

DSC

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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. Listed in parentheses at the end of each course description is the term(s) that the course is normally offered. F= Fall, S= Spring, and M = Summer.

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

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

Prerequisite: MATH 1111 or higher.

Examines the underlying theory and application of accounting concepts for reporting financial information to outside users. Stresses the relationship between the rules by which financial statements are prepared and the use of financial information for decision making. (F,S,M)

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

Prerequisite: ACCT 2101 with a "C" or better.

Examines the underlying theory and application of managerial accounting concepts. Stresses the study of financial and non-financial information for use by internal decision makers and the role of managerial accounting in a business environment. (F,S,M)

ACCT 3100. Financial Accounting and Reporting I 3-0-3

Prerequisites: ACCT 2101 and 2102.

Studies the concepts and standards for presentation and disclosure of general purpose financial statements in accordance with GAAP. The focus is on financial statement analysis and the theory and issues related to revenue recognition and measurement of cash, receivables, and inventories. (F)

ACCT 3200. Financial Accounting and Reporting II 3-0-3

Prerequisites: ACCT 3100.

Focuses on theory and issues related to recognition and measurement of depreciation, intangible assets, current liabilities, long-term liabilities, stockholders' equity, and property, plant and equipment. (S)

ACCT 3300. Tax Accounting and Reporting I 3-0-3

Prerequisites: ACCT 2101 and ACCT 2102.

Examines the federal taxation of individuals and taxation of property transactions. Tax research and ethics and responsibilities for accounting professionals are also introduced. (F)

ACCT 3400. Auditing and Attestation 3-0-3

Prerequisite: ACCT 3200.

Examines auditing procedures, standards, and other attestation issues. Corporate governance and professional responsibilities are also introduced.

ACCT 4100. Financial Accounting and Reporting III 3-0-3

Prerequisite: ACCT 3200.

Examines special types of transactions and their effect on financial statement presentation. The focus is on investments, income taxes, pensions, leases, and business combinations. (F)

ACCT 4200. Financial Accounting and Reporting IV 3-0-3

Prerequisite: ACCT 4100.

This course focuses on the concepts and standards for presentation and disclosure of financial statements for governmental entities and nongovernmental not-for-profit entities. (S)

ACCT 4300. Tax Accounting and Reporting II 3-0-3

Prerequisite: ACCT 3300.

Explores the federal taxation of business entities, including C corporations, partnerships and S corporations. (S)

ACCT 4400. Planning and Control in the Corporate Environment 3-0-3

Prerequisites: ACCT 2101 and ACCT 2102.

Focuses on planning, budgeting, performance measures and cost measures in the corporate environment. Financial statement and business implications of electronic commerce, including electronic fund transfers, point of sale transactions, and internet-based transactions are also introduced. (S)

ACCT 4800. Special Topics in Accounting Variable 1-3 hours

Prerequisite: ACCT 2101.

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

ALHT 1110. Allied Health Terminology I 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) (F,S,M)

ALHT 1111. Allied Health Terminology II 3-0-3

Prerequisite: ALHT 1110.

Focuses on basic normal structure and function of the human body. Topics include: an overview of each body system, how systems coordinate activities to maintain a balanced state, recognizing deviations from the normal, and medical terminology including basic word structure and terms related to body structure and function are taught as an integral part of the course.

ALHT 1112. Introduction to Health Insurance and Billing 1-0-1

This course is designed to familiarize students with basic functions of health insurance and its impact on medical care in the United States. Major emphasis will be placed on understanding how health insurance influences the management, profitability, accounts receivable and cash flow of physician practices and healthcare facilities. (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) (F,S,)

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

Prerequisites: ALHT 1110, 1115, BIOL 1100, OADM 1250, 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 2-9-5

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

Prerequisites: 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) (S)

ALHT 1170. Caring for Patients from Different Cultures 3-0-3

Introduces the student to the nuances of working in a multi-cultural healthcare environment, defines culture, the difference between surface and deep culture, and the nature of communication between workers of different cultures. Explores rituals surrounding birth, family structure and relationship, and how to deal with visitors and/or demanding families, cultural differences in expressions of pain, and attitudes toward sickness and death. (Career Course)

ALHT 1175. Healthcare Management Practicum 0-6-2

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

ANTH 1103. Introduction to Cultural Anthropology 3-0-3

Prerequisite: READ 0098, unless exempt.

