment, as well as wildlife habitat assessment techniques and methods. Students will also be familiarized with basic forest measurements, experimental design, and data analysis and statistics.

ESCI 2130 – AQUACULTURE (1-5-3)

This course is an introduction to and an investigation of aquaculture and aquaculture systems. Topics include types of aquaculture systems, species, water quality, feeding and nutrition, physiological aspects (reproduction and disease), harvesting, and hauling.

ESCI 2160 – ENVIRONMENTAL TOXICOLOGY (3-0-3)

This course focuses on the effects of environmental contaminants at the individual, population, and ecosystem level. Topics include toxicity test methods, environmental fate of contaminants, and the physiological and ecological effects of selected heavy metals, chlorinated organics, and pesticides.

ESCI 2170 – ENVIRONMENTAL TECHNOLOGY INTERNSHIP (0-9-3)**Prerequisite: Program Instructor Approval**

The purpose of this internship is to reinforce skills learned in the program of study and allow students to practice in a workplace setting. Topics include work ethics, quality, productivity, appropriate work habits, and other applications of knowledge and skills.

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FORS 1030 – DENDROLOGY (1-6-3)

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.

HIST 1111 – WORLD HISTORY I to 1500 (3-0-3) (degree level)

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

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 since 1500 (3-0-3) (degree level)

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

Emphasizes the study of the intellectual, cultural, scientific, political, and social contributions of the civilizations 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 to 1877 (3-0-3) (degree level)

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

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 since 1865 (3-0-3) (degree level)

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

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.

HORT 1000 – HORTICULTURE SCIENCE (2-2-3)

Introduces the fundamentals of plant science and horticulture as a career field. Emphasis will be placed on an industry overview, plant morphology, plant physiology, environmental factors affecting horticulture practices, soil physical and chemical properties, fertilizer elements and analysis, and basic propagation techniques.

COURSE DESCRIPTIONS**HORT 1010 – WOODY PLANT IDENTIFICATION (1-4-3)****Prerequisite: Program Admission**

Provides the basis for a fundamental understanding of the taxonomy, identification, and cultural requirements of woody plants. Topics include introduction to woody plants, classification of woody plants, and woody plant identification and cultural requirements.

HORT 1020 – HERBACEOUS PLANT IDENTIFICATION (2-2-3)**Prerequisite: Program Admission**

Emphasizes the identification, selection, and cultural requirements of herbaceous plants. Topics include introduction to herbaceous plants, plant classification and nomenclature of herbaceous plants, herbaceous plant identification and cultural requirements, and seasonal color management.

HORT 1030 – GREENHOUSE MANAGEMENT (3-4-4)

This course helps to prepare students for a career in the management of commercial greenhouses, conservatories, and institutional greenhouses. Emphasis is placed on greenhouse construction, operation and management, regulating and controlling the environment, applying cultural practices as they affect plant physiological processes and influence plant growth and development, and management of a greenhouse business.

HORT 1041 – LANDSCAPE CONSTRUCTION (2-4-4)

This course develops fundamental skills in landscape construction with an emphasis on landscape, grading, drainage, retaining walls, and pavements. Topics include workplace safety, site preparation, project layout, construction methods, sequencing and managerial functions.

HORT 1050 – NURSERY PRODUCTION AND MANAGEMENT (3-4-4)

Develops skills necessary to propagate and produce both container and field-grown nursery stock. Topics include industry overview, facility design, propagation techniques and environment, field-grown and container production, and managerial functions for nursery production.

HORT 1060 – LANDSCAPE DESIGN (3-4-4)

Introduces design principles, drawing skills, and plant selection techniques required to produce landscape plans for residential/commercial clients. Topics include landscape design principles, sketching and drawing skills, site analysis, plant and material selection, and landscape design process.

HORT 1080 – PEST MANAGEMENT (2-2-3)

This course provides an introduction to the principles and mechanisms of integrated pest management across a diverse array of pests including insects, weeds, plant pathogens, nematodes, and vertebrates. Specifically, the course will provide students with a fundamental and practical understanding of integrated pest management in a landscape setting with emphasis on pest identification and control, pesticide application safety, and legal requirements for state licensure.

HORT 1100 – INTRODUCTION TO SUSTAINABLE AGRICULTURE (3-0-3)

Introduces the fundamentals of small-scale agriculture with a sustainable approach. Emphasis will be placed on an industry overview, history and foundation of sustainable practices, management and fertility of soils, pest management, and economic and marketing theory and practices.

COURSE DESCRIPTIONS**HORT 1110 – SMALL SCALE FOOD PRODUCTION (3-2-4)**

Continues hands-on experience in food-crop production to be sold direct to the consumer, at the farmers markets, or Community Sponsored Agriculture (CSA). Topics include farm safety, farm design and development, propagation, production, harvesting, packaging, and marketing.

HORT 1120 – LANDSCAPE MANAGEMENT (3-4-4)

This course introduces cultural techniques required for proper landscape management with emphasis on practical application and managerial techniques. Topics include landscape management, safe operation and maintenance of landscape equipment, and administrative functions for landscape managers.

HORT 1140 – HORTICULTURE BUSINESS MANAGEMENT (2-2-3)

This course presents managerial techniques required for business success in a chosen horticultural field. All aspects of establishing and managing a small business will be addressed. Emphasis will be placed on strategic planning, financial management, marketing strategies, human resource management, and operations and administration.

HORT 1150 – ENVIRONMENTAL HORTICULTURE INTERNSHIP (0-9-3)

Provides the student with practical experience in an actual job setting. This internship allows the student to become involved in on-the-job environmental horticulture applications that require practice and follow through. Topics include work ethics, skills, and attitudes; demands of the horticulture industry; horticultural business management; and labor supervision.

HORT 1160 – LANDSCAPING CONTRACTING (2-2-3)

Provides essential knowledge and skills in landscape contracting with emphasis on landscape business practices and principles, landscape bidding and estimating, and managerial skills for the landscape business environment. Topics include overview of landscape industry, landscape business principles and practices, landscape bidding and estimating, and managerial skills for the landscape business environment.

HORT 1410 – SOILS (2-4-3)**Prerequisite: Program Admission**

This course introduces students to the basic fundamentals of soil science including soil formation and classification; physical, chemical, and biological characteristics; soil fertility and productivity; and soil management and conservation practices.

HORT 1430 – ADVANCED LANDSCAPE DESIGN (3-4-4)

This course familiarizes students with approaches to garden and small outdoor space design. Students will examine various approaches to color and design theory relevant to designing gardens and outdoor spaces. Topics include history of design, landscape design principles and elements, sketching and drawing skills, design analysis, garden design styles, plant material selection, and the development of a garden planting plan.

HORT 1670 – VINEYARD TECHNOLOGY (1-2-3)

This course focuses on the development of healthy vines which will bear high quality fruit in a cost-effective manner. Topics covered includes site selection and preparation; varietal, clonal, and

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rootstock selection and planting; trellis systems; and vine training during the first year of growth. Upon completion, students should be able to make independent decisions with regard to the establishment of a new vineyard.

HORT 1800 – URBAN LANDSCAPE ISSUES (2-2-3)

This course introduces the concepts and principles of sustainable urban landscapes. By using these concepts, the student will be able to create outdoor spaces that are not only functional and maintainable, but environmentally sound, cost effective, and aesthetically pleasing. The design process is the first consideration, followed by implementation and maintenance, each with sustainability as a major consideration. The course will cover such topics as green roofs, water wise principles, rain gardens, pervious paving, LEED, erosion and sedimentation control, and others.

HUMN 1101 – INTRODUCTION TO HUMANITIES (3-0-3)

Pre-requisite: ENGL 1101

Explores the philosophic and artistic heritage of humanity expressed through a historical perspective on visual arts, music, and literature in the early, middle, and modern periods. The humanities insight into people and society in both the Western and non-Western world. Topics include historical and cultural developments, contributions of the humanities, and research.

IDFC 1007 – INDUSTRIAL SAFETY PROCEDURES (1-2-2)

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 (2-2-3)

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.

IDFC 1012 – ALTERNATING CURRENT I (2-2-3)

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.

