

COURSES
OF INSTRUCTION

Credit Course Descriptions

Opposite each course title are printed three numbers, such as 3-2-4. 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 hours of credit awarded for the successful completion of the course.

The College reserves the right to cancel or delete any course with insufficient enrollment.

ACCT 2101. Principles of Accounting I **3-0-3**

Prerequisite: CAPS 1101, CISM 2201, CMPS 1125, or permission of the instructor

Examines the underlying theory and application of financial accounting concepts.

ACCT 2102. Principles of Accounting II **3-0-3**

Prerequisite: ACCT 2101.

Continues to examine the underlying theory and application of managerial accounting concepts.

ALHT 1110. Allied Health Terminology **3-0-3**

A study of medical language including word construction, definition, spelling, and proper usage of terms related to most allied health disciplines. (Career Course)

ALHT 1115. Medicolegal Ethics and Quality Assurance **1-0-1**

Medical ethics, legal issues, and methods of quality assurance, including agencies which regulate health care institutions, are carefully reviewed. Students are made aware of their legal and ethical responsibilities to all aspects of professionalism and confidentiality. (Career Course)

ALHT 1150. Introduction to Health Unit Coordinating **3-0-3**

Prerequisites: ALHT 1110, 1115, BIOL 1100, OADM 2250, and acceptance into the Health Unit Coordinator program and permission of HUC faculty.

Documentation of patient care within the hospital is stressed. Students apply techniques of transcribing physicians' orders, computer applications of terminology, and appropriate communication skills. (Career Course)

ALHT 1155. Health Unit Practicum **2-30-12**

Prerequisites: Successful completion with "C" or higher of all HUC course requirements and permission of HUC faculty.

The HUC student will be assigned to an area health care facility to apply the techniques learned in the classroom. Students will gather for a problem-solving seminar on a weekly basis. (Career Course)

ALHT 1160. Basic Coding Skills **3-0-3**

Prerequisite: ALHT 1110, 1115, BIOL 1100, OADM 1250, and acceptance into the MCS program and permission of MCS instructor. Other students wishing to take ALHT 1160 will be evaluated on an individual basis by the MCS faculty.

Coding is a uniform language that accurately describes medical, surgical, and diagnostic services. It is the basis for insurance claims and for the development of guidelines for medical care review. Students will identify and properly code medical diagnoses and procedures performed by medical personnel. (Career Course)

ALHT 1165. Coding Specialist Practicum **2-30-5**

Prerequisite: ALHT 1160 and permission of the MCS faculty.

The MCS student will be assigned to an area health care facility under the direction of a preceptor to apply techniques learned in the classroom. Students will meet for a problem-solving seminar on a weekly basis. (Career Course)

ANTH 1103. Introduction to Social Anthropology **3S0S3**

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Examines various types of human society. While an introduction is provided to the four fields of anthropology: archaeology, cultural anthropology, linguistics, and physical anthropology; the major emphasis is placed on the study of human culture.

ASTR 1101. Introduction to Astronomy **3-0-3**

Prerequisite: MATH 1111

A general survey of the solar system, stars, galaxies and cosmology. Some nighttime observation sessions will be included so the student can locate important constellations and stars. The telescope will be used to view certain planets, double stars and the Orion Nebula.

AUTM 1011. Engine Principles & Construction **2-2-3**

Develops a thorough understanding of basic engine principles, enabling the student to troubleshoot and perform engine overhaul as prescribed by the various engine manufacturers.

AUTM 1012. Computer Control & Fuel Systems **2-2-3**

Provides a foundation for servicing electronic fuel injection in great detail, includes operation and service of fuel management sensors, and air management is discussed. (Career Course)

AUTM 1013. Principles of Engine Tune-Up **2-2-3**

Emphasizes the fundamentals of the modern automotive engine, using tune-up equipment for diagnosis and adjustment from the basic point type to the modern distributor less systems. Also includes servicing CCC systems, HEI, EST, and Hall Effect Ignition systems. (Career Course)

AUTM 1014. Automotive Shop Practice I **0-8-4**

Provides students with opportunities in the diagnosis and repair of automotive problems. Experiences will be gained either in the campus automobile lab or in automotive dealerships and independent garages. (Career Course)

AUTM 1021. Specialized Automotive Electronics **2-2-3**

Course builds from the electrical principles and concepts through automobile semi-conductors to microprocessors. Includes electrical measurement devices and wire repairing including copper/aluminum and weather pack service techniques through on-bench and on-car practical exercises and homework. Students build personal test equipment in class and practice diagnostic procedures applicable to present and future automotive electronics systems. (Career Course)

AUTM 1022. Automotive Charging & Starting Systems **2-2-3**

The fundamentals of electrical theory and how it applies to the modern automobile. Includes a study of AC and DC systems, starting motors, and voltage regulators. (Career Course)

AUTM 1023. Power Train & Transmission **2-2-3**

Provides an understanding of the many problems encountered in automotive transmissions, and enables the student to troubleshoot and perform minor repairs as prescribed by the vehicle manufacturer.

AUTM 1024. Automotive Shop Practice II **0-8-4**

Provides students with opportunities in the diagnosis and repair of automotive problems. Experiences will be gained either in the campus automotive lab or in automotive dealerships and independent garages. (Career Course)

AUTM 1031. Automotive Brake Systems **2-2-3**

Presents the basic fundamentals of steering systems, front and rear suspension systems, and wheel alignment and balancing. Also a study of service procedures on standard hydraulic brakes. (Career Course)

AUTM 1032. Automotive Air Conditioning Systems **2-2-3**

A study of basic refrigeration principles and automotive air conditioning operations; enables the student to troubleshoot, repair, and install automotive air conditioning as prescribed by the manufacturers. (Career Course)

AUTM 1033. Steering and Suspension Systems **2-2-3**

Presents the basic fundamentals of steering systems, front and rear suspension systems, and wheel alignment and balancing. Laboratory assignments develop skills and knowledge needed to properly service steering and suspension systems on the modern automobile.

AUTM 1034. Automotive Shop Practice III **0-8-4**

Provides students with opportunities in the diagnosis and repair of automotive problems. Experiences will be gained either in the campus automobile lab or in automotive dealerships and independent garages. (Career Course)

BIOL 1100. Human Biology **3-0-3**

Prepares non-health majors for employment in the health professions. Topics include basic chemistry, cell biology, genetics, and digestive, excretory, respiratory, circulatory, endocrine, reproductive, and skeletal systems. Laboratory demonstrations and practices are included. (Career Course)

BIOL 1105. Environmental Studies **3-2-4**

Focuses on the interrelationship of the biological and physical components of the environment and the impact of human activities on the biosphere.

BIOL 1107. Principles of Biology I **3-2-4**

Prerequisite: READ 0098 unless exempt

Introduces fundamental unifying principles of biology. Topics include scientific method, biological chemistry, cell structure and function, energetics, cell division, genetics and evolution. Replaces BIOL 1101 - General Biology I.

BIOL 1108. Principles of Biology II **3-2-4**

Prerequisite: BIOL 1107

Continuation of BIOL 1107. Topics include the structure and function of the following animal systems: nervous, circulatory, immune, respiratory, digestive, urinary, endocrine, and reproductive, as well as diversity, development, behavior and ecology. Replaces BIOL 1102 - General Biology II.

BIOL 2203. Principles of Botany **3-2-4**

Introduces students to plant cell biology, anatomy, physiology, genetics, biotechnology, economic importance, diversity, and classification. Teaches students sterile technique, basic plant tissue culture, and techniques for microscopic observation of plants.

BIOL 2212. Anatomy and Physiology **3-3-4**

Prerequisite: BIOL 1107, except Plan 1 Nursing Majors

Focuses on the study of human anatomy and physiology. Topics include chemistry, cells, tissues, and the integumentary, skeletal, muscular, nervous, and endocrine systems.

BIOL 2213. Anatomy and Physiology **3-3-4**

Prerequisite: BIOL 2212 or permission of MLT advisor

Continues the study of human anatomy and physiology begun in Biology 2212. Topics covered include the circulatory-lymphatic, immune, respiratory, digestive-metabolic, excretory, and reproductive systems and human development and heredity.

BIOL 2215. Microbiology **3-2-4**

Prerequisite: BIOL 1107 or BIOL 2212

Introduces students to the biology of viruses, bacteria, fungi, and protozoan and animal parasites. Teaches students the fundamental principles of microbiology with special emphasis on the relationships of microbes to man. Trains students to isolate, culture, and identify microbes in a laboratory.

BIOL 2224. Entomology **3-2-4**

Prerequisite: BIOL 1108

Presents an introduction to the anatomy, biology, and behavior of insects. The laboratory emphasizes classification and identification of insects.

BUSA 1105. Introduction to Business **3-0-3**

Surveys the functional areas of business (finance, operations, marketing, human resources, etc.).

BUSA 2105. Communication in the Business Environment **3-0-3**

Prerequisite: ENGL 1101

Emphasizes both interpersonal and organizational communications; includes written and oral exercises appropriate to business practice.

BUSA 2106. The Environment of Business **3-0-3**

Introduces the political, social, legal, ethical, environmental, and technological issues which form the context for business; includes an overview of the impact of demographic diversity on organizations.

BUSA 3051. Principles of Management **3-0-3**

Prerequisite: BUSA 1105, BUSA 2106, or BUSA 3100

Introduces the basic concepts and processes of management. The course includes a study of the legal, social, and political environment with specific emphasis on the behavioral perspectives in organizations.

BUSA 3053. Human Resource Management **3-0-3**

Prerequisites: BUSA 2106, BUSA 3051

Presents theory and policy to perform industrial relations; organization and administration, theories of work, labor relations, commitment and morale, communication, employee benefits and services.

BUSA 3054. Principles of Marketing **3-0-3**

Prerequisite: BUSA 1105, BUSA 2106, or BUSA 3100

Provides a general survey of the field of marketing covering marketing channels, functions, methods and institutions.

BUSA 3055. Quantitative Methods **3-0-3**

Prerequisite: MATH 2181, MATH 2200, IOMG 3251, MGIS 3351

Develops students analytical skills for decision making, emphasizing forecasting techniques, inventory models, application of mathematical

programming and network models, sequencing and scheduling techniques, and line balancing.

BUSA 3056. Principles of Finance **3-0-3**

Prerequisites: ACCT 2102

Introduces students to financial management. Topics include the structure and analysis of financial statements, cash flow, financial forecasting, determination of the cost of capital and the profitability of proposed investments in fixed assets, risk-return tradeoffs that must be considered in using financial leverage.

BUSA 3100. Introduction to Technology Management **3-0-3**

Introduces the functions to be performed by managers in the production and service sectors. Topics emphasized include ethics in decision making, interpersonal skills, professional behavior, and other contemporary issues.

BUSA 3200. Survey of Economics **3-0-3**

Examines basic micro and macro economic principles used in business. This course will cover terminology and concepts which are used in upper level business courses. This course is only open to students enrolled in the BAS program who have a junior or higher standing.

BUSA 3300. Survey of Applied Accounting **3-0-3**

Provides an understanding of the pragmatic principles of accounting. Understanding of these principles are necessary to be successful in upper level business courses. This course is open only to students enrolled in the BAS program who have a junior standing or higher.

BUSA 3400. Survey of Data and Information Systems **3-0-3**

Surveys the roll of data and information systems in decision making and introduces software packages which are designed to assist managers in this task. This course is open only to students enrolled in the BAS program who have a junior standing or higher.

BUSA 4051. Strategic Management/Policy **3-0-3**

Prerequisites: BUSA 3051, 3054, 3056, ENGL 3203, IOMG 3251

Integrates subject matter from the business core courses and other disciplines, focusing on integrated approaches to medium and long-term organizational challenges in a dynamic environment. Students will develop skills in, and appreciation of, the role of all managers in the formulation and implementation of organizational strategies.

BUSA 4503. Quality Management Systems **3-0-3**

Prerequisite: BUSA 2106 or 3100, IOMG 3251, MGIS 3351

Develops the continuous quality philosophy. Strategic quality management focuses on assessment and group decisions. The role of leadership in continuous quality improvement is covered.

CAPS 1101. Introduction to Computers **2-2-3**

Corequisite: OADM 1140, or knowledge of computer key functions and ability to type at least 20 words per minute, or permission of instructor.

A survey of computer-related topics; including the basic elements of a computer system, ways in which computers can be used, and their organizational and social impact. Hands-on experience with microcomputers using Microsoft Windows, data-management, and electronic-spreadsheet programs. (Career Course)

CAPS 1120. AS/400 Operations and Facilities **3-2-4**

Prerequisite: CAPS 1101, CISM 2201, or CMPS 1125, or permission of instructor.
An introduction to the operations, basic tools, and facilities of the AS/400 computer system. Lectures are supported by hands-on laboratory exercises, primarily utilizing the IBM AS/400. (Career Course)

CAPS 1140. Microcomputer Operating Systems 3-2-4

Prerequisite: CAPS 1101, CISM 2201, or CMPS 1125, or permission of instructor.
An overview of operating system essentials for microcomputers, with emphasis on those used with IBM compatibles. (Career Course)

CAPS 1145. Data Communications and Networking 3-2-4

Corequisite: CAPS 1140 or permission of instructor.
Coverage of the fundamentals of data communications, including hardware, software, protocols, local and wide-area networks, and network issues. (Career Course)

CAPS 1151. Advanced AS/400 Operations and Facilities 3-2-4

Prerequisite: CAPS 1120 or permission of instructor.
Further study of operating system concepts and procedures with particular attention to the IBM AS/400. (Career Course)

CAPS 1152. UNIX 3-2-4

Prerequisite: CAPS 1140.
Study of the Unix operating system, to include basic system operation and access, system installation and configuration, file system organization, file management and manipulation, shell usage, and system maintenance and security.

CAPS 1203. COBOL 3-2-4

Prerequisites: CAPS 1101, CISM 2201, or CMPS 1125, or permission of instructor.
The design, coding and testing of programs using COBOL. Programs written include arithmetic operations, simple IF statements, and the generation of reports with edited output and final totals. (Career Course)

CAPS 1208. Computer User Support 3-0-3

Prerequisite: Three CAPS courses plus an introductory course such as CAPS 1101, Computer Information Systems 2201, or Computer Science 1125; or permission of instructor.
An overview of the skills and knowledge required to provide technical support for computer users. Includes such topics as user needs assessment, help desk operation, and computer user training.

CAPS 1209. Computer Problems 0-9-3

Prerequisite: Four CAPS courses, or three CAPS courses (other than CAPS 1101) plus an introductory course such as CISM 2201 or CMPS 1125, or permission of instructor.
Students obtain job-related experience in a data-processing installation or computer-utilizing unit in the community; or perform special projects to meet their individual needs. (Career Course)

CAPS 1211. Introduction to RPG Programming 3-2-4

Prerequisite: CAPS 1101, CISM 2201, CMPS 1125, or permission of instructor.
Students design, code, and test programs using the Report Program Generator (RPG IV) language. Programs written include report editing, mathematical operations, use of subroutines to support structured programming, IFs and case structures, and external and logical files. (Career Course)

CAPS 1212. Advanced RPG Programming **3-2-4**

Prerequisite: CAPS 1211 or permission of instructor.

A continuation of CAPS 1211. Programs written include file processing, interactive applications, and tables and arrays. Review of RPG logic cycle. (Career Course)

CAPS 1213. AS/400 Control Language Programming **3-2-4**

Prerequisite: CAPS 1151 and working knowledge of PDM, SEU, and DDS (may be obtained through CAPS 1211); or permission of instructor.

Introduces concept, purpose, uses, and implementation of Control Language (CL) programming. Emphasis is on CL syntax and interactive and batch programs in the AS/400 environment.

CAPS 1216. Database and Interactive Applications **3-2-4**

Prerequisite: CAPS 1101, or CISM 2201, or CMPS 1125, or permission of instructor.