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. (F)

ASTR 1101. Introduction to Astronomy 3-0-3

Prerequisite: MATH 1111.

A general survey of the solar system, stars, galaxies and cosmology. Some night-time 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. (F,S,M)

BIOL 1001. Environmental Impact of Natural Disasters 1-0-1

Prerequisite: READ 0098 unless exempt.

Involves discussion and study of recent natural disasters, their environmental and economic ramifications, including the environmental characteristics of the impacted area, how man has altered that environment over time and how this impact influenced the events of the disaster.

BIOL 1100. Human Biology 3-0-3

Prepares students 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) (F,S,M)

BIOL 1105K. 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. (F,S)

BIOL 1107K. 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. (F,S,M)

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

Prerequisite: BIOL 1107.

Continuation of BIOL 1107. Topics include the structure and function of the following animal, including human, systems: nervous, circulatory, immune, respiratory, digestive, urinary, endocrine, and reproductive, as well as diversity, development, behavior and ecology. (F,S,M)

BIOL 1203K. 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. (S)

BIOL 1224K. Entomology 3-2-4

Presents an introduction to the anatomy, biology, and behavior of insects. The laboratory emphasizes classification and identification of insects to family, which are required as part of assembling a collection during the course. (F)

BIOL 2212K. Anatomy and Physiology I 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. (This course will satisfy an Area D or Area F requirement only if specifically listed as an option for the program of study.) (F,S,M)

BIOL 2213K. Anatomy and Physiology II 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. (This course will satisfy an Area D or Area F requirement only if specifically listed as an option for the program of study.) (F,S,M)

BIOL 2215K. 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. (This course will satisfy an Area D or Area F requirement only if specifically listed as an option for the program of study.) (F,S,M)

BIOL 2270. Ethical Issues in Science 3-0-2

Prerequisite: BIOL 1108K.

Provides an introduction to basic ethical concepts and develops the concept of ethical decision-making and how this applies to the increasing number of biological ethics decisions made daily. A variety of bioethical questions will be proposed and students will explore the science and social science aspects of each particular question.

BIOL 3000. Environmental Law and Policy 3-0-3

Survey of national and state agencies and provisions of environmental laws and ordinances at all levels of government, including NEPA, Endangered Species Act, Clean Water Act, Clean Air Act and CERCLA. This course has a web component.

BIOL 3200K. Cellular Biology 3-3-4

Prerequisite: BIOL 1108K.

Co-requisite: CHEM 1211K.

An exploration of the basic unit of living organisms. Study of the structure and function of cellular structures with emphasis on the unifying nature of cell membrane systems, cellular energetics, motility and transport intercellular interactions, cellular communication, and cell division. Laboratory experiences introduce basic cytological study techniques.

BIOL 3300. Developmental Biology 3-2-4

Prerequisite: Cell Biology.

Introduces students to the developmental process in animals beginning with the formation of gametes through the embryonic stages, birth, maturation and aging. Anatomical development, experimental embryology and the molecular mechanisms of cell differentiation will be covered. Laboratory techniques in developmental biology including animal cell and tissue cultures will be utilized.

BIOL 3340. General Microbiology 3-2-4

Prerequisite: BIOL 1108, CHEM 1211.

Introduces students to the biology of non cellular, prokaryotic, and eukaryotic microorganisms. Topics include microbial metabolism, genetics, systematics, pathogenesis, epidemiology, and ecology. The history of microbiology, host defense against disease, and human exploitation of microbes will also be studied. The laboratory introduces students to the culture and identification of microorganisms.

BIOL 3400K. Genetics 3-3-4

Prerequisite: BIOL 3200K, CHEM 1212K.

Co-requisite: CHEM 2211.

A study of Mendelian principles, molecular genetics and population genetics. Topics include simple Mendelian inheritance, extensions of Mendelian inheritance, linkage, genetic mapping, quantitative inheritance, population genetics, prokaryotic genetics, and molecular genetics.