IDSY 1020 – PRINT READING AND PROBLEM SOLVING (2-3-3)

This course introduces practical problem-solving techniques as practiced in an industrial setting. Topics include analytical problem solving, troubleshooting techniques, reading blueprints and technical diagrams, schematics and symbols, specifications and tolerances. The course emphasizes how the machine or mechanical system works, reading and engineering specifications and applying a systematic approach to solving the problem.

IDSY 1101 – DC CIRCUIT ANALYSIS (2-2-3)

This course 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.

COURSE DESCRIPTIONS**IDSY 1105 – AC CIRCUIT ANALYSIS (2-2-3)**

This course introduces alternating current (AC) concepts, theory, and application of varying sine waves voltages and current, and the physical characteristics and applications of solid-state devices. Topics include electrical laws and principles, magnetism, inductance and capacitance.

IDSY 1110 – INDUSTRIAL MOTOR CONTROL I (2-5-4)

This course introduces the fundamental concepts, principles, and devices involved in industrial motor controls, theories and applications of single and three-phase motors, wiring motor control circuits, and magnetic starters and braking. Topics include motor theory and operating principles, control devices, symbols and schematic diagrams, NEMA standards, Article 430 NEC, and preventative maintenance and troubleshooting.

IDSY 1120 – BASIC INDUSTRIAL PLC'S (1-7-4)

This course introduces the operational theory, systems terminology, PLC installation, and programming procedures for Programmable Logic Controllers. Emphasis is placed on PLC programming, connections, installation, and start-up procedures. Other topics include timers and counters, relay logic instructions, and hardware and software applications.

IDSY 1130 – INDUSTRIAL WIRING (2-5-4)

Teaches the fundamental concepts of industrial wiring with an emphasis on installation procedures. Topics include grounding; raceways; three-phase systems; transformers (three-phase and single-phase); wire sizing, overcurrent protection; NEC requirements; industrial lighting systems; and switches, receptacles, and cord connectors.

IDSY 1170 – INDUSTRIAL MECHANICS (1-7-4)

This course introduces and emphasizes the basic skill necessary for mechanical maintenance personnel. Instruction is also provided in the basic physics concepts applicable to the mechanics of industrial production equipment, and the application of mechanical principles with additional emphasis on power transmission and specific mechanical components.

IDSY 1190 – FLUID POWER SYSTEMS (2-5-4)

This course provides instruction in the fundamentals of safely operating hydraulic, pneumatic, and pump and piping systems. Theory and practical application concepts are discussed. Topics include hydraulic system principles and components; pneumatic system principles and components; and the installation, maintenance, and troubleshooting of pump and piping systems.

IDSY 1195 – PUMPS AND PIPING SYSTEMS (1-4-3)

This course provides instruction in the fundamentals concepts of industrial pumps and piping systems. Topics include pump identification, pump operation, installation, maintenance and troubleshooting, piping systems and installation of piping systems.

IDSY 1220 – INTERMEDIATE INDUSTRIAL PLCs (1-7-4)

This course provides for hands on development of operation skills in the maintenance and troubleshooting of industrial control systems and automated equipment. Topics include data manipulation, math instructions, introduction to HMI, analog control, and troubleshooting discrete IO devices.

COURSE DESCRIPTIONS**IDSY 1240 – MAINTENANCE FOR RELIABILITY (3-3-4)**

Applies advanced instrumentation in conjunction with principles of mechanical physics, vibration and particulate analysis, thermography, and advanced reliability concepts relative to precision/ predictive maintenance of industrial equipment.

MAST 1010 – LEGAL AND ETHICAL CONCERNS IN THE MEDICAL OFFICE (2-0-2)**Prerequisite: Program Admission**

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 (4-0-4)**Prerequisites: MATH 1012, ALHS 1011, ALHS 1090**

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

MAST 1060 – MEDICAL OFFICE PROCEDURES (3-2-4)**Prerequisite: Program Admission**

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 (1-8-4)**Prerequisites: ALHS 1011, ALHS 1090**

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.

MAST 1090 – MEDICAL ASSISTING SKILLS II (1-8-4)**Prerequisites: ALHS 1011, ALHS 1090, MAST 1030, MAST 1080**

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.

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MAST 1100 – MEDICAL INSURANCE MANAGEMENT (1-3-2)

Prerequisites: ALHS 1011 or BIOL 2113 and BIOL 2113L and BIOL 2114 and BIOL 2114L, ALHS 1090, COLL 1010, ENGL 1010

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

MAST 1110 – ADMINISTRATIVE PRACTICE MANAGEMENT (1-5-3)

Prerequisites: ALHS 1011 or BIOL 2113 and BIOL 2113L and BIOL 2114 and BIOL 2114L, ALHS 1090, COLL 1010, ENGL 1010

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 (2-2-3)

Prerequisites: ALHS 1011, ALHS 1090, ENGL 1010

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 disease and diseases of body systems.

MAST 1170 – MEDICAL ASSISTING EXTERNSHIP (0-14-4)

Prerequisite: Completion of all required courses except 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 and functioning in the work environment.

MAST 1180 – MEDICAL ASSISTING SEMINAR (4-0-4)

Prerequisite: Completion of all required courses except 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 (1-2-2)

Prerequisites: ALHS 1011, ALHS 1090, ENGL 1010

Pre/Co-requisites: MAST 1120, MAST 1520

Provides an introduction to medical billing and coding skills with applications of international coding standards for billing of health care services. Topics include International Classification of Diseases, code book formats, guidelines and conventions, and coding techniques.

MAST 1520 – MEDICAL BILLING AND CODING II (1-4-3)

Co-requisite: 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

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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 (1-2-2)

Prerequisites: ALHS 1011, ALHS 1090, ENGL 1010

Pre/Co-requisite: MAST 1120

Provides the knowledge and skills to apply the coding of procedures for billing purposes using the Physicians Current Procedural Terminology (CPT) manual. Topics include format of CPT manual, CPT manual coding guidelines, and coding using the CPT manual.

MATH 0090 – LEARNING SUPPORT MATHEMATICS (3-0-3) (institutional credit only)

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, percentages, 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 1012 – FOUNDATIONS OF MATHEMATICS (3-0-3) (Basic Skills – non-degree level)

Prerequisite: Appropriate Math Placement Test Score or MATH 0090

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

MATH 1101- MATHEMATICAL MODELING (3-0-3) (degree level)

Prerequisite: 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 1103 – QUANTITATIVE SKILLS AND REASONING (3-0-3) (degree level)

Prerequisite: Appropriate Algebra Placement Test Score

This course focuses on quantitative skills and reasoning in the context of experiences that students will be likely to encounter. The course emphasizes processing information in context from a variety of representations, understanding of both the information and the processing, and understanding which conclusions can be reasonably determined. Students will use appropriate technology to enhance mathematical thinking and understanding. Topics covered in this course include sets and set operations, logic, basic probability, data analysis, linear models, quadratic models, exponential and logarithmic models, geometry, and financial management.

MATH 1111 – COLLEGE ALGEBRA (3-0-3) (degree level)

Prerequisite: Appropriate Degree Level 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; series, and probability or analytic geometry.

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MATH 1113 – PRECALCULUS (3-0-3) (degree level)**Prerequisite: MATH 1111 with C or better OR Appropriate Degree Level Placement Test Score**

Prepares students for calculus. Topics 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.

MATH 1127 – INTRODUCTION TO STATISTICS (3-0-3) (degree level)**Prerequisite: Appropriate Degree Level Algebra Placement Test Score**

Emphasizes the concepts and methods fundamental to utilizing and interpreting commonly used statistics. Topics include descriptive statistics, basic probability, discrete and continuous distributions, sampling distributions, hypothesis testing, chi square tests, and linear regression.

MATH 1131 – CALCULUS I (4-0-4) (degree level)**Prerequisite: MATH 1113 with C or better OR appropriate math placement test score**

Topics include: the study of limits and continuity, derivatives, and integrals of functions of one variable. Applications are incorporated from a variety of disciplines. Algebraic, trigonometric, exponential, and logarithmic functions are studied.

MATH 1132 – CALCULUS II (4-0-4) (degree level)**Prerequisite: MATH 1131 with C or better**

This course includes the study of techniques of integration, application of the definite integral, an introduction to differential equations, improper integrals, sequences, and series.