This course involves application development in an interactive-database environment. Students receive hands-on experience with a microcomputer database package. (Career Course)

CAPS 1217. Electronic Spreadsheets **3-2-4**

Prerequisite: CAPS 1101, or CISM 2201, or CMPS 1125, or permission of instructor.

Study of various types of applications using electronic spreadsheets. Topics include financial, statistical, database, and graphic applications; and macros. (Career Course)

CAPS 1218. Systems Analysis and Design **3-0-3**

Prerequisite: CAPS 1101 and CAPS 1216 and/or 1217, or permission of instructor.

An overview of the system development life cycle. Discussion of the analysis and documentation of existing systems, development of requirements for alternate systems, and design/implementation considerations for new systems. Emphasis is on tools (i.e., data-flow diagrams) used in all phases of the life-cycle. (Career Course)

CAPS 1219. Software Testing and Maintenance **3-2-4**

Prerequisite: CAPS 1216 and 1217, or permission of instructor.

Construction of test data; advanced debugging and testing techniques. Students modify and debug applications using test data that they construct. (Career Course)

CAPS 1240. Advanced Topics in Computer Applications/Systems **3-2-4**

Prerequisite: Permission of instructor.

Selected topics in the use of the computer based on current needs and trends; for example, an in-depth exploration of an operating system or an introduction to a programming language not currently taught. (Career Course)

CAPS 1250. Novell NetWare Administration **3-2-4**

Prerequisite: CAPS 1145 or permission of instructor

Covers the basics of managing a Novell NetWare network; how to set up, manage, and use basic network services, including file systems, network printing, and security; how to add users to the network. (Career Course)

CAPS 1255. Windows NT Server Administration **3-2-4**

Prerequisite: CAPS 1145 or permission of instructor

The same as CAPS 1250, except that Microsoft Windows NT Server is covered. (Career Course)

CAPS 1260. Advanced NetWare Administration **3-2-4**

Prerequisite: CAPS 1250 or permission of instructor

Advanced administration tasks such as tuning the network and managing complex directory trees. Troubleshooting NetWare. (Career Course)

CAPS 1265. Advanced NT Server Administration **3-2-4**

Prerequisite: CAPS 1155 or permission of instructor

Advanced administration tasks such as tuning the network and managing multiple server networks. Troubleshooting NT Server. (Career Course)

CAPS 1270. Multiple and Wide-Area Networks **3-2-4**

Prerequisite: CAPS 1145 or permission of instructor

Examination of how different networks are connected and related topics. Coverage includes routers, bridges, and gateways; intranets, the Internet, and related protocols; how to create World Wide Web pages and servers; setting up e-mail systems. (Career Course)

CAPS 1276. Advanced Routers and Switches **3-2-4**

Prerequisite: CAPS 1270 or permission of instructor

Builds on topics introduced in CAPS 1145 and 1270. Topics include network segmentation, Fast Ethernet, types of switches, spanning tree algorithm, and Novell IPX.

CAPS 1277. WAN Design **3-2-4**

Prerequisite: CAPS 1276 or permission of instructor

Implementation of various WAN services/protocols, include LAPB, frame relay, ISDN/LAPD, HDLC, PPP, and DDR.

CAPS 1280. Programming in Java. **3-2-4**

Prerequisite: CAPS 1270 or permission of instructor

An introduction to object-oriented programming using the language Java, with special attention to Java applets and Web pages. (Career Course)

CAPS 1290. Web Site Design **3-2-4**

Prerequisite: CAPS 1270 or permission of Instructor

Design and maintenance of effective web sites for information and e-commerce. Coverage includes organization and layout, use of animation and interaction, trouble shooting and maintenance. Topics include HTML, JavaScript, and web server installation and administration.

CCSS 1161. Service Industry Environment **1-0-1**

Introduces students to the services industry. Topics include an introduction to the service industry business environment; an introduction to life-long learning, work ethic and positive behaviors required for exceptional customer services. Other topics provide an introduction to customer relations, team building, and basic business principles.

CCSS 1162. Customer Contact Skills **4-0-4**

Provides students with the skills necessary to communicate with customers and successfully manage that relationship in both telephone and face-to-face situations. Topics include communicating effectively with customers, developing rapport with customers, problem-solving in customer service, and developing telephone skills, sales skills, managing the difficult customer, and managing the multi-cultural customer. Computer-Based Training (CBT) is used to allow students to practice skills using simulated business situations.

CCSS 1163. Computer Skills for Customer Service **3-0-3**

Provides students with the fundamentals of computer skills used in a customer service environment. Topics include introduction to computer technology, Windows environment, word processing, spreadsheet, databases, e-mail, and credit card processing.

CCSS 1164. Business Skills for the Customer Service Environment 2-0-2

Provides students with the fundamentals of basic business skills used in the customer service environment. Topics include introduction to business correspondence, basic business calculations, change management, managing multiple tasks and priorities, and tools for team problem-solving and service improvement.

CCSS 1165. Personal Effectiveness in Customer Service 1-0-1

Provides students with skills that will allow them to present a positive image to both co-workers and customers. Topics include personal wellness stress management, positive image, and job interview skills.

CHDV 1101. Introduction to Early Childhood and Related Care 3-0-3

Prerequisite: CDA Program admission or approval of instructor

This course will introduce students to the responsibilities and procedures involved in the different child care settings; the scope, growth and needs of early childhood programs; classroom goals, objectives, and evaluations; routines and scheduling; work ethics; licensure and accreditation procedures.

CHDV 1102. Early Childhood Growth and Development 3-0-3

Prerequisite: CDA Program admission or approval of instructor

This course will focus on the principles of child growth and development. Proper techniques for observing and recording children's behavior will be discussed. Topics will include the steps to advance children's physical and intellectual development, with emphasis on physical, social, emotional, cognitive, and moral development expectations.

CHDV 1103. Health/Safety and Nutrition 2-0-2

Prerequisite: CDA Program admission or approval of instructor

First Aid and Infant/Child CPR for early childcare providers is provided. Students will gain information regarding disease-causing organisms - how to recognize signs of communicable diseases and methods to avoid their spread in group child care. Topics will include proper techniques for preparing and serving nutritious, healthful foods, along with tips to prevent food-borne illness. Students will also learn about their role in the frequent injuries and accidents occurring with children, as well as how to prevent most unsafe situations.

CHDV 1104. Curriculum Development 1-2-2

Prerequisites: CHDV 1101 and 1102

Develops specific skills and knowledge of the process of translating theories of education into practice; students will plan and provide age-appropriate activities; different curriculum approaches, learning environments and a variety of community resources will be presented.

CHDV 1105. Creative Art/Music and Movement 1-4-3

Prerequisites: CHDV 1101 and 1102

Introduces the basic concept of creative art for children. Students, through class lecture/work setting, will identify art media, methods, and materials for creative activities, formulate art lesson plans, and understand the relationship between children's art processes and products. This course will also introduce the basic concept of creative music and movement with children. Students, through class lecture/work setting, will learn the music/movement benefits of children's development through physical, intellectual, emotional and social

experiences; planning a music learning center with a variety of music materials and incorporating the various elements of creative movement into the daily schedule.

CHDV 1106. Language Arts and Literature **3-0-3**

Prerequisites: CHDV 1102 and ENGL 1100

Introduces the basic concept of promoting the development of language skills in the preschool environment to include techniques for listening and speaking for young children; students will learn to expand the language arts center through library corner (reading readiness), storytelling areas (literature selection), and writing area (pre-writing).

CHDV 1107. Learning Concepts - Math/Science **3-0-3**

Prerequisites: CHDV 1102 and OADM 1208

Provides the basic concepts of the benefits of math and science for young children; identifies and recognizes a variety of items that can promote math/science experiences in each learning center and through child/teacher-directed activities.

CHDV 1108. Parental Involvement **3-0-3**

Students will be provided with methods on how to form partnerships with families through parent conferences, teacher/parent communications sources (i.e., newsletters), parents as volunteers, special activities for families, and parent education resources within the community. Techniques on incorporating multi-cultural and anti-bias activities in the classroom/home will also be presented.

CHDV 1109. CDA Preparation and Assessment **3-0-3**

Prerequisites: CHDV 1101, 1102, and 1103

Professionalism is emphasized in the area of CDA application through Direct Assessment, professional resource file development, and strategies to establish positive and productive relationships with families. This course will emphasize professionalism in the area of child development and help students who will be completing the application.

CHDV 1190. Early Childhood Practicum I **1-4-3**

Prerequisites: CHDV 1101 and 1102.

Students have the opportunity to gain knowledge and experience in on-the-job settings. The importance of professionalism, interpersonal relationships with co-workers, families and children, and classroom management will be presented.

CHDV 1191. Early Childhood Practicum II **1-4-3**

Prerequisite: CHDV 1190

Provides the opportunity to gain knowledge and experience in on-the-job settings. Developing professionalism, interpersonal skills with co-workers, families and children, and classroom management will be presented.

CHEM 1105. Fundamentals of Chemistry **3-3-4**

Prerequisite: High School Algebra II with a "C" average or exit MATH 0098

Introduces the fundamentals of chemistry including general principles of atomic structures, bonding, reactions, gases, water, solutions, pH and elementary organic chemistry and biochemistry.

CHEM 1211. General Chemistry I **3-3-4**

Prerequisite: MATH 1111 or permission of instructor

Explores the discipline of chemistry through an understanding of the basic laws and properties of matter, stoichiometry, atomic structure, chemical bonding, gas laws, solutions and the physical states of matter. Requires laboratory experimentation which illustrates applications of concepts studied in lecture.

CHEM 1212. General Chemistry II **3-3-4**

Prerequisite: CHEM 1211

Continues the exploration of the discipline of chemistry begun in CHEM 1211. Focuses on the more quantitative aspects of chemistry including chemical equilibria, kinetics, acid-base, solubility product, electrochemistry and coordination compounds. Requires laboratory development of techniques necessary to identify common metallic and non-metallic ions.

CHEM 2211. Organic Chemistry I **3-3-4**

Prerequisite: CHEM 1212 or permission of instructor

Introduces the chemistry of organic compounds including aliphatic and aromatic hydrocarbons, stereo-chemistry, monofunctional compounds and some polyfunctional compounds. Requires the illustration of techniques for synthesis, separation, purification and identification of organic compounds in the laboratory.

CHEM 2212 Organic Chemistry II **3-3-4**

Prerequisite: CHEM 2211

Continues the exploration of the chemistry of organic compounds with an emphasis on the characteristics and reactions of a variety of functional groups. Requires the illustration of techniques for synthesis, separation, purification and identification of organic compounds in the laboratory.

CHEM 3103. Textile Chemistry **3-0-3**

Prerequisite: CHEM 1211

Assures a basic understanding of the properties and reactions of aliphatic and aromatic organic compounds. Emphasis will be placed on mechanistic interpretations and the development of synthetic schemes leading to polyfunctional compounds of the types encountered in the textile industry.

CINM 1101. Introduction to Film as Literature **3-0-3**

Prerequisite: ENGL 1101 or permission of the instructor.

Presents an introduction to film which incorporates humanistic, philosophic, and historical analyses of film from the silent period through modern times. Explores selected films for critical application of these methodologies as well as appreciation through lectures, readings, and viewings, including capability in electronic resources and documentation.

CISM 2201. Fundamentals of Computer Applications **2-2-3**

Prerequisite: Degree credit math course or permission of instructor.

Assures a basic level of computer applications literacy; to include spreadsheet, database, word processing, LAN, e-mail, and Internet utilizations.

CMPS 1100. Computer Literacy **1-0-1**

Introduces basic computer concepts including computer terminology, Windows 95, and navigation of the Internet. Students will be exposed to the components that comprise computer hardware and the software needed to effectively use personal computers.

CMPS 1125. Computer Concepts **3-0-3**

Prerequisite: MATH 1111 or permission of instructor

Covers such topics as computer operating systems and problem solving using applications software. Software packages in word-processing, spreadsheet design and database management will be studied. For non-computer science majors.

CMPS 2220. Principles of Programming I **3-0-3**

Prerequisite: Permission of instructor, CAPS 1101, CISM 2201, or CMPS 1125

Introduces computer programming using the Pascal language. Emphasis is on the design and teaching of correct well-structured algorithms using appropriate control structures with simple data types and data structures.

CMPS 2221. Principles of Programming II **3-0-3**

Prerequisite: CMPS 2220 or permission of instructor

Continues the development of program design using the language C++.

CNAS 1110. Basic Nursing Assistant Skills **2-2-3**

Prerequisite: Permission of instructor.

This course emphasizes the needs of the elderly and other persons requiring the services of nursing facilities. It focuses on nursing assistant skills and functions, safety and the psychosocial approach to the care of the resident. Caring, understanding, and respect for the residents as individuals are important attitudes conveyed to the nursing assistant. Skills such as body mechanics and safety, feeding, bath and bed making are practiced in the nursing lab before applying these skills in the clinical setting. (Career Course)

CNAS 1111. CNA Clinical Practicum **0-6-2**

Prerequisite: CNAS 1110

The purpose of this clinical practicum is to provide the student with opportunity to utilize developing skills acquired in the classroom and lab of CNAS 1110. The goal of these skills includes: acquiring insight into his/her personal development, developing and utilizing communication skills, and to safely and effectively relate theory as presented in the classroom setting to the individual patient in a clinical area (examples: Geriatrics and Acute Care Hospitals). (Career Course)

CNAS 1130. Home Care Training **1-0-1**

Prerequisite: CNAS 1111

This course builds upon the basic Certified Nursing Assistant concepts with an expansion of the role of the Certified Nursing Assistant in order to function outside of the structure of the healthcare facility. Subject areas included are orientation to the home care industry, communication skills, working with people, caring for clients at various stages of development, and caring for the client's home environment. (Career Course)

CNAS 1131. Home Care Skills Practicum **0-6-2**

Prerequisite: CNAS 1130

This course is the clinical component of Certified Nursing Assistant 1130. Principles and skills introduced in the classroom will be practiced in the clinical setting under the supervision of a nurse preceptor (RN or LPN). During the two weeks of clinical practicum, the student will meet with their primary instructor at the end of the week for post-conference and problem solving. (Career Course)

COMM 1110. Fundamentals of Speech **3-0-3**

Presents a course in the basic principles of effective oral communication. Emphasizes planning, researching, organizing, and presenting types of speeches used in business, educational, and political activities. Gives special attention to informative and persuasive extemporaneous speeches.

COMM 2240. Group Discussion and Parliamentary Procedure **3-0-3**

Focuses on the theory and practical application of discussion methods used in committees, informal groups, and business conferences. Special attention will be given to the principles and practices in the use of parliamentary procedure, motions, amendments, nominations, elections, constitutions, and bylaws. The main emphasis is on group theory, problem solving, and critical thinking.

COOP 1000. First Parallel CO-OP Experience

Prerequisite: Acceptance into the Co-Op Program and acceptance of a job offer by an approved Co-Op employer.

The student works 20 hours a week in a position directly related to the academic major. A Supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1001. Second Parallel CO-OP Experience

Prerequisite: COOP 1000

The student continues to work 20 hours a week in a position directly related to the academic major. The difficulty of the work assignments and the student's level of responsibility will increase from COOP 1000. A supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1002. Third Parallel CO-OP Experience

Prerequisite: COOP 1001

The student continues to work 20 hours a week in a position directly related to the academic major. The difficulty of the work assignments and the student's level of responsibility will increase from COOP 1001. A supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1003. Fourth Parallel CO-OP Experience

Prerequisite: COOP 1002

The student continues to work 20 hours a week in a position directly related to the academic major. The difficulty of the work assignments and the student's level of responsibility will increase from COOP 1002. A supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1500. First Alternating CO-OP Experience

Prerequisite: Acceptance into the Co-Op Program and acceptance of a job offer by an approved Co-Op employer.