BIOL 3500K. Ecology 3-3-4

A study of the interrelationships of organisms with their physical and biological environment. Topics include an exploration of adaptations, population structure and dynamics, organization and classification of communities, and nutrient and energy flows in ecosystems.

- BIOL 3510K. Plant Biology** **3-3-4**
 Prerequisite: BIOL 3500K.
 An in depth examination of the structures, growth, reproduction, competition, survival, and diversity of plants.
- BIOL 3520K. Invertebrate Zoology** **3-3-4**
 Prerequisite: BIOL 1108.
 An in depth examination of the taxonomy, morphology, physiology, and evolution of the more common invertebrate phyla. A study of the distribution and interspecific relationships among invertebrates and other forms of life.
- BIOL 4000. Senior Seminar** **2-0-2**
 Prerequisite: 12 hours upper level biology.
 Survey of various topics, especially highlighting the interdisciplinary nature of biology.
- BIOL 4250K. Evolution and Diversity of Life** **3-3-4**
 Prerequisite: BIOL 3400K, CHEM 1212K.
 A study of the principles of evolutionary biology including discussions of natural selection, adaptation, population genetics, speciation, and phylogeny reconstruction, and the distribution, abundance and adaptations of living organisms as mediated by the environment and natural selection.
- BIOL 4360K. Comparative Vertebrate Anatomy and Physiology** **3-3-4**
 Broad comparative analysis of vertebrate morphology by considering anatomical structure and function and the integration of these structures in the individual organism, as well as the functional process of vertebrate organs and organ systems, and their physiological integration. Consideration will be given to the relationship between structure and functional demands of vertebrates to particular environments as well as the details of each vertebrate organ system, emphasizing the structure-function relationship of the organs/organ systems, and the range of structural and evolutionary modifications of organ systems seen in different vertebrate classes.
- BIOL 4410K. Molecular Biology** **3-3-4**
 Prerequisite: BIOL 3400K, CHEM 2212K.
 In depth examination of the molecular aspects of cell structure and function, emphasizing the chemical and molecular basis of cellular physiology. Addresses genetic function at the chromosomal and molecular levels, gene expression, and regulation.
- BIOL 4500K. Biotechnology** **3-3-4**
 Prerequisite: BIOL 4200K.
 A study of the applied aspects of biochemistry and molecular biology in various fields, with emphasis on the use of recombinant DNA methods and protein engineering.
- BIOL 4900. Special Topics in Biology** **3-0-3**
 Prerequisite: BIOL 3400 and 3 additional upper level Biology courses.
 A detailed examination of one topic culminating in a research paper. Any field of biology may be included in these topics. Course may be repeated for credit when topic differs.

BUSA 2106. The Environment of Business	3-0-3
Introduces the political, social, legal, ethical, environmental, and technological issues that affect or are affected by business decisions. Topics include stakeholder analysis, social responsibility, ethics, globalization, business-government relations, and fair trade. (F,S,M)	
BUSA 3050. Business Statistics	3-0-3
Prerequisite: MATH 2181 or concurrent.	
Emphasizes applications of statistics in business. Topics include methods of presenting data, numerical measures and correlation, probability theory and probability distributions, sampling distributions, estimation, hypothesis testing, and linear regression. (F,S)	
BUSA 3051. Principles of Management	3-0-3
See MNGT 3051.	
BUSA 3053. Human Resource Management	3-0-3
See MNGT 4053.	
BUSA 3055. Quantitative Methods	3-0-3
Prerequisites: MATH 2200 or BUSA 3050.	
Develops analytical skills for business decision making. Topics include regression analysis, decision tools, application of mathematical programming and network models, sequencing and scheduling techniques, and line balancing. (S)	
BUSA 3056. Principles of Finance	3-0-3
See FINC 3056.	
BUSA 3060. Business Law	3-0-3
Prerequisite: Junior standing or higher.	
Covers the source of law and courts, and introduces tort law along with the historical, economic, political and ethical considerations in business and the impact of regulatory and administrative law on business. Topics include property law, contracts, and environmental issues. (F,S)	
BUSA 4051. Strategic Management/Policy	3-0-3
See MNGT 4701	
BUSA 4351. International Business	3-0-3
Prerequisite: MNGT 3051.	
Surveys the administrative philosophies, policies, and practices of international business organizations. Examines business processes in terms of different social, cultural, political and economic environments. (F,S)	
BUSA 4501. Entrepreneurship	3-0-3
See MNGT 4501.	
BUSA 4503. Quality Management Systems	3-0-3
See OPMT 4503.	
BUSA 4602. Leadership	3-0-3
See MNGT 4602.	
BUSA 4621. Organizational Behavior	3-0-3
See MNGT 3621.	