MCHT 1011 – INTRODUCTION TO MACHINE TOOL (2-4-4)

Introduces the fundamental concepts and procedures necessary for the safe and efficient use of basic machine tools. Topics include machine shop safety, terminology, use of hand and bench tools, analysis of measurements, part layout, horizontal and vertical band saw setup and operation, drill press setup and operation, and quality control.

MCHT 1012 – PRINT READING FOR MACHINE TOOL (3-0-3)

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, tolerance and assembly drawings.

MCHT 1013 – MACHINE TOOL MATH (2-3-3)

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.

MCHT 1020 – HEAT TREATMENT AND SURFACE GRINDING (2-4-4)**Prerequisite: Program Admission**

Provides instruction in the setup, operations, maintenance, and assembly operations of surface grinders. Introduces the properties of various metals, production methods, and identification of ferrous and non-ferrous metals. Topics include heat treatment safety, metallurgy principles, heat treatment of metals, surface grinders, surface grinder maintenance, surface grinder setup, surface grinder operations, and safety.

COURSE DESCRIPTIONS**MCHT 1119 – LATHE OPERATIONS I (2-4-4)**

Provides opportunities for students to develop skill in the setup and operation of metal cutting lathes. Topics include safety, lathes parts and controls, lathe tooling and tool bit grinding, lathe calculations, and lathe setup and operations.

MCHT 1120 – MILL OPERATIONS I (2-4-4)

Provides instruction in the setup and use of the milling machine. Topics include safety, milling machines, milling machine setup, and milling machine operations.

MCHT 1219 – LATHE OPERATIONS II (2-4-4)**Pre-requisite – MCHT 1119**

Provides further instruction for students to develop skill in the use of lathes. Topics include lathes, lathe setup, lathe operations, and safety.

MCHT 1220 – MILL OPERATIONS II (2-4-4)

Provides further instruction for students to develop skills in the use of milling machines. Topics include safety, advanced milling calculation, and advanced milling machine setup and operations.

MCHT 1520 – INDUSTRIAL MACHINE APPLICATIONS (0-6-3)**Pre-requisite: MCHT 1011**

Provides an opportunity to perform creative and critical thinking skills needed to fabricate, modify, and maintain complex machine assemblies. Emphasis is placed on bench work, lathe, mill, and grinder operations; tool selection; and sequencing fabrication operations. Topics include job planning, preparation for machining operations, and machining operations.

MGMT 1100 – PRINCIPLES OF MANAGEMENT (3-0-3)

Develops skills and behaviors necessary for successful supervision of people and their 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 (3-0-3)

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 (3-0-3)

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

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Labor Standards Act (FLSA), Family Medical Leave Act (FMLA), Workers Compensation, Unemployment Compensation, and National Labor Relations Act.

MGMT 1115 – LEADERSHIP (3-0-3)

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, and the role of leadership in effecting change.

MGMT 1120 – INTRODUCTION TO BUSINESS (3-0-3)

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 numerous 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 (3-0-3)

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; personal values, rights, and responsibilities; frameworks for ethical decision-making in business; justice and economic distribution; corporations and social responsibility; 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 (3-0-3)

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 will 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 (3-0-3)

This course is designed as an overview of the Human Resource Management (HRM) function and of 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.

COURSE DESCRIPTIONS**MGMT 2120 – LABOR MANAGEMENT RELATIONS (3-0-3)**

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 (3-0-3)

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 (3-0-3)

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 (3-0-3)

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 and applications, team/group communication, intercultural communication, external stakeholder communication, and using spreadsheet applications for business problem solving.

MGMT 2140 – RETAIL MANAGEMENT (3-0-3)

Develops a working knowledge of managing a retail business from a variety of perspectives with an emphasis on store management. The emphasis is on contemporary issues in retailing, particularly the process of supervising customer service and dealing with the changing demographics of retailing. An application focus on the use of information technologies, the internet, and electronic retailing is intended to give the student hands-on experience in retail management. Topics include strategic retail

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management; store, non-store, and nontraditional retailing; retail human resource management; developing a customer-focused service strategy; managing customer service; retail operations and financial management; merchandise management; buying and inventory management; global, cataloging, and electronic retail management, information technology applications in retailing.

MGMT 2145 – BUSINESS PLAN DEVELOPMENT (3-0-3)

Provides student with knowledge and skills necessary for a manager or entrepreneur to develop and implement a business plan. Topics include business/community compatibility, introduction to cash flow and break-even analysis, development of product/service idea, determination of market feasibility, development of marketing strategy, development of operations outline, and application of financial concepts.

MGMT 2150 – SMALL BUSINESS MANAGEMENT (3-0-3)

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 business.

MGMT 2210 – PROJECT MANAGEMENT (3-0-3)

Provides a basic understanding of project management functions and processes. Topics include team selection and management; project planning, definition and scheduling of tasks; resource negotiation, allocation, and leveling; project control, monitoring, and reporting; computer tools for project planning and scheduling; managing complex relationships between project team and other organizations; critical path methodology; and total quality management.

MGMT 2215 – TEAM PROJECT (3-0-3)

This course utilizes team methodologies to study the field of management. It encourages students to discuss their perception of management practices that 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. Potential team projects could include authoring a management book covering the competencies, videos, web sites, bulletin boards, and slide presentations amongst others.

MGMT 2220 – MANAGEMENT OCCUPATION-BASED INSTRUCTIONS (0-9-3)

Co-requisites: ENGL 1010, MGMT 1100

Reinforcement of management, supervision, and employability principles in an actual job placement or through a practicum experience. Students are acquainted with occupational responsibilities through realistic work situations and are provided with insights into management and supervisory applications on the job. Topics include problem solving, adaptability to the job setting, use of proper interpersonal skills, application of management and supervisory techniques, and professional development. The occupation-based instruction is implemented through the use of a practicum or internship and all of the following: written individualized training plans, written performance evaluation, and a required weekly seminar.

MKTG 1100 – PRINCIPLES OF MARKETING (3-0-3)

This course emphasizes the trends and the dynamic forces that affect the marketing process and the coordination of the marketing functions. Topics include effective communication in a marketing

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environment, role of marketing, and knowledge of marketing principles, marketing strategy, and marketing career paths.

MKTG 1130 - BUSINESS REGULATIONS AND COMPLIANCE (3-0-3)

This course introduces the study of contracts and other legal issues and obligations for businesses. Topics include creation and evolution of laws, court decision processes, legal business structures, sales contracts, commercial papers, Uniform Commercial Code, and risk-bearing devices.

MKTG 1190 - INTEGRATED MARKETING COMMUNICATIONS (3-0-3)

This course introduces the fundamental principles and practices associated with promotion and communication. Topics include purposes of promotion and IMC, principles of promotion and Integrated Marketing Communication (IMC), budgeting, regulations and controls, media evaluation and target market selection, integrated marketing plans, trends in promotion, and promotion and communication career paths.

MKTG 2290 – MARKETING INTERNSHIP/PRACTICUM (0-9-3)

This course applies and reinforces marketing and employability skills in an actual job placement or practicum experience. Topics include problem solving, adaptability to the job setting, use of proper interpersonal skills, application of marketing skills, and professional development.

MKTG 2500 – EXPLORING SOCIAL MEDIA (3-0-3)

This course explores the environment and current trends of social media as it relates to marketing functions. Topics include history of the internet and social media, social media dashboards, legal issues of social media, outsourcing vs. in-house administration, and the current social media ecosystem including applications in the following areas: communication, collaboration/authority building, multimedia, reviews and opinions, and entertainment.

MLBT 1010 – INTRODUCTION TO MEDICAL LABORATORY TECHNOLOGY (1-1-2)

Prerequisite: Program Admission

Introduces students to the terms, concepts, procedures, and equipment used in a professional clinical laboratory. Topics include professional ethics and regulatory agencies; 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 the clinical setting.

MLBT 1030 – URINALYSIS/BODY FLUIDS (1-1-2)

Pre/Co-requisites: BIOL 2113, BIOL 2113L, MLBT 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 fundamental theory of urinalysis, basic urinalysis tests, correlation of urinalysis to disease states, related lab math, body fluid tests, special urinalysis and related testing, and safety and quality control.