The student works 40 hours a week in a position directly related to the academic major. A Supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1501. Second Alternating CO-OP Experience

Prerequisite: COOP 1500

The student continues to work 40 hours a week in a position directly related to the academic major. The difficulty of the work assignments and the student's level of responsibility will increase from COOP 1500. A supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1502. Third Alternating CO-OP Experience

Prerequisite: COOP 1501

The student continues to work 40 hours a week in a position directly related to the academic major. The difficulty of the work assignments and the student's level of responsibility will increase from COOP 1501. A supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

COOP 1503. Fourth Alternating CO-OP Experience

Prerequisite: COOP 1502

The student continues to work 40 hours a week in a position directly related to the academic major. The difficulty of the work assignments and the student's

level of responsibility will increase from COOP 1502. A supervisor will train and evaluate the student. Satisfactory completion of the course will result in a grade of CC (Co-Op Credit).

CRJU 1100. Introduction to Criminal Justice **3-0-3**

Prerequisites: POLS 1101 or SOCI 1101, or permission of the instructor.

Introduces the study of the institutions and processes of the criminal justice system, including the legislature, law enforcement, attorneys, courts, and corrections. An emphasis is placed upon inter-component relations and checks and balances within the system. Discussion of relevant philosophical models of the criminal justice system is included.

CRJU 2221. Introduction to Criminology **3-0-3**

Prerequisite: SOCI 1101

Examines criminal behavior, theories of deviance, and social control. Considers the relationship between individual deviance and social disorder. Includes analysis of criminal statistics as well as models of treatment and prevention.

CRJU 2231. Introduction to Corrections **3-0-3**

Prerequisite: SOCI 1101

Investigates the history and origins of the correctional process through the organizational structure, the treatment procedures, and the control and management of institutions, jails, and detention facilities.

CRJU 2261. Introduction to Juvenile Justice **3-0-3**

Prerequisite: SOCI 1101

Examines the nature of juvenile delinquency as well as the significant causal theories and models of treatment and prevention. Includes analysis of delinquency statistics and relationships among selected social indicators.

CRPT 1259. Introduction to Carpet Manufacturing **3-0-3**

Students will be introduced to the different techniques utilized in the process of manufacturing carpet. A history of carpet manufacturing from its beginning until today will be presented. Carpet manufacturing from other countries will be investigated.

CRPT 1275. Introduction to Textiles/Polymer Chemistry **3-0-3**

an introduction to the chemistry of polymers and textile fibers, preparation agents, dyes, and finishes.

CRPT 1280. Carpet Fiber Science **3-0-3**

This class introduces students to the history, structure, properties, fabrication, and use of polymers in the carpet industry. Properties of fibers are examined in relation to their end-use performance.

CRPT 1285. Yarn Manufacturing **3-0-3**

This course investigates manufacturing technologies for producing staple, natural/synthetic fiber yarns, and basic properties of spun yarn. The extrusion process will be investigated.

CRPT 1287. Carpet Coloration and Finishing **3-0-3**

A study of thermal, chemical, and mechanical processes used in preparation, coloration, and finishing of textile structures.

CTMS 1152. Manufacturing Organizational Principles **1-0-1**

Students will be introduced to the Certified Manufacturing Program at Dalton State College as well as the manufacturing process as a whole. Time will be

spend on business principles and plant safety. The work ethic principles will be stressed during this learning module.

CTMS 1154. Manufacturing Workplace Skills **1-0-1**

The importance of effective listening will be presented in detail. Another component is that of team work or working together to get multiple task completed. Students will also be introduced to different ways to manage change in their lives. Methods of personal wellness, problem solving skills, and job interview scenario will be presented. The concept of a positive self image will be explored.

CTMS 1156. Manufacturing Production Requirements **2-0-2**

World class manufacturing will be explored in this area. Statistical Process Control will be introduced and worked into the curriculum quite heavily.

CTMS 1158. Automated Manufacturing Skills **2-0-2**

Students will be introduced to force, work, rate, and power. Various hand tools, both power and manual will be explored in detail. The student will receive a basic understanding of the fundamentals of electricity, industrial control and computers automation.

CTMS 1160. Representative Manufacturing Skills **4-0-4**

Students will be introduced to concepts involving fractions, the metric system, and ratio and proportion. Calculator will be used in developing business calculation skills. A great deal of time will be spent on actual blueprint reading and understanding. Various manufacturing simulations will be presented, including forklift operational and safety standards.

DRFT 1120. Applied Computer Graphics **1-4-3**

Prerequisite: CAPS 1101, or permission of instructor.

This course provides an introduction to computer graphics used in business applications. It is designed for the non-drafting student. Topics covered include terminology, hardware, and applications software necessary to produce computer generated graphics. (Career Course)

DRFT 1141. Engineering Graphics I **1-4-3**

Engineering Graphics I is the introductory course for students majoring in Drafting and Design Technology. The course will introduce engineering graphics and its role in the engineering and manufacturing process. Beginning sketching, lettering, and the use of drafting tools as well as the process of creating working drawings are presented. (Career Course)

DRFT 1143. Engineering Graphics II **1-4-3**

Prerequisite: DRFT 1141.

This course will build upon and expand knowledge and skill levels in geometric construction, multi-view drawing, sectioning, and dimensioning practices. Pictorial drawing along with auxiliary, steel detailing and welding drawing are introduced. (Career Course)

DRFT 1145. Geometric Tolerancing and Dimensions **1-2-2**

Prerequisite: DRFT 1141.

The course will introduce the student to geometric tolerancing and dimensioning and how these practices are used in machine drawings found in various industries. The student will gain experience applying geometric tolerances to machine design problems. (Career Course)

DRFT 1151. Introduction to Computer-Aided Drafting (CAD I) **2-3-3**

Introduces the student to computer-aided drafting (CAD I) and its role in today's engineering processes. Includes micro-based CAD software and the use of plotters and other computer graphics hardware. (Career Course)

DRFT 1153. Intermediate Computer-Aided Drafting (CAD II) 2-3-3

Prerequisites: DRFT 1141 and 1151.

This course will cover 3D CAD. The use of 3D space, 3D tools, solids modeling and advanced modeling concepts and commands. The student will have an introduced to the programming language of AutoLisp. (Career Course)

DRFT 1161. Architectural Drafting I 1-2-2

Prerequisite: DRFT 1141.

This course will give the student an overview of architectural drafting. The student will be exposed to components of architectural plans, lettering, and sketching. The course will be taught using traditional board drafting techniques. (Career Course)

DRFT 2245. Descriptive Geometry 2-3-3

Prerequisite: DRFT 1141.

This course will present descriptive geometry as a problem solving tool. Students experience how descriptive geometry is used in developing solutions to technical design problems. (Career Course)

DRFT 2247. Manufacturing Processes 1-2-2

Prerequisite: DRFT 1141.

Various manufacturing processes will be introduced along with the use of calipers, micrometers, and computer-aided manufacturing (CAM). (Career Course)

DRFT 2249. Manufacturing Processes II 1-2-2

Prerequisite: DRFT 2247

This course is a continuation of DRFT 2247.

DRFT 2255. Advanced Computer-Aided Drafting (CAD III) 2-3-3

Prerequisites: DRFT 1151 and 1153.

A study of 3D modeling and rendering techniques used to create photo-realistic renderings, animation, and presentations. (Career Course)

DRFT 2257. CAD Machine Drafting I 2-3-3

Prerequisites: DRFT 1141 and 1151.

This course introduces components and design concepts used in creating machine drawings and working drawings. (Career Course)

DRFT 2259. CAD Machine Drafting II 2-3-3

Prerequisite: DRFT 2257.

This course is where all drafting concepts come together. Subjects include working drawings, sheet layout, zoning, bill of materials, and assembly drawings. (Career Course)

DRFT 2263. Architectural Drafting II 2-3-3

Prerequisites: DRFT 1151 and 1161.

Covers basic principles of house planning and styles of home architecture. The student will prepare a complete set of residential house plans using architectural CAD software. (Career Course)

DRFT 2274. Special Problems in CAD 1-4-3

Prerequisites: Permission of Instructor

Course will include selected advanced CAD topics, CAD updating skills, and other software applications not covered in previous CAD courses. (Career Course)

DSCS 1101. A Guide to College Success **2-0-2**

Concentrates on the requirements for success at Dalton State College and provides practical strategies and methods of realizing success. Self-assessment, feedback and reinforcement activities are applied to the development of effective study skills, self-management strategies, interpersonal communication skills, and short- and long-term goals. The course prepares students to assume responsibility for their own learning and growth. (Institutional Credit)

DSCS 1105. Career Choices and Decisions **1-0-1**

Provides an overview of the career planning process. Information, activities, and resources will assist students in developing the skills necessary in choosing a major/career, learning about various occupations and industries, and exploring educational options. (Institutional Credit)

DSCS 1106. Job Search Strategies **1-0-1**

Addresses issues associated with preparing to start a career. Includes information on job search processes, issues and strategies. Will help students assess and relate their qualifications to job options as well as develop resume, cover letter, and interview skills. (Institutional Credit)

DSCS 1110. Personal Development and Wellness **1-0-1**

Explores the concept of personal development, focusing on the application of life management skills to student success. The dimensions of wellness as they relate to the whole person—physical, mental, and psychological—are discussed, and life skills such as goal-setting and motivation, stress management, and communication skills are presented. (Institutional Credit)

DSCS 1115. Real World Skills **1-0-1**

Provides a focused, practical introduction to budgeting, credit, investing, insurance, automobile and home purchase, and basic consumer rights. (Institutional Credit)

ECON 1101. Introduction to Economics **3-0-3**

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Describes and analyzes the economic operation of a modern industrial/commercial society, promotes an understanding of economic concepts as they apply to everyday life, and examines the role of government in the economy. (Designed primarily for students in non-business programs)

ECON 2105. Principles of Macroeconomics **3S0S3**

Prerequisite: Degree credit math course or permission of instructor

Surveys macroeconomic principles. Topics covered include the scope and method of economics, basic demand and supply theory, national income/output analysis, employment/unemployment, inflation, fiscal policy, and monetary policy.

ECON 2106. Principles of Microeconomics **3S0S3**

Prerequisite: Degree credit math course or permission of instructor

Surveys microeconomic principles. Topics covered include the operation of markets, output and price determination, market structure, income distribution, government regulation of business, labor organizations, and international trade.

EDUC 2203. Introduction to Education and Teaching **3-0-3**

Prerequisite: PSYC 1101, or SOCI 1101, or permission of instructor.

Introduces the historical, philosophical, and organizational aspects of teacher education. Includes a 22-hour practicum of primary, middle, and/or secondary classroom observation.

EDUC 2706. Teaching the Exceptional Child **3-0-3**

Prerequisite: EDUC 2203

Introduces the history, practices, advances, problems, and challenges encountered in the education of exceptional children. Ten hours of on-site observation are required.

ELCT 1000. Introduction to Electronics Technology **3-2-4**

Prerequisite: none

Provides basic knowledge and skills for technicians in fields related to electronics technology. Topics include: electrical safety, common electronic devices, soldering, analyzing electrical circuits using Ohm's law, number systems and instrumentation.

ELCT 1010. Basic Electrical Circuits Analysis **3-4-5**

Prerequisite: None

Provides knowledge and skills to analyze, construct, and troubleshoot basic electrical circuits that contain resistors, inductors, and capacitors. Topics include: electrical laws, safety practices, series-parallel circuits, instruments, soldering, energy and power, opens and shorts, inductance, and capacitance. (Career Course)

ELCT 1020. AC Circuits Analysis **3-4-5**

Prerequisites: ELCT 1010 or permission of instructor

Provides knowledge and skills to analyze, construct, and troubleshoot basic RL and RC circuits. Topics include: transformers, generations of DC and AC electricity, oscilloscopes, frequency, amplitude, period, and phase, magnetism, L (inductance), C (capacitance), reactance, impedance, resonance, filters, three-phase power systems. (Career Course)

ELCT 1030. Electronic Devices and Circuits **3-4-5**

Prerequisites: ELCT 1020 or permission from instructor.

Provides knowledge and skills to analyze, construct, and troubleshoot semiconductor circuits. Topics include: junction diodes, Zener regulators, bipolar transistors, field effect transistors, thyristors, opto devices, basic amplifiers, operational amplifiers, linear integrated circuits, power supplies, oscillators, waveshaping circuits, and modulation and demodulation circuits. (Career Course)

ELCT 1045. Introduction to Visual BASIC programming **2-4-4**

Prerequisite: CAPS 1101 or permission of instructor

This course provides knowledge and skills to create programs using Microsoft's Visual BASIC. Topic include BASIC Programming, debugging programs, forms, menus, OLE, standard controls, and ActiveX controls.

ELCT 1100. PC Maintenance and Upgrading **2-4-4**

Prerequisite: CAPS 1140 or permission of instructor

This course provides basic knowledge and skills for the student to perform maintenance and upgrades to microcomputer systems. Topics include microcomputer components, hardware and software maintenance procedures, MS-DOS and upgrading common computer components.

ELCT 2030. Electrical Systems Troubleshooting **3-4-5**

Prerequisite: ELCT 1040 or instructor approval.

Provides knowledge and skills to methodically troubleshoot electrical/electronic systems. Topics include: review of basic electrical concepts relating to all electrical and electronic components, industrial control devices circuits, transformers, motors, troubleshooting methodology and skills, and maintenance. (Career Course)

ELCT 2040. Programmable Logic Controllers (PLCs) 3-4-5

Prerequisite: ELCT 1040 or instructor approval.

Provides knowledge and skills to analyze, construct, program, and troubleshoot computer-based programmable logic controllers used in industrial processes. Topics include: programmable controllers, input/output, processing and programming, field wiring, start-up, timers, counters, sequencers, analog and digital I/O, PID, Human Machine Interface (HMI) software and troubleshooting. (Career Course)

ELCT 2050. Electrical Codes and Circuits 3-4-5

Prerequisite: ELCT 1040 or permission of instructor.

Provides knowledge and skills to analyze electrical power distribution systems with emphasis on National Electrical Code conformity. Topics include: wiring methods, branch circuits, feeders and mains, residential, commercial, industrial, grounding, hazardous locations, motor circuits, GFCI's, ladder logic, start-stop control, forward-reversing, wiring and line diagrams, timers, counters, and sensors. (Career Course)

ELCT 2060. Motors, Controls and Drives 3-4-5

Prerequisite: ELCT 1040 or permission of instructor.

Provides knowledge and skills to analyze, construct, and troubleshoot DC motors and control circuits. Topics include: DC motors, controllers, motor circuit protection, braking, forward and reversing, acceleration and deceleration and Electronic motor drives, single-phase AC motors, three-phase AC motors, Electronic AC motor drives (Inverters), branch circuit protection, overload protection. (Career Course)

ELCT 2100. PC Systems Troubleshooting 2-4-4

Prerequisite: ELCT 1100

This course provides advanced knowledge and skills for the student to install, maintain and troubleshoot microcomputer systems. Topics include software diagnostics, hardware diagnostics, system upgrading of primary and secondary storage devices, video systems, input devices and printers.

ELCT 2110. Microprocessor Interfacing and Technology 2-4-4

Prerequisite: ELCT 1100

This course provides knowledge and skills to analyze, interface, program, construct and troubleshoot microprocessor-based systems. Topics include Microprocessor architecture, assembler language programming, memory, input-output devices, addressing schemes, digital-to-analog and analog-to-digital conversions, interface adapters and communications.

EMST 1100. Emergency Medical Service I 6-2-7

Prerequisite: Admission to the Basic EMT program.

Introduction to Emergency Medical Services and Emergency Medical Technician's skills; Emergency Medical Services and the Law; introduction to Emergency Vehicle Operations, and Equipment; introduction to Blood and Airborne Pathogens; Universal Precautions; Introduction to Hazardous Materials; Introduction Anatomy and Physiology; Patient Assessment; and Radio Communications; introduction to written documentation; introduction to Basic Life Support; introduction to the use of an Automatic External Defibrillator; introduction to the use of airway adjuncts and oxygen therapy. (Career Course)

EMST 1101. Emergency Medical Services II **6-2-7**
Prerequisite: EMST 1100.