- BUSA 4700. Senior Seminar** **1-0-1**
 Prerequisite: Must be in either of student's final two semesters.
 Co-requisite: MNGT 4701.
 Features the practices and administration of business, as well as the preparation needed for success in the job market. Topics include resume writing, interviewing skills, and personal financial management.
- BUSA 4800. Special Topics in Management** **Variable 1-3 hours**
 See MNGT 4800.
- BUSA 4900. Management Internship** **Variable 1-3 hours**
 See MNGT 4900.
- CAPS 1101. Introduction to Computers** **2-2-3**
 Students who have no knowledge of computer key function and do not type a minimum 20 words per minute are urged to take OADM 1140, either prior to, or in conjunction with, this course. 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. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)
- CAPS 1120. iSeries Operations and Facilities** **3-2-4**
 An introduction to the operations, basic tools, and facilities of the computer system. Lectures are supported by hands-on laboratory exercises, primarily utilizing the IBM iSeries. This course satisfies the computer literacy requirement. (Career Course) (F)
- CAPS 1140. Microcomputer Operating Systems** **3-2-4**
 Prerequisite/Co-requisite: CAPS 1101 or MGIS 2201 or CMPS 1130.
 An overview of operating system essentials for microcomputers, with emphasis on a current version of MS-Windows. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)
- CAPS 1145. Network Fundamentals** **3-2-4**
 Understanding networking basics including hardware, software, LANs, WANs, Ethernet, IP addressing, network-to-network communications and designing and documenting a basic network and associated cabling. This course satisfies the computer literacy requirement. (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. This course satisfies the computer literacy requirement. (S)
- CAPS 1208. Computer User Support** **3-0-3**
 Prerequisites: Three CAPS courses plus an introductory course such as CAPS 1101 or MGIS 2201.
 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. This course satisfies the computer literacy requirement. (Career Course) (S)

- CAPS 1209. Computer Problems** **0-9-3**
 Prerequisites: Four CAPS courses, or three CAPS courses (other than CAPS 1101) plus an introductory course such as MGIS 2201 or CMPS 1130.
 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. This course satisfies the computer literacy requirement. (Career Course) (M)
- CAPS 1211. Introduction to RPG Programming** **3-2-4**
 Students design, code, and test programs using the Report Program Generator (RPG) language. Programs written include report editing, mathematical operations, use of subroutines to support structured programming, IFs and case structures, and external and logical files. This course satisfies the computer literacy requirement. (Career Course) (S)
- CAPS 1212. Advanced RPG Programming** **3-2-4**
 Prerequisite: CAPS 1211.
 A continuation of CAPS 1211. Programs written include file processing, interactive applications, tables and arrays, and subfiles. Review of RPG logic cycle. This course satisfies the computer literacy requirement. (Career Course) (F)
- CAPS 1213. Control Language Programming for iSeries 400** **3-2-4**
 Introduces concept, purpose, uses, and implementation of Control Language (CL) programming. Emphasis is on CL syntax and interactive and batch programs in the iSeries environment. This course satisfies the computer literacy requirement. (Career Course) (M)
- CAPS 1216. Database and Interactive Applications** **3-2-4**
 Prerequisite: CAPS 1212, or CAPS 1213.
 This course involves Database design; queries; application development in a database environment. Students receive hands-on experience with a relational database package. This course satisfies the computer literacy requirement. (Career Course) (F)
- CAPS 1217. Electronic Spreadsheets** **3-2-4**
 Prerequisite: CAPS 1101, or MGIS 2201, or CMPS 1130.
 Study of various types of applications using electronic spreadsheets. Topics include financial, statistical, database, and graphic applications; and macros. This course satisfies the computer literacy requirement. (Career Course) (Offered as needed)
- CAPS 1240. Advanced Topics in Computer Applications/Systems** **3-2-4**
 Prerequisite: CAPS 1140.
 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. This course satisfies the computer literacy requirement. (Career Course) (Offered as needed)
- CAPS 1250. Novell NetWare Administration** **3-2-4**
 Co-requisite: CAPS 1145.
 Covers the basics of managing a Novell NetWare network; how to set up, manage, and use basic network services, including file systems, network printing, security; and directory services. This course satisfies the computer literacy requirement. (Career Course) (F)