MLBT 1040 – HEMATOLOGY/COAGULATION (3-2-5)

Pre/Co-requisites: BIOL 2113, BIOL 2113L, MLBT 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

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related blood test, related lab math, correlation of test results to disease states, coagulation and fibrinolysis, instrumentation for hematology and coagulation, critical values and blood cell dichasia, safety and quality control, and process improvement.

MLBT 1050 – SEROLOGY/IMMUNOLOGY (2-1-3)

Pre/Co-requisite: MLBT 1010

Introduces the fundamental theory and techniques applicable to serology and immunology practice in the laboratory. Topics include immune system, antigen and antibody reactions, immunological diseases, concept in molecular diagnostics, common serological and molecular techniques, safety and quality control, and quality improvement.

MLBT 1060 – IMMUNOHEMATOLOGY (2-2-4)

Prerequisite: MLBT 1050

Provides an in-depth study of immunohematology principles and practices as applicable to clinical/medical 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 and quality control, and process improvement.

MLBT 1070 – CLINICAL CHEMISTRY (2-2-4)

Prerequisites: BIOL 2114, BIOL 2114L, MLBT 1010

Pre/Co-requisites: CHEM 1211 and CHEM 1211L or CHEM 1151 and CHEM 1151L

Develops concepts and techniques of clinical chemistry applicable to clinical/medical 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.

MLBT 1080 – MICROBIOLOGY (2-3-5)

Prerequisite: MLBT 1010

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

MLBT 2090 – CLINICAL URINALYSIS AND PRE-ANALYTIC SPECIMEN PROCESS PRACTICUM (0-3-3)

Prerequisites: MLBT 1010, MLBT 1030, MLBT 1050

Provides students with an opportunity for in-depth application and reinforcement of principles and techniques in a clinical/medical 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, 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.

MLBT 2100 – CLINICAL IMMUNOHEMATOLOGY PRACTICUM (0-4-4)

Prerequisite: MLBT 1060

Provides students with an opportunity for in-depth application and reinforcement of

COURSE DESCRIPTIONS

immunohematology principles and techniques in a clinical/medical 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 therapy practices, and 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.

MLBT 2110 – CLINICAL HEMATOLOGY/COAGULATION PRACTICUM (0-4-4)**Prerequisite: MLBT 1040**

Provides students with an opportunity for in-depth application and reinforcement of hematology/coagulation principles and techniques in a clinical/medical 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.

MLBT 2120 – CLINICAL MICROBIOLOGY PRACTICUM (0-4-4)**Prerequisite: MLBT 1080**

Provides students with an opportunity for in-depth application and reinforcement of principles and techniques in a clinical/medical 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.

MLBT 2130 – CLINICAL CHEMISTRY PRACTICUM (0-4-4)**Prerequisite: MLBT 1070**

Provides students with an opportunity for in-depth application and reinforcement of chemistry principles and techniques in a clinical/medical 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.

MLBT 2200 – CLT CERTIFICATION REVIEW (0-2-2)**Prerequisites: MLBT 1010, MLBT 1030, MLBT 1040, MLBT 1050, MLBT 1060, MLBT 1070, MLBT 1080**

Provides a review of basic knowledge from previous courses and helps the student prepare for national certification examinations for the clinical/medical laboratory technician level. Topics include review of professional ethics, regulatory agencies, safety, and fundamental techniques; phlebotomy and specimen collection and processing; quality control concepts; computer applications; urinalysis and body fluids; hematology and coagulation; immunology and serology; immunohematology; clinical

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chemistry in solutions; microbiology; parasitology, mycology, mycobacteriology, and virology; and test taking skills.

MUSC 1101 – MUSIC APPRECIATION (3-0-3) (degree level)

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

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 (4-5-6)

Prerequisites: ALHS 1040, ALHS 1060, ALHS 1090

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'/patients' condition, nutrition, and 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 skills competency based on federal guidelines. 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.

NAST 2100 – NURSE AIDE ACCELERATED (5-2-7)

Co-requisite: ALHS 1090

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'/patients' condition, nutrition, and 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 skills competency based on federal guidelines. 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 (4-0-4)

Prerequisites (diploma): ALHS 1011, ALHS 1090, ENGL 1010, MATH 1012

Prerequisites (degree): ALHS 1090, ENGL 1101, MATH 1111

Co-requisites: PHAR 1010, PHAR 1040

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

COURSE DESCRIPTIONS**PHAR 1010 – PHARMACY TECHNOLOGY FUNDAMENTALS (4-2-5)****Prerequisites (diploma): ALHS 1011, ALHS 1090, ENGL 1010, MATH 1012****Prerequisites (degree): ALHS 1090, ENGL 1101, MATH 1111****Co-requisites: PHAR 1000, PHAR 1040**

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, orientation to the pharmacy technology field, fundamental principles of chemistry, basic laws of chemistry, ethics and laws, definitions and terms, and reference sources.

PHAR 1020 – PRINCIPLES OF DISPENSING MEDICATIONS (3-3-4)**Prerequisites: PHAR 1000, PHAR 1010****Co-requisites: PHAR 1030**

This course introduces the student to principles of receiving, storing, and dispensing medications. Topics include purchasing, packaging, and labeling drugs; pharmacy policies and procedures; documentation; inventory and filing systems; compounding; storage and control; pharmacy equipment; and health care organizational structure. This course provides laboratory and clinical practice.

PHAR 1030 – PRINCIPLES OF STERILE MEDICATION PREPARATION (3-3-4)**Prerequisites: PHAR 1000, PHAR 1010****Co-requisites: PHAR 1020**

Continues the development of student knowledge and skills in preparing medication, processing glassware, and maintaining an aseptic environment. Topics include aseptic and sterile techniques, parenteral admixtures, hyper-alimentation, chemotherapy, filtering, disinfecting, contamination, ophthalmic preparations, infection control, and quality control.

PHAR 1040 – PHARMACOLOGY (4-0-4)**Prerequisites (diploma): ALHS 1011, ALHS 1090, ENGL 1010, MATH 1012****Prerequisites (degree): ALHS 1090, BIOL 2113, BIOL 2113L, ENGL 1101, MATH 1111****Co-requisites: PHAR 1000, PHAR 1010**

The course introduces the students to principles and knowledge about all classifications of medication. Topics include disease states and treatment modalities, pharmaceutical side effects and drug interactions, control substances, specific drugs, and drug addiction and abuse.

PHAR 1050 – PHARMACY TECHNOLOGY CLINICAL (0-15-5)**Prerequisites: PHAR 1000, PHAR 1010**

Orients students to the clinical environment and provides experiences with the basic skills necessary for the pharmacy technician. Topics include storage and control, documentation, inventory and billing, community practice, institutional practice, and communication.

PHAR 2060 – ADVANCED PHARMACY TECHNOLOGY PRINCIPLES (2-2-3)**Prerequisites: COLL 1010, PHAR 1030, PHAR 1050****Co-requisite: PHAR 2070**

This course presents the advanced concepts and principles needed in the pharmacy technology field. Topics include physician orders, patient profiles, pharmacy data systems, job readiness, legal requirements, inventory and billing, pharmaceutical calculations review, and pharmacology review.

COURSE DESCRIPTIONS**PHAR 2070 – ADVANCED PHARMACY TECHNOLOGY CLINICAL (0-15-5)****Prerequisites:** COLL 1010, PHAR 1030, PHAR 1050**Co-requisite:** PHAR 2060

Continues the development of student knowledge and skills applicable to pharmacy technology practice. Topics include dispensing responsibilities, physician orders, controlled substances, hyper-alimentation, chemotherapy, patient profiles, pharmacy data systems, ophthalmic preparations, and hospital/retail/home health pharmacy techniques.

PHLT 1030 – INTRODUCTION TO VENIPUNCTURE (2-2-3)**Prerequisite:** ALHS 1011, ALHS 1040, ALHS 1090, BIOL 2113, BIOL 2113L, BIOL 2114, BIOL 2114L

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.

PHLT 1050 - CLINICAL PRACTICE (0-4-4)**Prerequisite:** PHLT 1030

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.