Introduction to wounds, bleeding, and bandaging; introduction to shock, instruction of MAST as an invasive procedures; introduction to General Pharmacology and the use of Epinephrine - SQ 1: 1,000 in anaphylaxis. Covers the invasive procedures of IV therapy and treatment and management of injuries to soft tissue, the abdomen, the musculoskeletal system, the head, neck, chest, and spine. Covers environmental and behavioral emergencies as well as disaster/triage and patient lifting, moving and handling. (Career Course)

EMST 1102. Emergency Medical Services III **4-6-7**
Prerequisite: EMST 1101.

Procedures in the assessment and management of medical emergencies, pediatrics, obstetrics, environmental and behavioral emergencies are covered. Sessions involving patient management and mechanical aspects of extrication are included. Supervised experience with patients in clinical facilities is included. (Career Course)

EMST 1103. Introduction to the Paramedic Profession **3-1-3**
Prerequisite: Program admission or permission of instructor.

Introduces the student to the paramedic profession and provides an overview of human systems with emphasis on appropriate medical terminology, systems function, and initial patient management. Discussion of the paramedic profession centers on functions that extend beyond those of the EMT. Topics include: the role and responsibilities of the paramedic, the emergency services system, medical/legal considerations, emergency medical services communications, major incident response, medical terminology, anatomy and physiology, primary and secondary assessment and early field management. This course provides instruction on topics in Division I, Sections 1, 2, 3, 4, and 6 and Division II of the national curriculum. (Career Course)

EMST 1105. Fluids, Electrolytes, and Shock **1-1-1**
Prerequisite: Program admission.

Corequisite: EMST 1103.

Emphasizes the pathophysiology of shock and the functions and characteristics of body fluids. Topics include: cardiovascular anatomy and physiology; fluid and electrolyte balance; and classification, assessment, and management of shock. This course provides instruction on topics in Division II, Section 4 of the national curriculum. (Career Course)

EMST 1106. General Pharmacology for Paramedics **1-1-1**
Prerequisite: Program Admission

Corequisite: EMST 1103, 1105, MATH 1104

Provides a study of the principles and procedures necessary for the proper use and administration of pharmaceuticals in emergency medical care. Topics include: identification of drugs, drug calculations, drug administration techniques and procedures, and drug safety and standards. This course provides instruction on topics in Division II, Section 5 of the national curriculum. (Career Course)

EMST 1107. Respiratory Function and Management **3-1-3**
Prerequisites: Program admission, EMST 1103.

Provides an in-depth study of the anatomical and physiological foundation of respiration and the assessment and management of respiratory pathophysiology and distress. Topics include: anatomy and physiology of the respiratory system, respiratory assessment, airway and ventilation management, and respiratory disease. This course provides instruction on topics in Division IV, Section I and Division II, Section 3 of the national curriculum. (Career Course)

EMST 1108. Cardiology**6-1-6**

Prerequisites: Program admission, EMST 1103

Emphasizes the study of the cardiovascular system, electrocardiography, and cardiovascular treatment methods. Topics include: cardiovascular anatomy and physiology; principles of electrocardiography; recognition of cardiac dysrhythmias; assessment and management of cardiovascular emergencies; methods of emergency cardiovascular treatment such as pharmacologic intervention, defibrillation, and cardioversion; and ACLS skills. This course provides instruction on topics in Division IV, Section 2 of the national curriculum. (Career Course)

EMST 1109. Trauma**3-1-3**

Prerequisite: EMST 1105

Introduces students to the assessment and management of trauma patients. Topics include: systematic approaches to the assessment and management of trauma, such as basic trauma life support (BTLS) and pre-hospital trauma life support (PHTLS); anatomy and physiology of the integumentary system, the major internal organs, types of soft tissue injuries and their management, types of musculoskeletal injuries and the management, and the classification and care of burns. This course provides instruction on topics in Division I, Section 5 and Division III, Section 1 and 2 of the national curriculum. (Career Course)

EMST 1111. Medical Emergencies I**2-0-2**

Prerequisites: EMST 1105 and 1107.

Provides an in-depth study of the endocrine, nervous, digestive, genitourinary, immune systems, infectious disease, and anaphylaxis. Topics include: the assessment and management of endocrine system disorders, the assessment and management of nervous system disorders, the assessment and management of digestive system and genitourinary system disorders, and anaphylaxis. This course provides instruction on topics in Division IV, Section 3, 4, 5, 6, and 8 of the national curriculum. (Career Course)

EMST 1112. Medical Emergencies II**2-0-2**

Corequisite: EMST 1111.

Emphasizes the etiology, pathophysiology and in-field management of immune system compromise and infectious disease and toxicologic, environmental, and gerontological emergencies. Topics include: the assessment and management of patients with infectious disease and the utilization of universal precautions; toxicology, alcoholism, and substance abuse disease process; management of environmental emergencies; and geriatrics and gerontology. The course provides instruction on topics in Division IV, Sections 7, 9 and 10 of the national curriculum. (Career Course)

EMST 1113. Obstetrics/Gynecology**1-1-1**

Prerequisite: EMST 1105.

Provides a study of the female reproductive system, birth processes, and management of OB/GYN emergencies. Topics include: anatomy and physiology of the female reproductive system, normal and abnormal birth processes, assessment and management of OB/GYN emergencies, assessment and management of the newborn, and management of sexual assault victims. The course provides instruction on topics in Division V, Section 1 of the national curriculum. (Career Course)

EMST 1114. Pediatrics**1-1-1**

Prerequisites: EMST 1105, 1107, 1108, and 1109.

Provides the student with the necessary knowledge and skills to care for the ill or injured pediatric patient. Topics include: growth and development, specific diseases of the pediatric patient, approach to and assessment of the pediatric

patient, and management of the pediatric patient. This course provides instruction on topics in Division IV, Section 11 and Division V, Section 1 of the national curriculum. (Career Course)

EMST 1116. Behavioral Emergencies **1-0-1**

Prerequisite: Program admission.

Provides an overview of the assessment and management of behavioral emergencies as they pertain to pre-hospital care. Topics include: communication skills and crisis intervention, assessment and management of the adult and adolescent patient with behavioral emergencies, management of the violent patient, management of the suicidal patient, medical/legal considerations, and stress management. This course provides instruction on topics in Division VI, Section 1, and Division I, Section 7 of the national curriculum. (Career Course)

EMST 1118. Clinical Rotation I **0-8-3**

Corequisite: EMST 1103.

Provides supervised experience that meets Georgia Department of Human Resources (GDHR) requirements for actual patient care in the hospital and advanced ambulance settings. Simulations in the classroom, experience on an advanced ambulance, and service in a hospital develop assessment and treatment skills. Emphasis is placed on ethics, hospital etiquette, assessment and management of medical emergencies, practice of paramedic roles and responsibilities, and application of patient care skills. Clinical opportunities will be provided that meet GDHR requirements for clinical experience in the following areas: ethics and hospital etiquette, care of the critical intensive care patient, intravenous therapy, airway and ventilation management, management of normal and abnormal deliveries, management of the pediatric patient in the emergency department, management of the adult in the emergency department, patient care in an advanced ambulance, and psychological intervention. (Career Course)

EMST 1128. Clinical Rotation II **0-8-3**

Prerequisite: EMST 1118.

A continuation of the clinical applications of advanced emergency care. (Career Course)

EMST 1138. Clinical Rotation III **0-8-3**

Prerequisite: EMST 1128.

A continuation of the clinical applications of advanced emergency care. (Career Course)

EMST 1180. Board Review **1-0-1**

Prerequisite: Permission of instructor.

A review of didactic material and applied clinical techniques utilized in advanced emergency care. (Career Course)

ENGL 0098. Developmental Studies English **4-0-4**

Emphasis placed on the basics of grammar, paragraphs, and essays to prepare students to complete ENGL 1101 successfully. Students may exit from Developmental Studies from this course. (Institutional Credit)

ENGL 0800. Beginning English As A Second Language **3-3-4**

Prerequisite: Limited English, CPEE/R 0-65, CPPE/R 0-30, TOEFL 300-399, or the equivalent.

Offers a basic course in English as a Second Language (ESL). Attends to especially the oral but also the written skills of nonnative learners of English. (Institutional Credit)

ENGL 0830. Intermediate English As A Second Language **3-3-4**
Prerequisite: ENGL 0800, CPEE/R 66-70, CPPE/R 31-40, TOEFL 400-499, or the equivalent

Provides a mid-level course in English as A Second Language (ESL). Develops the oral and written skills of nonnative learners of English. (Institutional Credit)

ENGL 0860. Advanced English As A Second Language **3-3-4**
Prerequisite: ENGL 0830, CPEE/R 71-74, CPPE/R 41-49, TOEFL 500-599, or the equivalent

Presents an upper-level course in English as A Second Language (ESL). Emphasizes writing skills to prepare nonnative learners of English for ENGL 1101--English Composition I. (Institutional Credit)

ENGL 1095. Regents' Testing Program **2-0-2**

Provides required remediation to (1) students who have failed the essay portion of the Regent's Test and to (2) students who have earned 45 degree credit hours and who have not passed (or taken) the essay portion of the Regents' Test. (Institutional Credit)

ENGL 1100. Communication Skills **3-0-3**
Prerequisite: Satisfactory English placement score or successfully complete LRSE 0090.

Offers a basic course in the effective use of oral and written communication skills related to the student's technical program and designed to enable the student to organize, compose, and revise reports, business letters, and other forms of business communication. (Career Course)

ENGL 1101. English Composition I **3-0-3**

Prerequisite: ENGL 0098 unless exempt.

Corequisite: READ 0098 unless exempt.

Students scoring below the acceptable minimum on the diagnostic reading examination must successfully complete READ 0098 before receiving credit for ENGL 1101.

Provides a composition course focusing on skills required for effective writing in a variety of contexts, with emphasis on exposition, analysis, and argumentation, and also including introductory use of a variety of research skills. Special sections use computers each semester. A minimum grade of "C" is required in ENGL 1101 before the student can take ENGL 1102.

ENGL 1102. English Composition II **3-0-3**

Prerequisite: ENGL 1101 or the equivalent.

Presents a composition course that develops writing skills beyond the levels of proficiency required by ENGL 1101, that emphasizes interpretation and evaluation, and that incorporates a variety of more advanced research methods, including capability in electronic resources and documentation.

ENGL 1110. Creative Writing **1-0-1**

Prerequisite: ENGL 1102 or permission of instructor.

Writing fiction, with an emphasis on plotting, characterization, point of view, imagery, and symbolism for the short story. Special attention is given to drafting and revising. Classes contingent upon enrollment.

ENGL 2111. World Literature I **3-0-3**

Prerequisite: ENGL 1102 or permission of the instructor.

Surveys important works of world literature from ancient times through the mid-seventeenth century.

- ENGL 2112. World Literature II** **3-0-3**
Prerequisite: ENGL 1102 or permission of the instructor.
Surveys important works of world literature from the mid-seventeenth century to the present. Continues study begun in ENGL 2111, but 2111 is not a prerequisite.
- ENGL 2120. British Literature I** **3-0-3**
Prerequisite: ENGL 1102 or permission of the instructor.
Surveys important works of English literature from the Old English period through the neoclassical age.
- ENGL 2121. British Literature II** **3-0-3**
Prerequisite: ENGL 1102 or permission of the instructor.
Surveys important works of English literature from the Romantic era to the present. Continues study begun in English 2121, but 2121 is not a prerequisite.
- ENGL 2130. American Literature I** **3-0-3**
Prerequisite: ENGL 1102 or permission of the instructor.
Surveys important works of American literature from the pre-colonial age to the mid-nineteenth century.
- ENGL 2131. American Literature II** **3-0-3**
Prerequisite: ENGL 1102 or permission of the instructor.
Surveys important works of American literature from the mid-nineteenth century to present.
- ENGL 3203. Business Writing** **3-0-3**
Prerequisite: ENGL 1102
Provides an introduction to organization, style, and mechanics of technical and managerial writing and presentations. Includes practice in writing such documents as technical , organizing, writing, editing and presenting reports including designing visual aids.
- FNAR 1102. Fine Arts Appreciation** **3-0-3**
Prerequisite: ENGL 1101 or permission of the instructor.
Presents an historical study of aesthetic expression through painting, sculpture, music, dance, and architecture as those forms reflect the values and the culture of the societies that produced them. Begins with instruction in the common principles governing all the arts.
- FREN 1001. Elementary French I** **3-0-3**
Instructs in the basic principles of French pronunciation and in the fundamentals of grammar and sentence structure. Within a limited vocabulary range, emphasizes equally the development of speaking, writing, reading, and listening skills.
- FREN 1002. Elementary French II** **3-0-3**
Prerequisite: FREN 1101 or permission of the instructor.
Follows the same patterns and objectives used for FREN 1101 but includes a more detailed study of grammar, longer conversational exercises, and some discussion of French history, culture, and literature.
- FREN 2001. Intermediate French I** **3-0-3**
Prerequisite: FREN 1102 or two units of high school French.
Reviews intensively French grammar, verb forms, and idioms. Includes reading of texts of moderate difficulty; more advanced conversation exercises. Classes contingent upon enrollment.

- FREN 2002. Intermediate French II** **3-0-3**
 Prerequisite: FREN 2201.
 Continues readings of texts of moderate difficulty in literature and culture of French-speaking peoples; advanced conversation exercises. Classes contingent upon enrollment.
- GEOG 1101. Introduction to Human Geography** **3-0-3**
 Prerequisite: READ 0098, unless exempt, or permission of the instructor.
 Introduces the study of world geography with attention given to demographic, political, cultural, economic, and environmental characteristics of regions of the world.
- GEOG 1111. Introduction to Physical Geography** **3S0S3**
 Prerequisite: READ 0098, unless exempt, or permission of the instructor.
 Introduces the basic principles of geography as related to the physical elements of the human environment and area distribution throughout the world. Includes maps and locations, weather, climate, and natural resources.
- HIST 1111. World Civilization to 1650** **3S0S3**
 Prerequisite: READ 0098, unless exempt, or permission of the instructor.
 Surveys the history of civilization from its beginnings through the ancient, classic, and medieval eras to 1650 C.E. Although Western civilization and its antecedents in the Mediterranean basin receive the most intense study, Indian, Far Eastern, and Islamic civilizations are also given extensive consideration.
- HIST 1112. World Civilization since 1650** **3S0S3**
 Prerequisite: READ 0098, unless exempt, or permission of the instructor.
 Surveys the history of civilization in the modern era from 1650 C.E. to the present. While the perspective of the course is global, the development of Western ideals and institutions and their expansion on a world-wide scale serve as the basic organizing principles of the course. A continuation of HIST 1111 but may be taken independently.
- HIST 2111. United States History to 1877** **3S0S3**
 Prerequisite: READ 0098, unless exempt, or permission of the instructor.
 Surveys the history of colonial America and the United States from the first European encounters with the New World through the Civil War and Reconstruction.
- HIST 2112. United States History since 1877** **3S0S3**
 Prerequisite: READ 0098, unless exempt, or permission of the instructor.
 Surveys United States history from the Reconstruction era to the present. A continuation of HIST 2111 but may be taken independently.
- HUMN 2212. Electronic Culture** **1-0-1**
 Prerequisite: CMPS 1100 or comparable skill level.
 Carries students beyond the introduction to electronic technology and research begun in ENGL 1102 and the appreciation of culture begun in FNAR 1102 to an exploration and assessment of the subject matter of the Humanities in electronic forms, of electronic aids to research, and of the cultural treasures of the Internet. Classes contingent upon enrollment.
- IOMG 3251. Principles of Operations Management** **3-0-3**
 Prerequisite: BUSA 1105 or BUSA 2106 or BUSA 3100, MATH 2200 or concurrent, MGIS 3351 or concurrent

Introduces students to an organization's resources and processes in its efforts to create products or services. The set of resources planned and managed includes the work force, equipment, materials and information.