- CAPS 1255. Windows Network Server Administration** **3-2-4**
Prerequisite: CAPS 1140 or CAPS 1145.
The same as CAPS 1250, except that a current version of Microsoft Windows Server is covered. This course satisfies the computer literacy requirement. (Career Course) (F)
- CAPS 1260. Advanced NetWare Administration** **3-2-4**
Prerequisite: CAPS 1250.
Advanced administration tasks such as tuning the network and managing complex directory trees. Troubleshooting NetWare. This course satisfies the computer literacy requirement. (Career Course) (S)
- CAPS 1265. Advanced Windows Server Administration** **3-2-4**
Prerequisite: CAPS 1255.
Advanced administration tasks such as tuning the network and managing multiple server networks. Troubleshooting Windows Server. This course satisfies the computer literacy requirement. (Career Course) (S)
- CAPS 1270. Routing Protocols and Concepts** **3-2-4**
Prerequisite: CAPS 1145.
Understanding of routers and routing including: user interfaces, components, configurations, basics of IOS versions; TCP/IP Protocol Suite, IP addressing/subnetting; routing protocols RIP, OSPF, EIGRP. This course satisfies the computer literacy requirement. (Career Course)
- CAPS 1275. Computer Systems/Networking Security** **3-2-4**
Prerequisite: CAPS 1145.
An introduction to communication security in computer systems and networks. Both information flow and information integrity policies will be considered. Topics include: authentication, protection, security models, cryptography, application, hacker tools and public policy, along with case studies. (Career Course)
- CAPS 1276. LAN Switches and Wireless** **3-2-4**
Prerequisite: CAPS 1145.
Understanding of network switching, VLANs, Spanning-Tree protocol, switching technologies, network documentation, security and troubleshooting; basic wireless standards, configuration, security and troubleshooting. This course satisfies the computer literacy requirement. (Career Course)
- CAPS 1277. Accessing the WAN** **3-2-4**
Prerequisite: CAPS 1270.
Understanding of WAN technology basics to include: devices, encapsulation formats, PPP components, Access Control Lists, NAT, DHCP, DNS and Frame Relay. This course satisfies the computer literacy requirement. (Career Course)
- CAPS 1280. Programming in Java.** **3-2-4**
Prerequisite: CAPS 1140.
An introduction to object-oriented programming using the language Java, with special attention to Java applets and Web pages. This course satisfies the computer literacy requirement. (Career Course) (F)
- CAPS 1285. Building Scalable Internetworks** **3-2-4**
Focused on internetwork scalability, advanced routing protocols such as EIGRP, OSPF, IS-IS, and BGP operation, configuration and troubleshooting; route optimization; IP Multicast, IPv6.

CAPS 1286. Implementing Secure Converged Wide-area Networks 3-2-4

Providing secure enterprise-class network service for teleworkers and branch sites; teleworker configuration and access, frame-mode MPLS, site-to-site IPSEC VPN; Cisco device hardening and IOS firewall configuration.

CAPS 1287 Building Multilayer Switched Networks 3-2-4

Focused on selection and implementation of appropriate Cisco IOS services to build reliable, scalable multilayer-switched LANs; Inter-VLAN routing; campus networks; wireless client access; and configuring campus switches to support voice.

CAPS 1288 Optimizing Converged Networks 3-2-4

Optimizing and providing effective QoS techniques in converged networks; operating voice, wireless and security applications; DiffServ QoS model, AutoQoS; considerations for QoS implementations.

CAPS 1290. Web Site Design 3-2-4

Prerequisite: CAPS 1101 or CAPS 1140.

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 and JavaScript. (Career Course) (F)

CCSS 1160. Basic Business Skills 3-0-3

This course develops basic communication and computational skills useful in business environments where customers are served.