PHLT 1055 – ACCELERATED PHLEBOTOMY CLINICAL PRACTICE (0-5-5)**Co-requisite:** PHLT 1030

Provides work experiences in a clinical or simulated lab 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.

PHOT 1102 – VISUAL THEORY I (1-5-3)

Introduces the theory and information necessary for photographic processes with reference to black and white technologies. Emphasis will be placed on technical creative skills. Topics include photographic processes, technical skills, creative skills, black and white theory, equipment, and zone system.

PHOT 1103 – CAMERA TECHNIQUES I (1-5-3)

Introduces the technical aspects of camera operations. Emphasizes skill development through manipulative exercises. Topics include camera operation, exposure control, metering, lens manipulation, and large format operation.

PHOT 1104 – PHOTOGRAPHIC WORKSHOP I (1-6-3)

Provides instruction in procedures used to produce photographs. Skill development through laboratory practice and problem solving will be the emphasis of the course. Emphasis will be placed on skill development and completion of structured assignments. Topics include technical skill development, creative skill development, lighting, and equipment.

COURSE DESCRIPTIONS**PHOT 1105 – DIGITAL IMAGING I (1-5-3)**

Introduces the photographic processes that use digital technology. The course explores the fundamentals of photography with the emphasis on the development of strong photographic skills as they relate to the principles of DSLR cameras, lenses and perspective. Topics include photo digital technology history, digital processes in today's photography market, personal computer basics, introductory image manipulation software, and manipulation of digital photos into print formats.

PHOT 1122 – VISUAL THEORY II (1-5-3)**Prerequisite: PHOT 1102**

Continues study of the theory and information necessary for the photographic processes. Topics include color recognition, color management, technical skills, creative skills, and equipment.

PHOT 1123 – CAMERA TECHNIQUES II (1-5-3)**Prerequisite: PHOT 1103**

Introduces the technical aspects of camera operations. Emphasizes skill development through manipulative exercises. Topics include digital SLR and multiple camera systems, camera operation, exposure control, and metering.

PHOT 1124 – PHOTOGRAPHIC WORKSHOP II (0-5-2)**Prerequisite: PHOT 1104**

Provides technical and creative experiences for the development of photographic skills. Completion of structured assignments is the emphasis of the course. Topics include studio skill development and laboratory skill development.

PHOT 1125 – MULTIMEDIA I (2-2-3)

Provides instruction in the operational practices and procedures of electronic video equipment. Emphasizes relationship between linear and digital processes, the operation and maintenance of equipment, and management of people. Introduces techniques and methods of video production and presentation. Emphasizes production of an edited video presentation. Topics include automated equipment, workflow, formulating objectives, outlines, scripts, storyboards, titles, sound, programming, audience analysis, production planning, production, presentation, video preproduction, video production, and video presentation.

PHOT 1126 – PORTRAITURE I (1-5-3)

Introduces techniques of lighting and posing as applied to professional portraiture. Emphasizes the use of controlled studio lighting and available light portraits. Topics include available light, studio lighting, posing techniques, portraiture lighting, and portraiture styles and techniques.

PHOT 2101 – PORTFOLIO I (0-5-2)

The emphasis of the course is on understanding the portfolio and how to produce it. Topics include evaluation and planning, photographic image production, and presentation.

PHOT 2103 – COMMERCIAL I (1-5-3)

Introduces the concepts and techniques applied in commercial and advertising photography. Emphasizes skill development through laboratory activities. Provides instruction in advanced commercial photography. Emphasizes skill development in the use of various commercial lighting

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and composition techniques. Topics include commercial lighting, camera techniques, exposure and metering, safety techniques, advertising principles, advanced commercial composition and lighting, and studio and location set rigging.

PHOT 2105 – DIGITAL IMAGING II (0-6-3)

Prerequisite: PHOT 1105

Introduces the student to advanced operations and techniques in the production of digitally imaged photographs. Through the use of the Adobe Photoshop program, students will learn a precise use of tools and filters in the manipulation and enhancement of their photographs. Plan, layout, and create multi-layered images. Become familiar with service bureau operations and visit a service bureau.

PHOT 2106 – PHOTOJOURNALISM (1-5-3)

Introduces the written and photographic techniques of news, feature, and sports photojournalism for newspaper and magazine reproduction. Provides instruction on the history and development of photography. Topics include news coverage, feature photography, sports photography, equipment and techniques, documentary and essay work, ethics and laws of photojournalism, and use of multimedia.

PHOT 2121 – PORTFOLIO II (1-3-2)

Prerequisites: PHOT 2101, PHOT 2123

The emphasis of the course is on editing the portfolio of individual students directed toward a specific job and area of study. Stresses portfolio book, presentation, and visual images to secure photographic jobs in today's market. Topics include evaluation and planning, photographic image production, presentation, and portfolio show.

PHOT 2122 – PRACTICUM/INTERNSHIP (0-9-3)

Prerequisites: PHOT 2106, PHOT 2123

Provides an industry setting or simulated industry setting to allow students time for skill development and industry orientation. Topics include employability skills and photographic skills.

PHOT 2123 – COMMERCIAL II (1-5-3)

Prerequisite: PHOT 2103

Introduces advanced concepts and techniques applied in commercial and advanced photography. Emphasizes skill development in both interior and exterior photography and advanced advertising photography. Topics include available lighting, artificial lighting, mixed lighting, use of filters, metering techniques, camera and lens selection, and location photography safety techniques.

PHOT 2125 – MULTIMEDIA II (0-5-2)

Prerequisite: PHOT 1125

Provides instruction on methods related to video pre-production, production, and post-production. Topics include camera techniques, storyboarding, script development, professional practices for video production, video editing, and file optimization.

PHOT 2126 – PORTRAITURE II (1-5-3)

Prerequisite: PHOT 1126

Provides instruction in advanced studio portrait lighting. Emphasizes the photographer/subject relationship and the use of controlled studio lighting and available light portraits. Topics include studio

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lighting, advanced portraiture lighting, and advanced portraiture styles and techniques.

PHOT 2131 – PHOTOGRAPHIC BUSINESS MANAGEMENT (2-0-2)

Provides instruction in the operational practices and procedures of a photography business. Topics include pricing procedures, business records, advertising/marketing/market-analysis, copyright regulations, business ethics, and self-promotion.

PHYS 1110 – CONCEPTUAL PHYSICS (3-0-3) (degree level)

Prerequisites: ENGL 1101; and MATH 1101 or MATH 1103 or MATH 1111

Co-requisite: PHYS 1110L

Introduces some of the basic laws of physics. Topics include systems of units and conversion of units, vector algebra, Newtonian mechanics, fluids and thermodynamics, heat, light and optics, mechanical waves, electricity and magnetism, and modern physics.

PHYS 1110L – CONCEPTUAL PHYSICS LAB (0-3-1) (degree level)

Prerequisites: ENGL 1101; and MATH 1101 or MATH 1103 or MATH 1111

Co-requisite: PHYS 1110

Selected laboratory exercises paralleling the topics in PHYS 1110. The laboratory exercises for this course include systems of units and systems of measurement, vector algebra, Newtonian mechanics, fluids and thermodynamics, heat, light and optics, mechanical waves, electricity and magnetism, and modern physics.

PHYS 1111 – INTRODUCTORY PHYSICS I (3-0-3) (degree level)

Prerequisites: ENGL 1101; MATH 1111 or MATH 1113

Co-requisite: PHYS 1111L

The first course of two algebra and trigonometry-based courses in the physics sequence. Topics include material from mechanics (kinematics, dynamics, work and energy, momentum and collisions, rotational motion, static equilibrium, elasticity theory, and simple harmonic motion), mechanical waves, theory of heat and heat transfer, and thermodynamics.

PHYS 1111L – INTRODUCTORY PHYSICS LAB I (0-3-1) (degree level)

Prerequisites: ENGL 1101; MATH 1111 or MATH 1113

Co-requisite: PHYS 1111

Selected laboratory exercises paralleling the topics in PHYS 1111. The laboratory exercises for this course include units of measurement, Newton's laws, work energy and power, momentum and collisions, one- and two- dimensional motion, circular motion and law of gravity, rotational dynamics and static equilibrium, elasticity theory, harmonic motion, theory of heat and heat transfer, thermodynamics, wave motion, and sound.