IOMG 3252. Manufacturing Cost Analysis **3-0-3**

Prerequisites: BUSA 3056, IOMG 3251, MGIS 3351

Prepares students to provide a technical and economic evaluation of manufacturing operations to determine cost and feasibility.

IOMG 3253. Introduction to Data Processing Systems **3-0-3**

Prerequisite: IOMG 3251, MGIS 3351

Introduces to the concepts and terminology of data communications, network design, and distributed information systems. Emphasis on management of equipment, architectures, and transmission alternatives.

IOMG 3254. Computer Integrated Manufacturing **3-0-3**

Prerequisites: IOMG 3251 or concurrent, MGIS 3351 or concurrent

Introduces the concepts and terminology of computer integrated manufacturing. Special emphasis is placed on the practical application of automation technology.

IOMG 4252. Work Measurement and Analysis **3-0-3**

Prerequisite: MATH 2200

Prepares students to evaluate the motion necessary to perform industrial operations; motion economy; development of ratings, allowances, standard data, formal construction of standards, work sampling, wage payment and performance training.

IOMG 4253. Manufacturing Processes and Materials **3-0-3**

Prerequisite: IOMG 3251, MGIS 3351

Examines the materials, technologies, products, and practices associated with manufacturing. Raw materials, product design, formation and finishing systems, evaluation methods, distribution, and end-use applications are examined.

IOMG 4254. Industrial Loss and Risk Management **3-0-3**

Provides a foundation for planning, implementation and evaluation of industrial safety programs. Includes coverage of OSHA and workers' compensation issues.

IOMG 4255. Manufacturing Planning and Control **3-0-3**

Prerequisites: IOMG 4253

Examines the planning involved in manufacturing operations, evaluates personnel requirements, control methods, equipment and supplies.

IOMG 4256. Advanced Application Development **3-0-3**

Prerequisites: MGIS 3351 and either MGIS 3253 or MGIS 3352

Course will increase students' programming and database skills in an integrated application development environment. Specific topics include basic database theory, creation of tables, queries, forms, and reports; as well as programming with macros and sequential languages.

IOMG 4800. Special Topics in Operations Management **3-0-3**

Prerequisite: Permission of Instructor

In-depth supervised, individual study of one or more current problems in the field of operations management.

LENF 1100. Basic Law Enforcement **3-0-3**

Prerequisite: Approval by a recognized law enforcement agency.

A basic law enforcement course of 240 hours of classroom instruction designed for all peace officers. The following topics are prescribed by the Georgia Peace Officers Standards and Training Council for the Recruit Minimum Curriculum: Introduction to Law Enforcement, Criminal law, Evidence, Criminal Investigation, Patrol Procedures, Juvenile Procedures, Firearms, Accident Investigation, Community Relations, and First Aid. (Career Course)

LENF 1105. Basic Patrol Procedures **3-0-3**
Introduces law enforcement and patrol procedures. (Career Course)

LENF 1110. Fundamentals of Investigation and Crime **3-0-3**
Scene Processing
Introduces criminal investigation. Special emphasis is placed upon the skills necessary to conduct a preliminary criminal investigation and includes recording the scene as well as identifying and collecting physical evidence. (Career Course)

LENF 1115. Rules of Evidence and Courtroom Presentation **3-0-3**
Examines the rules of evidence commonly recognized by the judicial system. Topics covered are: legal rules governing presumption, opinion evidence, hearsay evidence, privileged communications, and the classification of evidence in terms of real, testimonial, direct, and circumstantial; the fundamentals of being an effective witness in court; the importance of preparation before court; and the importance of the officer's appearance and manner while on the witness stand. (Career Course)

LENF 1120. Georgia Laws and the Georgia Peace Officer **3-0-3**
Introduces Georgia Criminal Law, Georgia Juvenile Law, Georgia Traffic Law, and certain aspects of Georgia Criminal Procedures. This course is designed to give students a working knowledge of definitions, legal procedures, and the evidentiary elements of crime. (Career Course)

LENF 1125. Criminal Procedure **3-0-3**
Examines legal procedures required in "stop and frisk" situations, arrests, searches and seizures, in determining the existence of "probable cause", and in the analysis of probable cause to determine appropriate course of action. (Career Course)

LENF 1130. Constitutional Law and the Peace Officer I **3-0-3**
Introduces the historical factors that influenced the spirit and content of the U.S. Constitution, the major characteristics and powers of the three branches of government, and those provisions of the Bill of Rights which are of particular importance to law enforcement personnel. (Career Course)

LENF 1135. Constitutional Law and the Peace Officer II **3-0-3**
Prerequisite: LENS 1130.
Continues the introduction to constitutional law for the peace officer. (Career Course)

LENF 1140. Management of Forensics **3-0-3**
Introduces the basic principles of forensics. Includes the collection, preservation, and submission of material evidence, the use of forensics in relation to material evidence, and the services available from forensics laboratories. (Career Course)

LPNS 1105. Pharmacology **3-1-3**
Prerequisite: MATH 1102 or permission of instructor.

This course provides the student with basic skills to compute dosages and solutions calculation. Content includes broad drug classification, action, common side effects and criteria for evaluating effectiveness of drug therapy and drugs. Students will practice the procedures for medication administration in a simulated clinical environment. (Career Course)

LPNS 1110. Nursing Skills I/Nutrition **4-4-5**

Prerequisite: Acceptance into LPN program and current professional rescuer CPR certification.

The first of two courses. This course assists students in developing the knowledge and skills needed to perform basic nursing procedures. Through emphasis on the nursing process students are taught the basic principles and concepts involved in meeting the needs of the individual patient. Topics include: orientation to the profession, ethics and law, community health, cultural diversity, basic nursing procedures, and concepts of basic nutrition. (Career Course)

LPNS 1111. Nursing Skills II **4-5-6**

Prerequisite: LPNS 1110.

Continuation of LPNS 1110 focusing on development of more complex nursing skills. Emphasis is on the study of geriatric nursing. Clinical experience occurs in a skilled nursing home and the acute care setting. (Career Course)

LPNS 1120. Medical/Surgical I **3-7-5**

Prerequisite: LPNS 1111.

The first of four courses. This course assists students in developing knowledge, skills and attitudes in the care of adults. Special emphasis is on utilizing the nursing process in meeting the individual patient's needs. Contents include: common illness/disorders related to the respiratory, cardiovascular, and renal systems. Each unit of study includes: pharmacology, diet, therapy, psychosocial, cultural aspects, and/or support of the terminally ill and death. All curriculum threads are continuous. Clinical experience is in the acute care setting. (Career Course)

LPNS 1121. Medical/Surgical II **3-7-5**

Prerequisite: LPNS 1120.

Continuation of LPNS 1120 with emphasis on common illness/disorders of the reproductive, endocrine, and gastrointestinal systems. Clinical experience is in the acute care setting. (Career Course)

LPNS 1130. Medical/Surgical III **3-7-5**

Prerequisite: LPNS 1121.

Continuation of LPNS 1121. Emphasis is on common illness/disorders of the musculoskeletal, eye, nose, throat, and the nervous system. Clinical experience is in the acute care setting. (Career Course)

LPNS 1131. Medical Surgical IV **3-7-5**

Prerequisite: LPNS 1130.

Continuation of LPNS 1130. Emphasis is on common illness/disorders of the integumentary system, mental health and illness, and oncology nursing. Clinical experience is in the acute care setting. (Career Course)

LPNS 1140. Obstetrics **2-5-4**

Prerequisite: LPNS 1131.

This course is structured toward the utilization of the nursing process and nursing skills applicable to the family, maternal and newborn care. Instruction focus will lend itself to relevant pharmacology, diet therapy, and nursing interventions associated with the complicated and uncomplicated stages of labor, delivery, puerperium and newborn care. (Career Course)

LPNS 1141. Pediatrics **2-5-4**

Prerequisite: LPNS 1140.

This course is structured toward the utilization of the nursing process and nursing skills applicable to child care in the home and hospital setting. Instruction focus will lend itself to relevant pharmacology, diet therapy, normal growth and development, and nursing interventions associated with health prevention and disease/disorders of all body systems. (Career Course)

LPNS 1150. Nursing Leadership I **2-1-2**

Prerequisite: OADM 1250 or permission of instructor.

Corequisite: LPNS 1110 or permission of instructor

The first of two courses. Builds on concepts presented in OADM 1250 and LPNS 1110. Provides students with concepts and issues related to leadership, management and safe health care delivery. (Career Course)

LPNS 1151. Nursing Leadership II **0-6-2**

Prerequisite: LPNS 1131 and 1150 or permission of instructor.

Continuation of LPNS 1150. Mid-management skills are introduced utilizing the team nursing concept with multiple assignment. Clinical experience is in a skilled nursing home. (Career Course)

LPNS 1160. State Board Reviews **1-0-1**

Prerequisite: Permission of instructor.

This course assists students in the preparation for the NCLEX-PN/CAT. Review focuses on course content from Medical/Surgical, Maternal/Child, Pediatric and Psychiatric nursing. Students will practice test taking skills using software in the computer lab. (Career Course)

LRSE 0090 **3-0-3**

Prepares students for ENGL 1100 by presenting a study of basic grammar, including subject/verb agreement, pronoun antecedent, verb tense, sentence fragments, fused sentences, and comma splices. Prospective students will be required to score at or above 35 on the COMPASS exam to be exempt from this course. (Institutional Credit)

LRSM 0090 **3-0-3**

Presents the fundamentals of mathematics: addition, subtraction, multiplication, and division of whole numbers, fractions, decimals and percentages. Prospective students will be required to score at or above 35 on the Pre-Algebra COMPASS exam to be exempt from this course. (Institutional Credit)

LRSR 0090 **3-0-3**

Prepares students for READ 1100 by placing emphasis on vocabulary development, identification of main ideas and details, the author's style, and other basic components of reading. Prospective students will be required to score at or above 38 on the COMPASS exam to be exempt from this course. (Institutional Credit)

MATH 0096. PreAlgebra **4-0-4**

Reviews fractions, decimals, percents. Topics include signed numbers, order of operations, variable expressions, linear equations and inequalities, linear graphing, simultaneous equations and polynomials. (Institutional Credit)

MATH 0098. Intermediate Algebra **4-0-4**

Continues the development of algebra. Topics include factoring polynomials, rational expressions, radicals and quadratic equations, complex numbers, functions and logarithms. (Institutional Credit)

MATH 1102. Medical Mathematics **3-0-3**

Prerequisite: Satisfactory Mathematics placement score or successfully complete LRSM 0090

Designed primarily for those students majoring in health professions. Topics covered include a review of computational skills, metric and apothecary systems, and dosage calculations for tablets, solutions, and intravenous fluids. (Career Course)

MATH 1104. Applied Mathematics **3-0-3**

Prerequisite: Satisfactory Mathematics placement score or successfully complete LRSM 0090

A review of mathematics using problems that apply to the student's program of study. Topics include fractions, decimals, percentages, ratio and proportion, geometric shapes and graphs. (Career Course)

MATH 1105. Technical Mathematics **2-0-2**

Prerequisite: Satisfactory mathematics placement score or successfully complete MATH 0096

Covers such topics as basic arithmetic, elementary and intermediate algebra, geometry, and elementary trigonometry. (Career Course)

MATH 1111. College Algebra **3-0-3**

Prerequisite: High School Algebra with a "C" average or successfully complete Developmental Studies Mathematics

Presents topics in algebra, including the number system, polynomials, algebraic functions, exponents, radicals, linear and quadratic equations, inequalities, lines in the plane, linear modeling, conics, algebra of functions, exponential and logarithmic functions and systems of equations and inequalities.

MATH 1112. Trigonometry **3-0-3**

Prerequisite: MATH 1111

Introduces trigonometric functions, graphs of trigonometric functions, solutions and applications of right triangles, identities, inverse functions, general triangle, complex numbers.

MATH 1113. Precalculus Mathematics **3-0-3**

Prerequisite: At least one year of high school mathematics above Algebra II or MATH 1111

Provides immediate transition from high school algebra into calculus and physics. Material goes beyond that normally covered in Mathematics 1101. Algebra topics include linear, quadratic equations, functions and graphing, exponential and logarithmic functions. Trigonometry topics include trigonometric functions and inverse, law of sines, law of cosines and identities. For students planning to take calculus and/or physics.

MATH 1145. Business Mathematics **2-0-2**

Prerequisite: Satisfactory mathematics placements score or successfully complete MATH 0096

Reviews arithmetic operations and basic algebra followed by problems in simple compound interest, payrolls and taxes, valuation of assets, investments and statistics and graphing. (Career Course)

MATH 2181. Applied Calculus **3-0-3**

Prerequisite: MATH 1111

Surveys differential and integral calculus of polynomial, rational, exponential and logarithmic functions. Detailed applications to problems and concepts from business, economics and life science are covered.

- MATH 2200. Introduction to Statistics** **3-0-3**
Prerequisite: MATH 1111
Surveys descriptive and inferential statistics. Topics include organizing and graphing data, measures of central tendency, dispersion, probability, normal distribution, sampling, confidence intervals, hypothesis tests, significance tests, correlation and regression.
- MATH 2201. Foundations of Mathematics** **3-0-3**
Prerequisite: MATH 1111
Emphasizes the basic principles and historical development of numeration systems, geometry, number theory and problem solving. Designed primarily for education majors.
- MATH 2253. Calculus and Analytic Geometry I** **4-0-4**
Prerequisite: MATH 1113 or permission of instructor
Includes topics limits and continuity, derivatives and their applications and an introduction to the concept of the integral. The first in a four course sequence in Calculus.
- MATH 2254. Calculus and Analytic Geometry II** **4-0-4**
Prerequisite: MATH 2253
Emphasizes the definite integral and its applications, the calculus of trigonometric, exponential, logarithmic, hyperbolic and inverse functions, techniques of integration, improper integrals, L'Hospital's Rule, infinite series and conic sections. The second course in the Calculus sequence.
- MATH 2255. Calculus and Analytic Geometry III** **3-0-3**
Prerequisite: MATH 2254
Emphasizes calculus in three dimensions. Topics include vectors, parametric equations, partial derivatives, multiple integrals and their applications and topics in vector calculus. The third course in the Calculus sequence.
- MATH 2256. Calculus IV** **3-0-3**
Prerequisite: MATH 2255
Introduces low-dimensional linear algebra through eigenvalues and eigenvectors. Applications to linear systems, least-square problems, and the calculus, including elementary differential equations. The fourth course in the Calculus sequence.
- MATH 4502. Statistics for Process Control** **3-0-3**
Prerequisite: MATH 2200 or equivalent, IOMG 3251, BUSA 3055
Introduces application techniques used in quality/process control with particular application to area industries. Topics include probability, sampling distributions, control charts for variables and attributes, lot-by-lot sampling plans, acceptance sampling for variables, elementary reliability calculations, and an introduction to the concept of quality costs.
- MFGT 1207. Industrial Safety** **3-0-3**
Students will investigate the course of industrial accidents and their prevention. The design of occupational safety systems and programs will be reviewed.
- MFGT 1269. Time and Motion** **3-0-3**
This course incorporates an analysis of work methods and work measurement systems in manufacturing plants.
- MFGT 2101. Fundamentals of Manufacturing** **3-0-3**

Ideal for those with limited or no prior manufacturing background. An exceptional exploration of manufacturing principles, the functioning team and basic improvement practices. Also covered are manufacturing improvement programs, manufacturing teams, the process, sources of process waste, improvement, continual improvement, basic statistics for improvement, statistical process control charts, process capability and improvement.