CCSS 1161. Service Industry Environment 2-0-2

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** **2-0-2**
 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.
- CHEM 1151K. Survey 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. (S)
- CHEM 1211K. Principles of Chemistry I** **3-3-4**
 Prerequisite: MATH 1111, with a grade of "C" or better.
 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. (F,S,M)
- CHEM 1212K. Principles of Chemistry II** **3-3-4**
 Prerequisite: CHEM 1211K.
 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. (S,M)
- CHEM 2211K. Organic Chemistry I** **3-3-4**
 Prerequisite: CHEM 1212K.
 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. (F,M)
- CHEM 2212K. Organic Chemistry II** **3-3-4**
 Prerequisite: CHEM 2211K.
 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. (S,M)
- CHEM 3103. Textile Chemistry** **3-0-3**
 Prerequisite: CHEM 1211K.
 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.
- CHEM 3500. Biochemistry** **3-3-4**
 The chemical aspects of protein, carbohydrate, lipid, and nucleic acid, and enzyme function, bioenergetics, metabolism, photosynthesis, nuclei acid function, and protein biosynthesis. Prerequisite: CHEM 2212, BIOL 1108.
- CINM 1101. Introduction to Film as Literature** **3-0-3**
 See ENGL 1201.

- CISM 2201. Fundamentals of Computer Applications** **3-0-3**
See MGIS 2201.
- CMPS 1130. Introduction to Computer Science** **2-2-3**
Prerequisite: MATH 1001 or MATH 1111.
Introduces the concepts of computer hardware, operating systems, and programming. Programming topics require creating well designed interfaces and well written code using simple data types, control structures, and loops. Students will gain hands on experience using a modern programming language. This course satisfies the computer literacy requirement. (F,S,M)
- CMPS 1301. Principles of Programming I** **3-0-3**
Prerequisite: MATH 1111.
Introduces the principles of computer programming. Emphasis is on the design and teaching of correct well-structured algorithms using appropriate control structures with simple data types and data structures. This course satisfies the computer literacy requirement. (F)
- CMPS 1302. Principles of Programming II** **3-0-3**
Prerequisite: CMPS 1301.
This course continues the development of program design using a modern object-oriented language. This course satisfies the computer literacy requirement. (S)
- CMPS 1371 Computing for Scientists and Engineers** **3-0-3**
Prerequisite: Math 1111 Co-requisite: CMPS 1301.
Introduces skills and concepts which are needed to use the computer in scientific and engineering work. Topics include design and analysis of algorithms, methods and techniques of scientific computation, and the organization of software. (S)
- CNAS 1110. Basic Nursing Assistant Skills** **3-2-4**
Prerequisite: Permission of instructor.
This course emphasizes the needs of the elderly and other persons requiring the services of nursing facilities or home care. 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 clients/patients as individuals are important attitudes conveyed to the nursing assistant. Skills such as body mechanics and safety, feeding, bathing and bed making are practiced in the nursing lab before applying these skills in the clinical setting. (Career Course)
- CNAS 1111. CNA Clinical Skills I** **2-4-4**
Prerequisite or Co-requisite: 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 and a variety of home care environment). (Career Course)
- CNAS 1131. CNA Clinical Skills II** **1-5-4**
Prerequisite or Co-requisite: 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 more fully function

both within and outside the structure of the healthcare facility. Subject areas included are client/patient care, communication skills, client/patient reporting/documentation and caring for the client/patient's environment.

COMM 1110. Fundamentals of Speech 3-0-3

Presents 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. Special sections use computers. COMM 1110C satisfies the computer literacy requirement. (F,S,M)

COMM 1120. Argumentation and Advocacy 3-0-3

Prerequisite: COMM 1110.

Explores aspects of speech research and policy analysis. Students will research, develop, and persuasively argue selected topics. Additionally, the course will prepare students for competition in parliamentary and public debate. Issues to be discussed, analyzed, and debated include educational, political, and social events. (S)

COMM 2000. Introduction to Mass Communication 3-0-3

Prerequisite: ENGL 1101 with a grade of "C" or better.

A historical and social overview of the mass media and their relationship to the mass communication process in a modern society. (F)

COMM 2110. Interpersonal Communication 3-0-3

Prerequisite: COMM 1110 and ENGL 1101.