PHYS 1112 – INTRODUCTORY PHYSICS II (3-0-3) (degree level)

Prerequisites: PHYS 1111, PHYS 1111L

Co-requisite: PHYS 1112L

The second of two algebra and trigonometry-based courses in the physics sequence. Topics include material from electricity and magnetism (electric charge, electric forces and fields, electric potential energy, electric potential, capacitance, magnetism, electric current, resistance, basic electric circuits, alternating current circuits, and electromagnetic waves), geometric optics (reflection and refraction),

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and physical optics (interference and diffraction).

PHYS 1112L – INTRODUCTORY PHYSICS LAB II (0-3-1) (degree level)

Prerequisites: PHYS 1111, PHYS 1111L

Co-requisite: PHYS 1112

Selected laboratory exercises paralleling the topics in PHYS 1112. The laboratory exercises for this course include material from electricity and magnetism, geometric optics, and physical optics.

PNSG 2010 – INTRODUCTION TO PHARMACOLOGY AND CLINICAL CALCULATIONS (1-3-2)

Prerequisite: 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 (3-8-6)

Prerequisite: 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 (0-6-2)

Prerequisite: Program Admission

An introduction to nursing practice in the clinical setting. Topics include history taking, physical assessment, nursing process, critical thinking, and activities of daily living, documentation, client education, and standard precautions.

PNSG 2210 – MEDICAL-SURGICAL NURSING I (3-2-4)

Prerequisite: 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; hygiene and personal care; mobility and biomechanics; fluid and electrolytes; oxygen care; perioperative care; 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 (3-2-4)

Prerequisite: 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; prevention of illness; care of the individual as a whole; as well as pathological diseases, disorders, and deviations from the normal state of health, client care, treatment,

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pharmacology, nutrition and standard precautions with regard to the endocrine, gastrointestinal, and urinary system.

PNSG 2230 – MEDICAL-SURGICAL NURSING III (3-2-4)**Prerequisite: 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; 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 (3-2-4)**Prerequisite: Program Admission**

This fourth course in a series of four courses 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, 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 (3-0-3)**Prerequisite: Program Admission**

Focuses on 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 non-pathological 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 2255 – MATERNITY NURSING CLINICAL (0-3-1)**Prerequisite: 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 non-pathological concerns in obstetric clients and the newborn; client care, treatments, pharmacology, and diet therapy related to obstetric clients and the newborn; and standard precautions.

COURSE DESCRIPTIONS**PNSG 2310 – MEDICAL-SURGICAL NURSING CLINICAL I (0-6-2)****Prerequisite: 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 412.5 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 hours of maternal, 37.5 pediatric, and 37.5 geriatric 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 (0-6-2)**Prerequisite: 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 412.5 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 hours of maternal, 37.5 pediatric, and 37.5 geriatric 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 (0-6-2)**Prerequisite: 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 412.5 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 hours of maternal, 37.5 pediatric, and 37.5 geriatric 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.

COURSE DESCRIPTIONS**PNSG 2340 – MEDICAL-SURGICAL NURSING CLINICAL IV (0-6-2)****Prerequisite: 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 412.5 hours of clinical experience including 300 hours of comprehensive medical-surgical, 37.5 hours of maternal, 37.5 pediatric, and 37.5 geriatric 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 (1-0-1)**Prerequisite: Program Admission**

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 (0-6-2)**Prerequisite: Program Admission**

Builds on the concepts presented in prior nursing courses and develops the clinical 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 (3-0-3)

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 (3-0-3) (Basic Skills – non-degree level)

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 treatments, stress and health, and social psychology.

COURSE DESCRIPTIONS**PSYC 1101 – INTRODUCTORY PSYCHOLOGY (3-0-3) (degree level)****Prerequisite: Appropriate Degree Level Writing (English) and Reading Placement Test Scores**

Introduces the major fields of contemporary psychology. Emphasis is on critical thinking and 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, psychological disorders and treatment, stress and health, and social psychology.

PSYC 2103 – HUMAN DEVELOPMENT (3-0-3) (degree level)**Prerequisite: 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 theoretical perspectives and research methods, prenatal development and child birth, stages of development from infancy through late adulthood, and death and dying.

RNSG 2602 – FOUNDATIONAL CONCEPTS OF NURSING (3-8-6)**Prerequisite: Program Admission**

This course introduces the basic concepts and principles fundamental to nursing practice which include the role of the registered nurse and the nursing process. The nursing student will be introduced to the basic concepts of physiological integrity, psychological integrity, and caring for self. Safe and effective environment will be introduced as the foundation of knowledge used throughout the nursing curriculum. The basic skills training in simulated settings will introduce the use of the skills in a variety of clinical settings. The roles of the nurse as a provider of care, manager of care, and member within the discipline serve as the organizing framework for expected student behaviors.

RNSG 2604 – PHARMACOLOGY FOR NURSING (2-4-4)**Prerequisite: RNSG 2602****Co-requisite: RNSG 2610**

This course focuses on the information required to safely administer drugs and monitor the effects of drug therapy. Emphasis will be on dosage calculations and principles of pharmacology including drug actions, interactions and nursing implications for broad classifications of medications. Students will be expected to apply the nursing process and critical thinking in the administration of prescribed medications, taking a medication history, and in teaching patients about medications in a simulated setting.

RNSG 2606 – CONCEPTS OF MENTAL HEALTH (2-3-3)**Prerequisites: RNSG 2602, RNSG 2604, RNSG 2610****Co-requisite: RNSG 2620**

This course presents sound nursing theory, therapeutic modalities, and clinical applications across the treatment continuum of the mental health client. It provides a foundation for understanding contemporary psychiatric mental health problems and prepares the nursing student for planning and providing safe, compassionate, evidenced-based nursing care to clients with mental and neurobehavioral disorders. Emphasis is placed on health promotion, restoration, and maintenance of the client in outpatient and inpatient mental health facilities, as well as adult day care settings. Concepts of mental health nursing will be applied through the nursing process in the care and collaboration of care of the adult client with acute and/or chronic mental health problems. Teaching

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and learning principles will be incorporated to all aspects of care, including the biophysical, psychosocial, spiritual, and cultural aspects. Supervised clinical simulations, inpatient/outpatient hospital rotations, and adult day care interactions will provide the student opportunities to meet course competency outcomes.

RNSG 2609 - INTRODUCTION TO PROFESSIONAL NURSING PRACTICE (5-3-8)

This course is designed to facilitate entry of the licensed practical nurse into the associate of science degree in nursing program. This course provides for a transition from the role of the practical nurse to the role of the registered nurse and introduces the student to the conceptual framework and philosophy of the associate degree nursing program with the introduction of new concepts and skills.

RNSG 2610 – CONCEPTS OF NURSING I (3-8-6)

Prerequisite: RNSG 2602

Co-requisite: RNSG 2604

This course introduces the nursing student to nursing concepts and skills related to the care of multicultural individuals with simple acute health problems. Students will reinforce nursing theory and skills taught in the foundational course focusing on the care of individuals/families with common physiological, psychological, and psychosocial alterations in health. The course further prepares the nursing student to provide safe compassionate, effective, evidence-based nursing care for adult clients in a variety of health care and simulated settings. Concepts of medical and surgical nursing will be applied through the nursing process to the care of the adult client experiencing simple acute to more complex chronic health problems incorporating essential nursing science, biophysical, psychosocial, spiritual, and cultural principles. Pharmacological concepts are strengthened throughout the course.

RNSG 2612 – CONCEPTS OF PEDIATRIC NURSING (3-3-4)

Prerequisites: RNSG 2604, RNSG 2610

Co-requisite: RNSG 2614

This course focuses on the safe, compassionate, evidenced-based care of children from birth through adolescence. The promotion of wellness, restoration, and maintenance to the changing needs related to this population is emphasized. The nursing process will be utilized, incorporating critical thinking skills in the management of care and education for these clients and their families. Pharmacologic principles as they relate to the obstetrical pediatric patient will be utilized. Essential nursing science, biophysical, psychosocial, spiritual and culturally sensitive principles will be incorporated. Supervised clinical rotations in inpatient and outpatient facilities, as well as obstetric pediatric simulations will provide the student with opportunities to meet course competency outcomes.