MGIS 3351. Management Information Systems 3-0-3

Prerequisite: BUSA 3400 or CISM 2201, ACCT 2102, BUSA 2106, and ECON 2105 or 2106

Introduces students to management computing, with a focus on the capabilities required for management information systems/decision support systems. Also, students are introduced to spreadsheet and database applications.

MGIS 3352. Management Applications Programming I 3-0-3

Prerequisite: MGIS 3351

Develops a knowledge of language and file structures for computer-based business applications using a major business language. Students will write computer programs on individual and team projects.

MGIS 3353. Management Applications Programming II 3-0-3

Prerequisite: MGIS 3352

Builds on the business programming language fundamentals learned in Business Computer Applications. Language and file structure systems. Introduces advanced applications using these structures, such as object-oriented, visual languages for faster development. Microcomputer-based languages will be explored.

MGIS 3354. Telecommunications Management 3-0-3

Prerequisite: MGIS 3351

Provides fundamental instruction on telecommunications and data communications technologies. Provides an understanding of voice communications and data networks, protocols, standards and management. Gives the student a basis for making a business decision in the use of this technology.

MGIS 4354. Systems Analysis and Design 3-0-3

Prerequisite: MGIS 3353 or IOMG 3253

Uses general systems techniques, systems analysis and design, skills and knowledge of modern developments, project planning and control, and total system integration techniques to analyze and design business information systems.

MGIS 4355. Information Resource Management 3-0-3

Prerequisite: MGIS 4354

Enhances skills used to investigate the management and use of information systems and technology as strategic resources to the organization.

MGIS 4356. Database Management Systems 3-0-3

Prerequisite: MGIS 4354

Investigates business applications software in a data base environment and analyzes complex data and file structures used in systems design consideration of global and distributed databases.

MGIS 4358. Web-based MIS 3-0-3

Prerequisite: MGIS 3353

Covers design principles and programming of web-based management information systems, both Internet and Intranet. Studies include organizational considerations for developing and running a web-based MIS; and system considerations for the design, development, implementation, and support of a web-based MIS. Topics covered will include an individual web page, a company Intranet, and a web site for a real or hypothetical organization.

MGIS 4800. Special Topics in MIS **3-0-3**

Prerequisite: Permission of the Instructor

Supervised, in-depth individual research and study of one or more current topics in MIS in conjunction with an associated major project. Student will be required to prepare a formal report and presentation of the topic research and project.

MGMT 2201. Introduction to Management **3-0-3**

This course is designed to familiarize students with the basic functions of the management process applicable all types of organizations. Major emphasis is devoted to planning, organizing, staffing, directing, and controlling, and is presented in the context of political, societal, regulatory, ethical, global and technical forces. (Career Course)

MGMT 2203. Labor Economics **3-0-3**

This course is designed to familiarize students with the supply and demand of labor, the implications of wages, income, types of jobs available, why people are being paid what they are and labor relations. These issues are presented in a framework of current social issues and public policy debates. (Career Course)

MGMT 2205. Introduction to Human Resources Management **3-0-3**

An introduction of major topical areas in human resources management. Emphasis is placed on the functional areas that form the major occupational categories in personnel. Basic concepts in employment planning, recruiting, employee and labor relations, compensation and benefits, health and safety, and security are included. (Career Course)

MGMT 2207. Small Business Management **3-0-3**

An introduction to entrepreneurship and practical applications to the management and operation of small businesses. Included are: start-up issues, legal forms of organization, operational planning, financing the business, budgeting, personnel issues, developing an accounting and control system, long-range planning and strategy formation, developing a business plan, and other appropriate topics. (Career Course)

MGMT 2210. Supervisory Development **3-0-3**

This course provides supervisory skills needed for survival in today's business environment. Supervision concepts that apply to most every situation will be examined. Particular attention will be spent on unique issues, ideas, and trends that affect supervisors. (Career Course)

MLTS 1101. Introduction to Health Sciences **3-1-3**

The student is introduced to the health sciences environment and language. The hospital as an organization is discussed, as well as the role of each major department. The concepts, personnel, and work flow of the clinical laboratory is discussed in detail, as an example of health care application. Other topics include professional ethics regulatory agencies, legal concepts as applied to confidentiality and patients' rights, infection control, and safety. Students will learn venipuncture/capillary puncture techniques, equipment, application, and specimen processing. Enrollment is limited to students of the Medical laboratory, Medical Office, LPN, or Phlebotomy programs. (Career Course)

MLTS 1102. Phlebotomy Clinical Practicum **1-11-5**

Prerequisite: Successful completion (with a grade of "C" or better) of MLTS 1101, OADM 1250, and BIOL 1100 and approval of the instructor.

Students receive clinical application of the venipuncture and micropuncture skills learned in MLTS 1101. Five days per week students are assigned to an area hospital where they work under the direct supervision of a preceptor. Students return to campus one afternoon per week for problem-solving and review. (Career Course)

MLTS 1103. Hematology/Coagulation I **2-2-3**

Introduces the fundamental formation of normal blood cells and some disease states related to hematopoiesis. Safety and quality control also included throughout the course. Instrumentation relating to hematology is introduced. (Career Course)

MLTS 1104. Hematology/Coagulation II **2-2-3**

Prerequisite: MLTS 1103.

Coagulation and related diseases, instrumentation relating to coagulation, critical level, blood cell dyscrasias, safety and quality control are covered. (Career Course)

MLTS 1105. Serology/Immunology **2-2-3**

Prerequisite: BIOL 2215 or permission of MLT Advisor.

Introduces the fundamental theory and techniques applicable to serology and immunology practice in the clinical laboratory. Topics include: immune system, antigen and antibody reactions, common clinical applications, serological/microbiological applications, common serological techniques, and safety and quality control. (Career Course)

MLTS 1106. Blood Bank **2-2-3**

Prerequisite: BIOL 2215 or permission of MLT Advisor.

Provides an in-depth study of immuno-hematology principles and practices as applicable to medical laboratory technology. Topics include: genetic theory and clinical implications, immunology, donor collection, pre-transfusion testing, management of disease statistics, and safety and quality control. (Career Course)

MLTS 1107. Clinical Chemistry **2-2-3**

Prerequisite: CHEM 1211 or permission of instructor.

Develops concepts and techniques of clinical chemistry applicable to medical laboratory technology. Topics include: carbohydrates, electrolytes and acid-base balance, nitrogenous compounds, enzymes and endocrinology, bilirubin metabolism, lipids, toxicology and therapeutic drug monitoring, and safety and quality control. (Career Course)

MLTS 1112. Urinalysis/Parasitology **2-2-3**

Provides theory and techniques of urinalysis. Urinalysis topics include: significance, correlation to disease states, physical, chemical and microscopic urinalysis theory and practice. Selected types of other body fluids will be discussed to discover their significance and uses in disease correlation. This class also introduces concepts and techniques used in the identification of selected human parasites. (Career Course)

**MLTS 1118. Instrumentation and Computer Applications in
the Clinical Laboratory** **3-2-4**

Prerequisites: MLTS 1101, 1103, and 1105, or permission of instructor.

Provides an introduction to basic physics concepts used in clinical laboratory instrumentation. Examines, in detail, selected equipment in the laboratory representing the principles of cell counting, spectrophotometry, continuous-flow analysis, and radioimmunoassay. Computer concepts, applications, and interfacing with laboratory instrumentation, is introduced. (Career Course)

MLTS Technology 1120. Medical Laboratory Mathematics 3-0-3

Prerequisites: Satisfactory placement examination math score or successfully complete MATH 0097 or 0098.

This course is designed primarily for those students majoring in Medical Laboratory Technology. Emphasis is on the metric system, preparation of solutions, percent, normal, molar, dilutions, ionic concentrations and pH, preparation of standard curves, absorbance and percent transmission, quality control statistics and standard deviation. (Career Course)

MLTS 1190. Medical Laboratory Clinical Practicum I 0-3-1

Prerequisite: MLTS 1101 and permission of the instructor.

Introduces Medical Laboratory Technician students to the hospital environment. Students gain experience with venipuncture and microcapillary techniques while working under the direction of a hospital preceptor. (Career Course)

MLTS 1191. Medical Laboratory Clinical Practicum II 0-3-1

Prerequisites: MLTS 1101, 1104, 1105, 1190 and permission of the instructor.

Resumes the clinical experience begun in Medical Laboratory Technology 1190. Students rotate through selected departments in the clinical laboratory to apply and complement concepts and applications learned in previous Medical Laboratory Technology courses. Introduces students to problem solving at the clinical level. (Career Course)

MLTS 2218. Microbiology 2-4-4

Prerequisite: BIOL 2215 or permission of instructor.

Introduces fundamental clinical microbiology theory and techniques applicable to disease state identification. Topics include: isolation techniques, biochemical techniques, anti-microbial sensitivity, safety and quality control, and disease processes. (Career Course)

MLTS 2290. Medical Laboratory Clinical Practicum III 1-32-12

Prerequisite: Successful completion with a "C" or better of all other Medical Laboratory Technology courses, and permission of instructor.

Full-time supervised experience in an affiliated clinical laboratory. Students will rotate among designated laboratory sections where they will work side by side with, and be under the supervision of, medical technologists and the laboratory director to develop professional skills in the practice of medical laboratory technology. (Career Course)

MLTS 2291. Medical Laboratory Clinical Practicum IV 0-12-4

Prerequisite: Successful completion with a "C" or better of all other Medical Laboratory Technology courses, and permission of instructor.

Full-time supervised experience in an affiliated clinical laboratory. Students will rotate among designated laboratory sections where they will work side by side with, and be under the supervision of, medical technologists and the laboratory director to develop professional skills in the practice of medical laboratory technology. (Career Course)

MOAS 1110. Clinical Procedures 2-2-3

Prerequisites: Enrollment is limited to students accepted into the Medical Office Assisting program.

An introduction into the medical assisting field. Students learn both clinical and communication skills that are performed in the physician's office including the care, use and sterilization of instruments, how to obtain vital signs, and administer electrocardiograms, how to drape and position patients for examination, application of dressings and bandages, and how to assist with minor surgical procedures in the office setting. (Career Course)

MOAS 1190. Clinical Practicum **1-12-5**

Prerequisite: MLTS 1101, OADM 1214, BIOL 1100, ALHT 1110, and MOAS 1110 with a grade of "C" or higher.

Students perform a practicum in a physician's office or health care facility. (Career Course)

MRKT 2210. Introduction to Marketing **3-0-3**

An introduction to the principles of marketing. This course examines the activities of individuals and organizations which encourage and facilitate exchanges of values. It includes research, physical distribution, product planning, pricing and promotional activities. These concepts are examined as they apply to marketing of goods and services, in profit and non-profit sectors, in both domestic and global markets. (Career Course)

MRKT 2211. Professional Selling **3-0-3**

An introduction to selling principles with attention to the business-to-business market and the consumer. It examines the role of personal selling in the firm's marketing strategy, communication, psychology, and sales techniques. Students will be required to develop and deliver effective sales presentations. (Career Course)

MRKT 2214. Advertising and Sales Promotion **3-0-3**

Emphasizes the role of advertising in the marketing of goods and services. Discussions on the different uses of advertising, types of media, how advertising is created, budgeting, agency functions and social and economic aspects of the industry. Advertising display, copy and art work preparation, printing and selection of media are also covered. (Career Course)

MRKT 2218. Retail Organization and Management **3-0-3**

Examines the organization of the retail establishment to reach its goals. The course includes the study of site selection, internal layout, store operations, budgeting and security, the retailing mix, the buying process, pricing, and selling. (Career Course)

MSHP 1100. Hand Tools, Power Saws, Lay-Out **1-6-3**

An introductory course in hand tools, power saws, drill presses, and lay-out tools used in machine shops. Projects include lay-out, sawing, drilling, tapping, filing, and finishing. Shop safety is also included. (Career Course)

MSHP 1110. Lathes **1-6-3**

Introduction to the lathe, emphasizing safety, tool sharpening, machine parts and accessories, measuring tools, and drilling and boring are included in the course. (Career Course)

MSHP 1120. Milling Machine **1-6-3**

Introduction to the milling machine, emphasizing safety, feed and speed setups, maintenance, tool selection, project setups, and completion of project assignments. (Career Course)

MSHP 1130. Machining Techniques **1-6-3**

Prerequisite: MSHP 1110 and 1120

The use of all machine tools and equipment through machine projects. Precision machining is stressed. (Career Course)

MSHP 1140. Grinders 1-6-3

Emphasis is placed on the operation of surface grinders, and tool and cutter grinders. Projects made in other courses are finished on the surface grinder. (Career Course)

MSHP 1150. Advanced Machining Techniques I 1-6-3

Prerequisite: MSHP 1110 and 1120.

Presents complicated projects on all equipment. Precision layout, machining techniques, inspection procedures, and machine tool attachments are stressed. (Career Course)

MSHP 1160. Advance Machining Techniques II 1-6-3

Prerequisite: MSHP 1110 and 1120.

Prepares the student to enter the industrial machine shop arena in industry through complicated projects and lay-out procedures. Students make more than one of the same project, as they would in a production shop. (Career Course)

MSHP 1170. Computer Numerical Control (CNC) Operations 1-6-3

A study of the planning, programming, tool selection, determining feeds and speeds, setting up, and operating CNC programs. The production of parts on a CNC milling machine and a CNC lathe are also covered. (Career Course)

NURS 1101. Fundamentals of Nursing I 1-5-3

Corequisite: NURS 1102, MATH 1111, BIOL 2212

Introduces nursing concepts and skills. Requires clinical application in a health care setting. (Career Course)

NURS 1102. Pharmacology 2-0-2

Corequisite: NURS 1101

Introduces pharmacological concepts including drug classifications, mathematical calculations, and principles of drug administration. (Career Course)

NURS 1103. Fundamentals of Nursing II 2-5-4

Prerequisite: NURS 1101, 1102

Corequisite: NURS 1104

Continues the introduction of nursing concepts and skills with increased complexity of theory and practice. Requires clinical application in a health care setting with emphasis on medication administration. (Career Course)

NURS 1104. Nutrition 1-0-1

Corequisite: NURS 1103

Introduces nutrition concepts with emphasis on metabolism, essential nutrients, and the nurse's role in diet therapy. (Career Course)

NURS 1105. Maternal and Infant Care 2-6-4

Prerequisite: NURS 1103

Corequisite: BIOL 2213, PSYC 1101

Emphasizes nursing concepts and skills related to the childbearing family. Requires clinical application in health care settings specific to maternal and infant care. (Career Course)

NURS 1106. Mental Health Nursing 2-6-4

Prerequisite: NURS 1103

Corequisite: BIOL 2213, PSYC 1101

Focuses on nursing concepts and skills related to mental health with emphasis on therapeutic communication. Requires clinical application in health care settings. (Career Course)

NURS 1107. Medical Terminology 1-0-1

Enables students to learn major prefixes, suffixes and word roots used in modern medical terminology. A programmed text will allow students to progress at their own pace. (Career Course)

NURS 2201. Health and Illness I 4-15-9

Prerequisites: NURS 1105, 1106, BIOL 2215

Concentrates on nursing concepts and skills related to the care of individuals across the life span. Addresses common well-defined alterations involving cellular proliferation, mobility, neurological functions, respiration, circulation, and immunity. Requires clinical application in a variety of health care settings. (Career Course)

NURS 2202. Health and Illness II 4-15-9

Prerequisite: NURS 2201 and all general education courses

Concentrates on nursing concepts and skills related to the care of individuals across the life span. Addresses common well-defined alterations involving regulatory function, genitourinary function, digestion, the integument, and the sensory organs. Requires clinical application in a variety of health care settings involving team management of patients and health care workers. (Career Course)

NURS 2203. Nursing Issues 1-0-1

Prerequisite: NURS 2201

Corequisite: NURS 2202

Discusses current issues in nursing. Facilitates the transition from student to registered nurse. (Career Course)

NURS 2204. Pharmacology Review 1-0-1

Prerequisite: NURS 1102

Reviews drug classifications, actions, doses, side effects and nursing implications. Pharmacology mathematical calculations will be included. (Career Course)

NURS 2210. Directed Independent Study 1-0-1

Directed review of nursing techniques and concepts. Available to all returning or advanced placement students. Grading will be pass/fail. (Career Course)

OADM 1101. Office Accounting Procedures 3-0-3

The introduction of the accounting cycle with emphasis on accounting procedures typical in the merchandising and service business. Students will prepare financial statements, work with journals and ledgers, prepare payroll and banking statements, accounting receivables and payables, and develop skill in the use of spreadsheet software.