Focuses on the development of assertiveness, leadership, conflict resolution skills, critical thinking, and greater understanding of the complexities of the communication process. Practical and theoretical applications for all theories and concepts will be discussed. (S)

COMM 3301. Business Communication 3-0-3

Prerequisite: ENGL 1102 with a grade of "C" or better.

Prepares students to write and speak effectively in a variety of business situations. Students will examine the influence of audience, purpose, and situation and learn how to use those elements to formulate and apply communication strategies that enable them to inform, persuade, and motivate others. Topics include business letters, memos, and reports; oral presentations; nonverbal communication; personal styles and interpersonal communication; the influence culture, ethics, and technology on environment; and the small group process. (F,S)

COMM 3220. Persuasive Communication 3-0-3

Prerequisite: COMM 1110 and ENGL 1102.

Focuses on the development of critical evaluation, research, and persuasive speaking skills. Individual oral presentations, small group problem-solving discussions, and debating contexts will be considered. (F, alternate years)

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

Prerequisites: 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

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. (F)

CRJU 2221. Introduction to Criminology 3-0-3

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. (S)

CRJU 2231. Introduction to Corrections 3-0-3

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. (F)

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

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. (S)

CRPT 1259. Introduction to Floor-covering Manufacturing 3-0-3

This course familiarizes the student with the history of the carpet industry with an emphasis on the techniques and processes involved in the manufacturing of carpet. The course will also review the manufacturing processes and techniques for ceramic tile, hardwood, laminate, and vinyl. Viewing the actual products and materials will be available to show how each is utilized.

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.

- DRFT 1120. Applied Computer Graphics** **1-4-3**
Prerequisite: CAPS 1101.
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. This course satisfies the computer literacy requirement. (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 or Co-requisite: DRFT 1141 with a grade of "C" or better.
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 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. This course satisfies the computer literacy requirement. (Career Course)
- DRFT 1153. Intermediate Computer-Aided Drafting (CAD II)** **2-3-3**
Prerequisites: DRFT 1151 with a grade of "C" or better.
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 introduction to the programming language of AutoLisp. This course satisfies the computer literacy requirement. (Career Course)
- DRFT 1161. Architectural Drafting I** **2-3-3**
Prerequisite: DRFT 1141 and 1151 with a grade of "C" or better.
This course will introduce the student to 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 and CAD. (Career Course)
- DRFT 2245. Descriptive Geometry** **2-3-3**
Prerequisite: DRFT 1141 with a grade of "C" or better.
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 with a grade of "C" or better.
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 with a grade of “C” or better.
 This course is a continuation of DRFT 2247.
- DRFT 2255. Advanced Computer-Aided Drafting (CAD III)** **2-3-3**
 Prerequisites: DRFT 1151 with a grade of “C” or better.
 A study of 3D modeling and rendering techniques used to create photo-realistic renderings, animation, and presentations. This course satisfies the computer literacy requirement. (Career Course)
- DRFT 2257. CAD Machine Drafting I** **2-3-3**
 Prerequisites: DRFT 1141 and 1151 with a grade of “C” or better.
 This course introduces components and design concepts used in creating machine drawings and working drawings. This course satisfies the computer literacy requirement. (Career Course)
- DRFT 2259. CAD Machine Drafting II** **2-3-3**
 Prerequisite: DRFT 2257 with a grade of “C” or better.
 This course is where all drafting concepts come together. Subjects include working drawings, sheet layout, zoning, bill of materials, and assembly drawings. This course satisfies the computer literacy requirement. (Career Course)
- DRFT 2263. Architectural Drafting II** **2-3-3**
 Prerequisites: DRFT 1151 and 1161 with a grade of “C” or better.
 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. This course satisfies the computer literacy requirement. (Career Course)
- ECON 2105. Principles of Macroeconomics** **3-0-3**
 Prerequisite: MATH 1111 or higher.
 Describes and analyzes macroeconomic principles. Topics covered include the scope and method of economics, national income/output analysis, employment/ unemployment, inflation, fiscal policy, monetary policy, and international finance. (F,S,M)
- ECON 2106. Principles of Microeconomics** **3-0-3**
 Prerequisite: MATH 1111 or higher.
 Describes and analyzes microeconomic principles. Topics covered include demand and supply theory, output and price determination, market structure, income distribution, government regulation of business, labor organizations, and international trade. (F, S, M)
- ECON 3107. International Economics** **3-0-3**
 Prerequisite: ENGL 1102, ECON 2105 and 2106.
 Examines the objectives of the regional and global organizations such as the North American Free Trade Agreement (NAFTA), the European Union (EU), the General Agreement on Tariffs and Trades (GATT), the World Trade Organization (WTO), and the International Monetary Fund (IMF).