RNSG 2614 – CONCEPTS OF OBSTETRICAL NURSING (3-3-4)

Prerequisites: RNSG 2604, RNSG 2610

Co-requisite: RNSG 2612

This course focuses on the safe, compassionate, evidenced-based care of women during their reproductive years. The promotion of wellness, restoration, and maintenance to the changing needs related to this population is emphasized. The nursing process will be utilized, incorporating critical thinking skills in the management of care and education for these clients and their families. Pharmacologic principles as they relate to the obstetrical client will be utilized. Essential nursing science, biophysical, psychosocial, spiritual, and culturally sensitive principles will be incorporated. Supervised clinical rotations inpatient and outpatient facilities, as well as obstetric will provide the student with opportunities to meet course competency outcomes.

COURSE DESCRIPTIONS**RNSG 2620 – CONCEPTS OF NURSING II (3-9-6)****Prerequisites:** RNSG 2602, RNSG 2604, RNSG 2610**Co-requisite:** RNSG 2606

This course is a continuation of Concepts of Nursing I, introducing the nursing student to nursing concepts and skills related to the care of multicultural individuals. Students will reinforce nursing theory and skills taught in previous courses focusing on the care of individuals/families with more complex physiological, psychological, and psychosocial alterations in health including emergent and/or life-threatening conditions in a variety of health care and simulated settings. Pharmacological concepts are strengthened throughout the course.

RNSG 2630 – TRANSITION TO NURSING PRACTICE (4-6-6)**Prerequisites:** RNSG 2606, RNSG 2620

This course builds on previous courses, integrating program concepts to provide care for groups of individuals/ families exhibiting complex and multisystem disorders in healthcare and community settings. Concepts of advanced medical-surgical nursing will be applied to the care of the client with complex problems incorporating essential nursing science, biophysical, psychosocial, spiritual, and cultural principles. This course is also designed to prepare the student for transition to the roles of the professional nurse. The focus is on leadership in nursing care delivery, management techniques and strategies in the care for groups of clients, employment procurement and opportunities, and health care policy issues.

SOCI 1101 – INTRODUCTION TO SOCIOLOGY (3-0-3) (degree level)**Prerequisite:** Appropriate Degree Level Writing (English) and Reading Placement Test 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.

SOCW 2000 – INTRODUCTION TO SOCIAL WORK (3-0-3)

This course provides an introduction to social welfare institution and the profession of social work. It focuses on the values, ethics, and methods of generalist social work practice with an emphasis on diversity. Students will be introduced to basic social welfare policies, community agencies and at-risk populations.

SOCW 2010 – INTRODUCTION TO CASE MANAGEMENT (3-0-3)

A practical course in the how to of human service case management. Students will learn the step-by-step process of case management from the initial referral for services, determination of eligibility for services, writing a formal plan for services, case documentation techniques, and techniques for monitoring a clients progress through the service delivery system, to case closure/follow-up activities. This course will include how to access community resources, how to interpret and utilize information from other professionals, and the development of interviewing, intervention, case recording, and caseload management skills. Legal and ethical issues in service delivery will be discussed.

SOCW 2020 – HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT (3-0-3)

This course provides an overview of multi-cultural and critical perspectives on understanding; individuals, families, and their interpersonal and group relationships; life span development; and theories of well-being, stress, coping, and adaptation. Students learn to address biopsychosocial

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influences on human functioning.

SOCW 2030 – INTERVIEWING TECHNIQUES WITH INDIVIDUALS (3-0-3)

This course is offered as a beginning general foundation class and focuses on social work practice with individuals. It will emphasize the initial contact and rapport building skills utilized in partnering with clients in the social work process, interviewing skills and counseling techniques along with the assessment of a clients situation, and determination of the appropriate level of intervention for the change effort. Students will be expected to participate in interpersonal sharing and activities. Additional areas of study include interviewing for assessment, the person in environment perspective, motivational interviewing, and ethical framework for practice.

SOCW 2040 – BEHAVIORAL HEALTH (3-0-3)

This course examines various modalities for assessing and intervening with individuals who have special needs, such as mental health disorders, addictive diseases, and development disabilities. The course focuses on problem assessment, types of intervention strategies, and techniques and methods for determining the effectiveness of interventions.

SOCW 2050 – GROUP WORK INTERVENTION (3-0-3)

This course will provide students with a foundational understanding of the knowledge and skills required to participate in and lead small groups in a variety of settings. The course emphasizes an experiential approach which will provide students with the opportunity to develop skills in planning, facilitating, organizing, and evaluating the success of groups. Emphasis will be placed on exploration and application of group work theory, principles and practices of group counseling, stages of group development, group dynamics, and group leadership.

SOCW 2060 – CHILD AND ADOLESCENT BEHAVIORS AND INTERVENTIONS (3-0-3)

This course examines various modalities for assessing and interviewing the children and adolescents. It focuses on biopsychosocial changes, interpersonal relationships and the individuals ability to relate to the social environment. Topics include child maltreatment, teen parenting, delinquency, violent behavior, school dropout, suicide, substance abuse, and runaway behavior.

SOCW 2070 – SOCIAL POLICIES AND PROGRAMS FOR THE AGING (3-0-3)

This course explores the aging process and the experience of aging from a variety of perspectives. Emphasis is placed on understanding the normative changes associated with the aging process, as well as the ways in which those changes are experienced personally and socially. Specific issues that will be reviewed include the realities of aging on our society, life adjustments, physical health, mental health, changes in physical appearance, and the dying process.

SOCW 2080 – SOCIAL WORK FIELD PRACTICUM AND SEMINAR I (0-6-6)

The field practicum is an educationally focused, guided field experience in which students engage in community-based practice with individuals, families, and/or communities. Students gain experienced with various social work roles, such as advocate, broker, and counselor. Students learn to function as professional generalists social workers in an organizational setting, to demonstrate an understanding of and behavior consistent with the NASW Code of Ethics, and to increasingly assume professional responsibility. Special emphasis is placed on the identification of specific needs, the empowerment of diverse populations at the micro and mezzo levels, and a keen awareness of social justice issues. Students will under the supervision of the Social Work program faculty and/or persons designated to

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coordinate work experience arrangements.

SOCW 2090 – SOCIAL WORK FIELD PRACTICUM AND SEMINAR II (0-6-6)

Field practicum II is an advanced educationally focused, guided field experience in which students engage in community-based practice with individuals, families, and/or communities. Students gain experience with various social work roles, such as advocate, broker, and counselor. Students learn to function as professional generalist social workers in an organizational setting, to demonstrate an understanding of and behavior consistent with the NASW Code of Ethics, and to increasingly assume professional responsibility. Special emphasis is placed on the identification of specific needs, the empowerment of diverse populations at the micro and mezzo levels, and a keen awareness of social justice issues. Students will be under the supervision of the Social Work program faculty and/or persons designated to coordinate work experience arrangements.

SOCW 2100 – LEADERSHIP AND COMMUNITY SERVICE (2-1-3)

This course is designed to prepare students for a lifetime of engaged responsible and active community involvement and leadership. In class, students will learn about leadership skills and styles and how to most effectively assess and assist organizations in their community. Outside of class students will be required to provide volunteer service to an approved placement site in their local community for an approved number of hours.

SOCW 2110 – CASE MANAGEMENT WITH FAMILIES (3-0-3)

This course focuses on initial introduction to the concept of families throughout the family life cycle. Using a biopsychosocial approach, the course explores the family structure (traditional, single parent, gay/lesbian, divorce); and social and environmental stressors that impact the family. Students will learn the step-by-step process of case management for the family unit from the initial referral for services, determination of eligibility for services, writing a formal plan for services, case documentation techniques, and techniques for monitoring progress for each individual family member through the service delivery system, to case closure/follow-up activities.