OADM 1140. Basic Keyboarding 0-2-1

Develops the "type by touch" method of keying information on typewriter or computer. Basic WordPerfect functions such as Save, Retrieve, and Print are taught. The course is required for all Office Administration, Medical Office Assistant, and Medical Transcription students unless they can exempt through testing. Students majoring in other programs of study may elect the course with permission of their advisor. (Career Course)

OADM 1150. Elementary Document Processing 1-2-2

Prerequisite: OADM 1140 or successful demonstration of 25 net words per minute as demonstrated by exemption test.

Develops formatting skills for business letters, memos, tables, and reports. WordPerfect functions may include Margin changes, Block, Move, Indent, Spell Check, Date, Bold, Underline, Endnotes, and others. Speed building and accuracy are stressed. (Career Course)

OADM 1151. Intermediate Document Processing 2-2-3

Prerequisite: OADM 1150 or equivalent.

Continues the principles begun in OADM 1150 Elementary Document Processing. More advanced formats are mastered, and WordPerfect functions such as Merge, Multiple Windows, Footnotes, and Macros are used. Speed building and accuracy are stressed. (Career Course)

OADM 1152. Advance Document Processing 2-2-3

Prerequisite: OADM 1151 or equivalent.

The student completes simulations in a wide variety of office-style activities which use the skills developed in Elementary and Intermediate Document Processing. Strong emphasis is placed on building critical-thinking skills, proofreading, and setting priorities. (Career Course)

OADM 1159. Medical Office Procedures 2-2-3

Prerequisite: OADM 1150 or equivalent.

Emphasis on the production of medical correspondence and medical forms. Insurance forms will be used extensively. (Career Course)

OADM 1208. Mathematics for Office Careers 3-0-3

Prerequisite: Satisfactory score on mathematics placement examination or exit LSRM 0090

Mathematics for business including the fundamental processes of fractions, percentages, averages, interest, and the application of these skills to business situations. (Career Course)

OADM 1214. Medical Machine Transcription I 2-2-3

Prerequisite: OADM 1150 or equivalent.

Designed to orient the student to the various medical reports and terminology used daily in the medical office. The student will learn to use dictation equipment by using cassettes to transcribe medical reports. (Career Course)

OADM 1215. Medical Machine Transcription II 2-2-3

Prerequisite: OADM 1214 with a grade of "C" or better.

Continuation of Medical Machine Transcription I. (Career Course)

OADM 1216. Medical Machine Transcription III 2-2-3

Prerequisite: OADM 1215 with a grade of "C" or better.

Continuation of Medical Machine Transcription II. Includes a practicum in a health care facility. (Career Course)

OADM 1220. Office Procedures 2-2-3

Prerequisite: OADM 1230 and 1151.

A course designed to utilize the skills acquired in English and computer courses to prepare the student for the modern office. Office etiquette, telephone and receptionist techniques, filing, travel arrangements, etc., will be discussed and reinforced with case studies and activities. A research paper is required. Sources must include the Internet as well as the usual literacy materials. (Career Course)

OADM 1222. Transcription **2-2-3**
Prerequisite: OADM 1151 and 1230.

A course in transcription utilizing recorded voice media as a source of impulse-to-type. Consideration is given to correspondence, memoranda, reports, and other documents. Emphasis is placed on spelling, grammar, form, speed, and accuracy. (Career Course)

OADM 1227. Machine Transcription S Legal **2-2-3**
Prerequisite: OADM 1151.

A course in transcription utilizing recorded voice media as a source of impulse-to-type. Emphasis on spelling, grammar, form, speed, accuracy, and legal document formats. (Career Course)

OADM 1230. Business English **3-0-3**

Designed to develop and improve basic language art skills. A thorough review of basic grammar, punctuation, and agreement principles. (Career Course)

OADM 1232. Business Communications **3-0-3**
Prerequisite: OADM 1230.

Training in writing business letters, reports, articles, and memoranda. This course reinforces the basic grammar skills taught in Office Administration 1230. (Career Course)

OADM 1240. Desktop Publishing I **2-2-3**
Prerequisite: OADM 1151 or permission of instructor.

Builds on the word processing skills developed in Elementary and Intermediate Document Processing. It is a study of word processing skills using desktop publishing concepts to improve the appearance of business documents. Emphasis includes, but is not limited to, the following: creation of graphic elements, Text Art images, advanced line formatting, merge, and style features, customized table formatting, and macro assembly. Microsoft Word software will be used. (Career Course)

OADM 1240. Desktop Publishing II **2-2-3**
Prerequisite: OADM 1240

This class continues the principles covered in OADM 1240. Students will use a scanner, the Internet, and windows-based applications to design complex documents. Students will create presentations and design Web pages. Microsoft Word will be used. (Career Course)

OADM 1242. Integrated Computer Applications **2-2-3**
Prerequisite: OADM 1151 or permission of instructor.

A course designed to provide in-depth study of windows-based database, spreadsheet, word processing, and presentation software. Emphasis will be placed on office-style activities and critical thinking skills.

OADM 1250. Professional Development **3-0-3**

Emphasis is placed on developing job search skills and human relations skills. Each student will prepare an employment package which includes a resume, application letter, and job application form. Time is also spent on in-depth communication skills, interviewing skills, goal setting and a variety of employment issues. (Career Course)

PHED 1000. First Aid/CPR. **1-0-1**
(not an activity course)

Trains individuals to overcome reluctance to act in emergency situations, and to recognize and care for life-threatening emergencies such as respiratory or

cardiac problems, sudden illness, and injury. (American Red Cross Certification S First Aid/CPR)

PHED 1010. CPR for the Professional Rescuer. 1-0-1
(not an activity course)

Provides the skills and knowledge used by professional rescuers when providing initial care for life-threatening respiratory and cardiac emergencies. (Does not fulfill the PHED 1000 requirement). (American Red Cross Certification S C.P.R. for the Professional Rescuer)

PHED 1020. Physical Fitness Concepts 0-2-1

Introduces students to basic scientific knowledge and practical experience in the principles, assessment, and development of total well-being through health related physical fitness and lifestyle management techniques. Major topics will include: cardiovascular endurance, muscular endurance and strength, flexibility, body composition, nutrition, and hypokinetic diseases.

PHED 1030. Health & Wellness Concepts. 1-0-1
(not an activity course)

Introduces personal responsibility for health and wellness and provides information and strategies that can be adopted. Covers the following topics: wellness assessment, self-managed behavior, physical fitness, nutrition, weight control, hypertension, stress management, and sexually transmitted diseases.

PHED 1100. Fitness Circuit Training. 0-2-1

Acquaints students with basic knowledge pertaining to the importance of participation in physical activity and its contribution to optimal living.

PHED 1110. Aerobic Walking. 0-2-1

Introduces walking as a lifetime fitness activity. Acquaints the novice walker with the following: the benefits of fitness walking, clothing and equipment, elements of a fitness routine, walking techniques, nutrition, lifetime weight control, mental benefits, motivational strategies.

PHED 1120. Jogging. 0-2-1

Introduces students to the basic knowledge and techniques necessary for a lifelong fitness program. Teaches students how to use jogging/running to become more physically fit and more efficient in daily work and recreation.

PHED 1130. Swim Fitness. 0-2-1

Provides guidance for students who want to use swimming to improve their health and fitness. Students learn how to train effectively, how to measure progress, how to stay motivated, and how to avoid injuries common to swimmers. This is not a "learn to swim" course.

PHED 1140. Weight Training. 0-2-1

Provides basic instruction for students wishing to use weight training to improve personal health and fitness. Workouts will utilize variable and fixed resistance machines (Universal), free weights (dumbbells), and calisthenic exercises.

PHED 1200. Archery. 0-2-1

Introduces the student to target archery, related archery sports, and correlated academic subject matter.

PHED 1210. Beginning Badminton. 0-2-1

Introduces basic badminton skills, terminology, and rules.

- PHED 1215. Intermediate Badminton.** **0-2-1**
Continues the development and refinement of skills from PHED 1210 and introduces advanced badminton strategy and skills in competitive situations.
- PHED 1220. Table Tennis.** **0-2-1**
Introduces the basic rules and skills of table tennis and develops the essentials of spins, strokes, footwork, grips and tactics needed to play the game effectively.
- PHED 1230. Bowling.** **0-2-1**
Introduces the student to all aspects of bowling, including history, basic and advanced techniques, official rules, scoring, etiquette, equipment, and facilities. (Usage fee charged by the off-campus facility).
- PHED 1240. Golf.** **0-2-1**
Introduces the basic swing patterns, grips, stances, rules, and etiquette of golf.
- PHED 1250. Fencing.** **0-2-1**
Introduces basic fencing skills, terminology and rules of bouting.
- PHED 1260. Beginning Tennis.** **0-2-1**
Introduces basic tennis skills, techniques, rules, scoring, and strategy.
- PHED 1265. Intermediate Tennis.** **0-2-1**
Introduces skills appropriate to the intermediate tennis player with emphasis on control, spin, placement and shot selection in game situations.
- PHED 1270. Beginning Racquetball.** **0-2-1**
Introduces the basics of racquetball including court dimensions, scoring, basic strokes, and common errors.
- PHED 1275. Intermediate Racquetball.** **0-2-1**
Continues the development of racquetball skills by introducing advanced strokes, singles and doubles strategies, and shot sequencing.
- PHED 1290. Student Assistant.** **0-2-1**
Allows students who have previously exhibited knowledge and skills appropriate to a course to continue their interest by assisting in a class.
- PHED 1300. Soccer.** **0-2-1**
Introduces soccer as a lifetime activity and acquaints students with the fundamental skills and rules pertaining to soccer and the use of both in game situations.
- PHED 1310. Beginning Volleyball.** **0-2-1**
Introduces basic volleyball skills, terminology, rules and concepts of team play in a physical activity course.
- PHED 1315. Intermediate Volleyball.** **0-2-1**
Continues the refinement of skills from PHED 1310 and introduces patterns of play, set offensive and receiving plays, and officiating techniques.
- PHED 1500. Beginning Swimming.** **0-2-1**
Introduces fundamental swimming strokes, hydrodynamic principles, and water safety.
- PHED 1505. Intermediate Swimming.** **0-2-1**

A more advanced course in swimming covering swimming strokes, hydrodynamic principles, water safety, and fitness swimming components.

PHED 1510. Lifeguard Training. 2-2-3

(Counts as only one hour of activity credit and satisfies PHED 1000 requirement)

Provides training in the various duties and responsibilities of pool lifeguarding, rescue and surveillance techniques, basic first aid, and CPR skills. (American Red Cross Certification S First Aid, C-Pro, Life Guarding.

PHED 1520. Water Safety Instructor. 2-2-3

(Counts as only one hour of activity credit)

Provides training for instructor candidates to teach the fundamental techniques and methods appropriate for certification to instruct American Red Cross Swimming and Water Safety Courses.

PHED 2010. Introduction to Physical Education. 3-0-3

Introduces students interested in making physical education their profession to the history, philosophy, and problems of physical education and how it contributes to the total education program.

PHIL 1101. Introduction to Philosophical Issues 3S0S3

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Inquires into the art of knowing. Examines the questions of meaning, truth, reality, freedom, life, morality, and religion.

PHIL 1102. Logic and Critical Thinking 3-0-3

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Introduces the principles and standards for thinking and communicating clearly and effectively. Topics include: theories of meaning, uses of language, common causes of confusion and error in thought and argument, and evaluation of arguments.

PHIL 1103. Introduction to World Religions 3-0-3

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Studies selected world religions with primary concentration on the origin and major periods of the scriptural and doctrinal development of these religions.

PHYS 1111. General Physics I (Trigonometry based) 3-2-4

Prerequisite: MATH 1111 or MATH 1113

An introductory course which will include material from mechanics, thermodynamics and waves. Elementary algebra and trigonometric will be used.

PHYS 1112. General Physics II (Trigonometry based) 3-2-4

Prerequisite: PHYS 1111

An introductory course which will include material from electromagnetism, optics and modern physics. Elementary algebra and trigonometry will be used.

PHYS 2211. Calculus-based Physics I 3-3-4

Prerequisite: MATH 2253

An introductory course which will include material from mechanics, thermodynamics and waves. Elementary differential calculus will be used.

PHYS 2212. Calculus-based Physics II 3-3-4

Prerequisite: PHYS 2211

An introductory course which will include material from electromagnetism, optics and modern physics. Elementary differential and integral calculus will be used.

POLS 1101. American Government **3S0S3**

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Surveys the structure and operation of the American federal government, the state government of Georgia, and American local government.

POLS 2201. Introduction to State and Local Government **3-0-3**

Prerequisite: POLS 1101 or permission of the instructor.

Introduces the study of state and local government, with emphasis on the constitution, government, and political culture of Georgia. The place of state and local government in the federal system, the importance of state and local government to political liberty, models of state and local government, and special public policy problems faced by states and local communities today will also be considered. When possible, the course will include presentations by officials in Georgia government, or local government.

POLS 2301. Introduction to Comparative Politics **3-0-3**

Prerequisite: POLS or permission of the instructor.

Examines the methods by which major western governments govern and, more specifically, their formulas for dispersing power, both horizontally and vertically. The United States, Canada, Great Britain, Germany, and France, among others, will be discussed. Special attention will be given to the major problems of post-industrial societies and the "New World Order."

POLS 2401. International Relations **3S0S3**

Prerequisite: POLS 1101 or permission of the instructor.

Introduces the field of contemporary international relations and foreign policy. Topics covered include problems of war and peace, such as the Cold War and the ArabIsraeli disputes; conflict and cooperation; the role of international organizations, such as the United Nations; United StatesSSoviet and United StatesSThird World Relations.

PSYC 1101. Introduction to Psychology **3S0S3**

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Introduces the study of psychology as quantitative science and as an aid to the understanding of self and others. Includes consideration of learning principles, personality, conflict and adjustment, tests and measurements, biological bases of behavior and group phenomena.

PSYC 2101. Introduction to the Psychology of Adjustment **3-0-3**

Prerequisite: PSYC 1101 or permission of the instructor.

Surveys the dynamics of both normal and non-integrative adjustment. Includes a study of conflicts, fears, anxiety, and frustration with emphasis on mental hygiene, building emotional stability, and preventing mental illness.

PSYC 2103. Introduction to Human Development **3S0S3**

Prerequisite: PSYC 1101 or permission of the instructor.

Surveys human development from conception to death. Emphasizes physical, social, emotional, cognitive, and moral developmental expectations. Major theoretical and research contributions are also considered.

PSYC 2204. Introduction to Applied Psychology **3S0S3**

Prerequisite: PSYC 1101 or permission of the instructor.

Surveys psychology as used in industrial, educational, criminal justice, and community settings, with an emphasis on research methods and experimental principles.

PSYC 2250. Abnormal Psychology **3S0S3**

Prerequisite: PSYC 1101 or permission of the instructor.

Examines the psychology of deviations from the normal in behavior. Emphasis is upon dynamic factors in the development of differential psychological disorders.

RADT 1101. Introduction to Radiologic Technology 2-2-3

Prerequisite: Program Admission, Radiologic Technology

Introduction to Radiologic Technology and technologist's skills; patient care and assessment; clinical observation and documentation, phlebotomy/venipuncture, vital signs, medical emergencies, basic life support/CPR, infection control, OSHA Standards, blood/air-borne pathogens, methods of sterilization, medical law and ethics; equipment and imaging principles introduction, basic radiation protection principles, and issues common to many specializations in the health care profession. (Career Course)

RADT 1103. Medical Terminology 2-0-2

Prerequisite: Program Admission, Radiologic Technology

Introduces the elements of medical terminology. Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes. (Career Course)

RADT 1111. Radiographic Anatomy I 2-1-2

Prerequisite: Program Admission, Radiologic Technology

Introduces students to the anatomy and physiology of the human body with an emphasis on radiologic correlation to pertinent radiologic procedures. Topics include: respiratory system, upper and lower extremities, abdomen, bony thorax, pelvis and hip, ossification, joints, human chemistry and cells, and integumentary system. (Career Course)

RADT 1112 Radiographic Anatomy II 2-1-2

Prerequisite: RADT 1111

Continues the study of the human anatomy and physiology with an emphasis on radiologic correlation to pertinent radiologic procedures. Topics include: skull, sinuses, and systems--including digestive, urinary, biliary, and central nervous.

(Career Course)

RADT 1121 Radiologic Procedures I 3-1-3

Prerequisite: Program Admission, Radiologic Technology

Introduces the student to radiologic procedures, positioning, image analysis, and correlation of anatomical structures to radiographic films. Emphasis will be placed on the production of quality radiographs, and laboratory experience will demonstrate the application of theoretical principles and concepts. Laboratory evaluations will be administered. Topics include: introduction to radiologic procedures, positioning terminology, positioning considerations, and procedures, anatomy, and topographical anatomy related to body cavities (chest, abdomen), upper and lower extremities, bony thorax, pelvis, and hip. (Career Course)

RADT 1122 Radiologic Procedures II 2-1-3

Prerequisite: RADT 1121

Continues development of the knowledge and skill prior to execution of radiologic procedures in the clinical setting. Laboratory evaluations will be administered. Topics include: methodology for the routine procedures performed for the spine, skull, gastrointestinal, urinary and biliary tracts. (Career Course)

RADT 1123 Radiologic Procedures III 2-2-3

Prerequisite: RADT 1122

Continues the study of radiologic procedures to include: optional and ancillary views of the skull, mastoids, zygomatic arches, and facial bones. The course

also includes an introduction to adjunct imaging modalities including: computerized tomography, magnetic resonance imaging, radiation therapy technology, ultrasound, nuclear medicine, cardiac catheterization, digital radiology, mammography, and angioplasty. Laboratory evaluations will be administered. (Career Course)

RADT 1131. Radiographic Exposure I **2-1-2**

Prerequisite: Program Admission, Radiologic Technology

Introduces knowledge of the factors that govern and influence the production of the radiographic image on radiographic film. Emphasis will be placed on knowledge and techniques required to process radiographic film. Topics include: film processing and chemicals, artifacts, automatic processor troubleshooting, processing quality assurance, state and federal regulations, silver recovery systems, and radiographic quality principles--to include recorded detail, distortion, density, and contrast, film holders and intensifying screens, grids and solving technique problems with a variety of mathematical formulas. (Career Course)

RADT 1132. Radiographic Exposure II **2-1-2**

Prerequisite: RADT 1131

Continues to develop knowledge of the factors that govern and influence the production of the radiographic image on radiographic film. Topics include: beam limiting devices, beam filtration, technique alterations for a variety of equipment and patient pathology, control of scattered radiation, advanced technique formation and exposure calculation. (Career Course)

RADT 1141. Radiologic Science I **2-1-2**

Prerequisite: RADT 1101

Introduces the concept of basic physics and emphasizes the fundamentals of x-ray generating equipment. Topic include: units of measure, physical principles, atomic structure, structure of matter, electrostatics, magnetism, electromagnetism, control of high voltage, rectification, basic principles of x-ray tube operation and x-ray circuitry. (Career Course)

RADT 1151. Introductory Clinical Radiologic Technology I **0-16-3**

Prerequisite: Program Admission, Radiologic Technology

Introduces students to the performance of radiographic procedures in a variety of clinical settings (i.e., hospitals, doctor's offices) and provides an opportunity for students to participate in or observe radiographic procedures. Emphasis is placed on clinical exposure to competencies taught and evaluated in Radiologic Procedures I. Students' activities are under direct supervision before competency evaluation and under indirect supervision after competency evaluation. (Career Course)

RADT 1152. Introductory Clinical Radiologic Technology II **0-20-4**

Prerequisite: RADT 1151

Continues introductory student learning experiences in a variety of clinical settings. Emphasis is placed on those procedures presented in Radiologic Procedures I and II. Students' activities are under direct supervision before competency evaluation and under indirect supervision after competency evaluation. (Career Course)

RADT 1153. Introductory Clinical Radiologic Technology III **0-28-6**

Prerequisite: RADT 1152

Provides students with continued clinical setting work experience. Students improve skills in executing procedures introduced in Radiologic Procedures I and II and practiced in previous clinical practicums. Students' activities are under

direct supervision before competency evaluation and under indirect supervision after competency evaluation. (Career Course)

RADT 2205. Radiologic Seminar I **1-1-2**

Prerequisite: RADT 1132

Provides students the opportunity to enhance critical thinking and problem solving skills. Each student will exhibit creativity in the production of course assignments and evaluations. In addition to creativity assignments, students will be introduced to job-finding skills, resume production, job-interviewing techniques. A review of patient care techniques will also be presented. Students will have the opportunity to be evaluated on a variety of mock registry examinations. (Career Course)

RADT 2210. Radiologic Seminar II **2-1-3**

Prerequisite: RADT 2205

Provides students with knowledge concerning two topical areas: radiographic pathology and radiographic quality assurance. Emphasis is placed on producing high quality radiographs using the benefits of pathology and quality assurance principles. (Career Course)

RADT 2213. Radiographic Anatomy III **2-0-2**

Prerequisite: RADT 1112

The third course in the radiologic anatomy sequence. Provides the student with knowledge of the following topical areas and body systems: circulatory, lymphatic, reproductive, endocrine, muscular, special senses, and cross-sectional anatomy. The student will also be able to correlate basic cross-sectional anatomy to a variety of imaging modalities. (Career Course)

RADT 2215. Radiologic Technology Review **3-2-4**

Prerequisite: RADT 2210

Provides a review of basic knowledge from previous courses and helps the student prepare for the national certification examination for radiographers. Topics include: principles of image production and evaluation, radiation protection and biology, radiologic equipment, radiographic anatomy, physiology and pathology, radiographic procedures, and patient care techniques. (Career Course)

RADT 2224. Radiologic Procedures IV **2-1-3**

Prerequisite: RADT 1123

The final course in the radiologic procedures sequence. Topics include radiologic procedures for the following: reproduction system, venograms, arteriograms, panorex, myelograms, arthrograms, bronchograms, tomograms, and pediatric and trauma radiology. Also includes a review and evaluation of the basic radiologic procedures presented in the previous three radiologic procedures courses. Laboratory evaluations will be administered. (Career Course)

RADT 2242. Radiologic Science II **3-0-3**

Prerequisite: RADT 1141

Continues discussion of the concepts of basic physics and the fundamentals of x-ray generating equipment. A basic review of Radiologic Science I will be presented. Additional course topics include: production and characteristics of radiation, interactions of x-ray and matter, survey of a variety of radiographic equipment, image intensified fluoroscopy, recording media and techniques, image noise, and equipment monitoring and maintenance. (Career Course)

RADT 2245. Radiation Protection and Biology **3-0-3**

Prerequisite: RADT 2242

Provides instruction on the principles of safe radiation usage, protection, and interaction of radiation on living matter. Topics include: radiation detection, measurement, patient and radiographer protection, dose limits, state and federal regulations and agencies, radiation biology, cell anatomy, radiation/cell interaction, and effects of radiation. (Career Course)

RADT 2254. Intermediate Radiologic Technology II **0-28-6**
Prerequisite: RADT 1153

Provides students with continued clinical setting work experience. Students improve skills in executing procedures introduced in Radiologic Procedures I, II, and III; and practiced in previous clinical practicums. Students' activities are under direct supervision before competency evaluation and under indirect supervision after competency evaluation. (Career Course)

RADT 2255. Advanced Clinical Radiologic Technology I **0-28-6**
Prerequisite: RADT 2254

Provides students with continued clinical setting work experience. Students improve skills in executing procedures introduced in Radiologic Procedures I, II, III, and IV; and practiced in previous clinical practicums. Students' activities are under direct supervision before competency evaluation and under indirect supervision after competency evaluation. (Career Course)

RADT 2256. Advanced Clinical Radiologic Technology II **0-24-5**
Prerequisite: RADT 2255

Provides a culminating clinical setting work experience which allows the student to synthesize information and procedural instruction provided throughout the Radiologic Technology program. Emphasis is placed on skill level improvements and final completion of all required competencies presented in previous courses and practiced in previous clinical Radiologic Technology courses. Execution of radiographic procedures will be conducted under indirect supervision. (Career Course)

READ 0098. Developmental Studies Reading **4-0-4**

Teaches reading skills necessary for success in studying and comprehending college-level courses. Emphasizes vocabulary, literal and inferential comprehension, analysis, efficiency, and reading rate. Students may exit from Developmental Studies from this course. (Institutional Credit)

READ 1095. Regents' Testing Program **2-0-2**

Provides required remediation to students (1) who have failed the reading section of the Regents' Test and to students (2) who have earned 45 degree credit hours and who have not passed (or taken) the reading portion of the Regents' Test. (Institutional Credit)

READ 1100. Reading Skills **3-0-3**

Prerequisite: Satisfactory Reading placement score or successfully complete LRSR 0090.

Uses a text and other materials to improve vocabulary, comprehension, critical reading, and other skills related to the student's technical program. Designed to enable the student to read and comprehend reports, business letters, and other forms of business communication. (Career Course)

SOCI 1000. Introduction to Multiculturalism and Diversity in American Society **1S0S1**

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Introduces the study of race, ethnicity, class, gender, religion, language, sexual orientation, and physical abilities/disabilities, and how these

structures/perspectives have shaped the experiences and discourses of Americans.

SOCI 1101. Introduction to Sociology **3S0S3**

Prerequisite: READ 0098, unless exempt, or permission of the instructor.

Examines human social behavior. Topics covered include culture, social interaction, deviance, social classes, social change, politics, religion, and the family. This course also considers the principal perspectives in sociology for interpreting everyday events and for interpreting the social structures of society.

SOCI 1160. Introduction to Social Problems **3S0S3**

Prerequisite: SOCI 1101 or permission of the instructor.

Introduces the study of the social and cultural origins of significant problems in society, such as racism, sexism, poverty, and crime, as well as other urban and environmental problems. An emphasis is placed on American problems, but problems in other societies are also considered. Some of the solutions to social problems that have been tried or proposed are discussed.

SOCI 2293. Introduction to Marriage and Family **3S0S3**

Prerequisite: SOCI 1101 or permission of the instructor.

Introduces the study of marriage and family relationships. Topics covered include the history of marriage and the family, the marriage and family life cycle, child rearing, marital communication and sexuality, marital problems, divorce, remarriage and step-parenting, as well as some of the alternatives to the traditional family, such as remaining single and the single-parent family.

SPAN 1100. Conversational Spanish **3-0-3**

Introduces basic grammar and Spanish vocabulary for use by medical personnel in practical situations in hospitals, medical clinics, and doctors' offices. Emphasizes frequently used phrases, comprehension, and situational role playing. Topics may vary from semester to semester. (Career Course)

SPAN 1001. Elementary Spanish I **3-0-3**

Instructs in the basic principles of Spanish pronunciation and in the fundamentals of grammar and sentence structure. Equally emphasizes, within a limited vocabulary range, the development of speaking, writing, reading, and listening skills.

SPAN 1002. Elementary Spanish II **3-0-3**

Prerequisite: SPAN 1101 or its equivalent.

Follows with lessons in the same patterns and objectives used for SPAN 1101 but includes a more detailed study of grammar, longer conversational exercises, and discussion of the history and culture of Spanish-speaking peoples.

SPAN 1110. Customs of International Business **3-0-3**

Prerequisite: SPAN 1101

Emphasis will be on applied business/industrial terms associated with performing business transactions in a Spanish-speaking environment. Fiscal matters, political/legal environment, and routine applications important to business success will be explored. (Technical Career Course)

SPAN 2001. Intermediate Spanish I **3-0-3**

Prerequisite: SPAN 1102 or two high school units in Spanish.

Offers intensive review of Spanish grammar, verb forms, and idioms. Involves reading texts of moderate difficulty and more advanced conversation exercises. Classes contingent upon enrollment.

SPAN 2002. Intermediate Spanish II **3-0-3**

Prerequisite: SPAN 2201 or its equivalent

Continues the reading of texts of moderate difficulty in the literature and culture of Spanish-speaking peoples; advanced conversation exercises. Classes contingent upon enrollment.

WELD 1100. Principles of Welding **0-4-2**

A basic course in welding. Welding processes are studied with emphasis on MIG welding, oxyacetylene welding, cutting and brazing. Application of these principles will consist of projects in the Welding Laboratory. (Career Course)

WELD 1101. Welding I **1-9-4**

Introduces history and principles of oxyacetylene welding and cutting, oxyacetylene equipment, development of the puddle, running beads in different positions with or without filler rods. Also a brief history of arc welding, basic welding processes, and their applications. Includes welding tasks in the flat, horizontal, and vertical positions with different types of electrodes. Personal safety and safe work procedures are stressed in the course. (Career Course)

WELD 1102. Welding I **1-9-4**

A continuation of WELD 1101 with emphasis on the vertical, and overhead positions with different types of electrodes. Teaches operation of AC transformers and DC motor generator arc welding machines, welding polarities, heats and electrodes for use in joining mild steel by the shield metal arc welding process in different positions. (Career Course)

WELD 1103. Blueprint I **3-0-3**

A beginning course in the study of blueprints and drawings to enable the student to understand the purpose and makeup of prints, types of lines, basic views, structural shapes, and sections as they apply to industrial trades. (Career Course)

WELD 1104. Metallurgy I **2-0-2**

A beginning course in the study of metals which explores the ways that metals behave when they are heated and cooled. Practical uses of metallurgy, composition of steel, the steel numbering system, the steel-making process, crystal structure, and heat treating are also covered. (Career Course)

WELD 1111. Welding II **1-9-4**

Introduces practical operation in the uses of Gas Metal Arc Welding (M.I.G.) and Gas Tungsten Arc welding (T.I.G.). Discusses equipment, safety operations, and welding practice in the various positions on ferrous and non-ferrous metals. (Career Course)

WELD 1112. Welding II **1-9-4**

An advanced course in welding stainless steel with the Shielded Metal Arc Process and preparation for the American Welding Society welder certification test. (Career Course)

WELD 1113. Blueprint II **3-0-3**

A continuation of WELD 1103 with emphasis on detail and assembly prints, welding symbols and abbreviations, basic joints for welding fabrications, pipe-welding symbols, and inspection and testing. (Career Course)

WELD 1114. Metallurgy II **2-0-2**

An advanced study of metals including annealing, quenching, tempering, and surface hardening. Also covers techniques and practices of testing welding joints using destructive and non-destructive testing. (Career Course)

WELD 1126. Pipe Welding

1-8-5

An advanced course in welding mild steel pipe with the Shielded Metal Arc Process. Included in the course are pipe preparation, electrode selection, and practice welding in various positions. (Career Course)

WELD 1128. Pipe Welding

1-8-5

Prerequisite: WELD 1126.

An advanced course in welding ferrous and non-ferrous metals with the Shielded Metal Arc Welding Process. Practice welds will be made in all positions using the different welding processes. (Career Course)