SOCW 2120 – MULTICULTURAL ISSUES (3-0-3)

This course provides students with knowledge and skills to work with physically, socio-economically, mentally, psychologically, and economically disadvantaged and oppressed people. Attention is given to ethnic minorities of color, women, people with disabilities, gay and lesbian people, the poor, and the oppressed. A multi-dimensional cross-cultural framework is introduced for assessments and interventions with consumers from diverse groups. Students learn to identify and emphasize the adaptive capabilities and strengths of disadvantaged and oppressed people.

SOCW 2130 – SOCIAL WELFARE, ETHICS, AND COMMUNITY SERVICE (2-1-3)

Introduction to the basic concepts, information and practices within the field of social services. Topics include a survey of the historical development of social services; social, legal and clinical definitions; and review of current information regarding indications for and methods of treatment and/or services. Students will be required to provide volunteer service to an approved placement site in their local community for an approved number of hours.

SOCW 2140 – ADDICTIONS, THEORIES, AND TREATMENTS (3-0-3)

This course looks at the social, political, physiological, and behavioral implications of alcohol/drug abuse. The course focuses on theories of drug and alcohol addiction stages, the dynamics and nature

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of psychoactive substances, theories/methods of substance abuse prevention, family dynamic models, co-dependency, and disease concepts.

SOCW 2150 – DOMESTIC AND FAMILY VIOLENCE (3-0-3)

This course provides a comprehensive exploration of domestic and family violence. The history, nature, extent, causes and consequences of violence are examined. This course includes information on laws and law enforcement, societal issues, populations victimized and diagnosis and treatment techniques. It also includes information on community resources, treatment centers and support groups, cultural awareness, special populations at risk and theories explaining the prevalence of domestic and family violence.

SPCH 1101 – PUBLIC SPEAKING (3-0-3) (degree level)

Prerequisite: Regular Admission or ENGL 0090

Introduces the student to the fundamentals of oral communication. Topics include selection and organization of materials, preparation and delivery of individual and group presentations, analysis of ideas presented by others, and professionalism.

WELD 1005 – WELDING AND CUTTING FUNDAMENTALS (1-6-3)

Co-requisite: COFC 1080

This course introduces the student to basic welding and cutting techniques. Topics include welding safety, oxyfuel cutting, plasma arc cutting, air carbon arc cutting and gouging, base metal preparation, and weld quality requirements.

WELD 1006 – WELDING AND CUTTING FUNDAMENTALS A (0-1-1)

Co-requisite: COFC 1080

This course introduces the student to basic welding and cutting techniques. Topics welding safety, oxyfuel cutting, base metal preparation, weld quality requirements, and welding symbols. This course aligns with select modules found in NCCER Levels I and II welding curricula. This course is designed for high school dual enrollment.

WELD 1008 – WELDING AND CUTTING FUNDAMENTALS B (0-2-2)

Prerequisite: WELD 1006

Co-requisite: COFC 1080

This course introduces the student to basic welding and cutting techniques. Topics include Plasma Arc cutting, Air Carbon Arc cutting and gouging, reading welding detail drawings, physical characteristics and mechanical properties of metals, and pre-heating and post-heating of metals. This course aligns with select modules found in NCCER Levels I and II welding curricula. This course is designed for high school dual enrollment.

WELD 1015 – SHIELDED METAL ARC WELDING I (1-8-4)

Co-requisite: COFC 1080, WELD 1005

This course is the first of two courses dedicated to shielded metal arc welding procedures. Topics include SMAW equipment and setup, electrodes, and beads and fillet welds.

WELD 1016 – SHIELDED METAL ARC WELDING A (1-1-2)

Co-requisite: COFC 1080

This course is the first several courses dedicated to Shielded Metal Arc Welding procedures. Topics

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include SMAW equipment and setup, electrodes, and beads and fillet welds with E7018. This course aligns with modules found in NCCER Level I welding curriculum. This course is designed for high school dual enrollment.

WELD 1018 – SHIELDED METAL ARC WELDING B (1-1-2)

Co-requisite: COFC 1080

This course is the second of several courses dedicated to Shielded Metal Arc Welding procedures. Topics include SMAW equipment and setup, electrodes, and beads and fillet welds with E6010. This course aligns with modules found in NCCER Level I welding curriculum. This course is designed for high school dual enrollment.

WELD 1025 – SHIELDED METAL ARC WELDING II (1-6-3)

Prerequisite: WELD 1015 or WELD 1016 or WELD 1018

Co-requisite: COFC 1080

This course is the second in a series of Basic Shielded Metal Arc welding practices. Topics include joint fit-up and alignment, groove welds with backing, and open V-groove welds.

WELD 1033 – GAS METAL ARC WELDING (1-2-2)

Co-requisite: COFC 1080

This course covers the fundamentals of Gas Metal Arc Welding (GMAW). Topics include equipment and filler metals and plate welding. This course is designed for high school dual enrollment.

WELD 1034 – FLUX-CORED ARC WELDING (1-2-2)

Prerequisite: WELD 1033

Co-requisite: COFC 1080

This course covers the fundamentals of Flux-Cored Arc Welding (FCAW). Topics include equipment and filler metals and plate welding. This course is designed for high school dual enrollment.

WELD 1035 – GAS METAL ARC AND FLUX-CORED ARC WELDING (1-3-4)

Co-requisites: COFC 1080, WELD 1005

This course covers the fundamentals of Gas Metal Arc Welding (GMAW) and Flux-Cored Arc Welding (FCAW). Topics include equipment and filler metals and plate welding.

WELD 1045 – GAS TUNGSTEN ARC WELDING I (2-3-3)

Co-requisites: COFC 1080, WELD 1005

This course provides an overview of gas tungsten arc welding (GTAW). Topics include welding safety, power sources, electrodes, equipment, GTAW torches, filler metals, equipment setup and plate welding.

WELD 1055 – SHIELDED METAL ARC WELDING PIPE WELDS (1-6-3)

Prerequisite: WELD 1025

Co-requisite: COFC 1080

This course explains how to set up shielded metal arc (SMAW) equipment for open-root V-groove welds on carbon steel pipe.

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WELD 1065 – GMAW AND FCAW PIPE WELDS (2-6-4)**Prerequisites:** WELD 1035 or WELD 1033 and WELD 1034**Co-requisite:** COFC 1080

This course explains how to set up gas metal arc welding (GMAW) and flux-cored arc welding (FCAW) equipment for open-root V-groove welds. It includes procedures for open-root V-groove welds with GMAW and FCAW equipment on pipe in a variety of positions.

WELD 1075 – GAS TUNGSTEN ARC WELDING PIPE WELDING (1-8-4)**Prerequisite:** WELD 1045**Co-requisite:** COFC 1080

This course explains how to prepare GTAW equipment for open-root V-groove welds on carbon steel and stainless steel pipe in all positions.

WELD 1085 – SMAW STAINLESS STEEL GROOVE WELDS (1-6-3)**Prerequisite:** WELD 1025**Co-requisite:** COFC 1080

This course explains how to make SMAS open-root V-groove welds on stainless steel plate and pipe in all positions.

WELD 1105 – GAS METAL ARC WELDING – ALUMINUM (2-3-3)**Prerequisite:** Program Admission**Co-requisite:** COFC 1080

This course introduces the student to aluminum plate and pipe welding techniques using Gas Metal Arc Welding (GMAW) equipment. Topics include aluminum metallurgy, equipment set-up and use, aluminum wire, shielding gas, and fillet and V-groove welds.

WELD 1115 – GAS TUNGSTEN ARC WELDING – ALUMINUM (2-3-3)**Prerequisite:** Program Admission**Co-requisite:** COFC 1080

This course introduces the student to aluminum plate and pipe welding techniques using Gas Tungsten Arc Welding (GTAW) equipment. Topics include aluminum metallurgy, equipment set up and use, aluminum wire, shielding gas and fillet and V-groove welds.

WELD 1570 – ADVANCED NUCLEAR PIPE WELDING (1-8-4)**Prerequisites:** WELD 1055, WELD 1075

This course provides additional skills application to prepare students to work in the construction and pipe welding industry to include nuclear and/or fossil fuel power applications. Topics include advanced SMAW introduction, SMAW applications, advanced GTAW introduction, GTAW applications, GTAW skill demonstration and combination GTAW/SMAW proficiency.