ECON 3108. Introduction to Environmental Management 3-0-3

Prerequisite: ECON 2106.

Discusses the greening of business with respect to manufacturing, marketing, strategy and communication, and discusses the nature of a sustainable corporation. Also, it raises the awareness about strategies for the society as a whole related to the concept of sustainable development. This course will help students to develop the necessary management skills that utilize various accounting procedures to perform a cost-benefit analysis of the greening of business.

ECON 3110. Introduction to International Trade 3-0-3

Prerequisite: ENGL 1102, ECON 2105, ECON 2106.

Covers topics on trade theory, trade policy, the measurement of a nation's balance of payments, foreign exchange markets, and exchange rate determination, and examining the open-economy macroeconomics, or the macro relationships between the domestic economy and the rest of the world, as well as the operation of the present international monetary system.

ECON 3112. Money and Banking 3-0-3

Prerequisite: ECON 2105.

Presents a comprehensive upper-level course in financial institutions, financial markets, bank management, and money and banking. This introduction to the operation of the US financial system describes the US financial institutions, instruments and markets; explains how the financial system interacts with the rest of the economy; and considers how the system changes through time.

EDUC 2110. Investigating Critical and Contemporary Issues in Education 3-0-3

Prerequisite: PSYC 1101, ENG 1101, ENG 1102, MATH 1111 with a grade of "C" or better, 30 hours of core curriculum, and successful completion of the Regents Test.

This course engages students in observations, interactions, and analyses of critical and contemporary educational issues. Students will investigate issues influencing the social and political contexts of educational settings in Georgia and the United States. Students will actively examine the teaching profession from multiple vantage points both within and outside the school. Against this backdrop, students will reflect on and interpret the meaning of education and schooling in a diverse culture and examine the moral and ethical responsibilities of teaching in a democracy. This course meets the computer literacy requirement. 10 Hours Field Experiences

EDUC 2120. Exploring Socio-Cultural Perspectives on Diversity in Educational Contexts 3-0-3

Prerequisite: PSYC 1101, ENG 1101, ENG 1102, MATH 1111 with a grade of "C" or better, 30 hours of core curriculum, and successful completion of the Regents Test.

Given the rapidly changing demographics in our state and country this course is designed to equip future teachers with the fundamental knowledge of understanding culture and teaching children from diverse backgrounds. Specifically, this course is designed to examine 1) the nature and function of culture; 2) the development of individual and group cultural identity; 3) definitions and implications of diversity, and 4) the influences of culture on learning, development, and pedagogy. 10 Hours field experiences.

EDUC 2130 Exploring Teaching and Learning 3-0-3

Prerequisite: PSYC 1101, ENG 1101, ENG 1102, MATH 1111 with a grade of “C” or better, 30 hours of core curriculum, and successful completion of the Regents Test.

Explore key aspects of learning and teaching through examining your own learning processes and those of others, with the goal of applying your knowledge to enhance the learning of all students in a variety of educational setting and contexts. 10 Hours Field Experiences

EDUC 3101 Teaching Students who are Exceptional, Diverse, or At-Risk 3-0-3

Prerequisite: Admission to Teacher Education. Must be taken concurrently with EDUC 3271, 3287, 3263, 3285, MATH 3803.

This course will provide teacher candidates with the knowledge necessary to identify characteristics of diverse learners, students with special needs, and students at risk. Teacher candidates will be provided with the necessary tools and strategies to promote successful student achievement by developing effective learning environments for all students. Teacher candidates will be apprised of legal issues, current laws governing students with exceptionalities, and techniques to accommodate individual differences in the classroom. (F)

EDUC 3120 Teaching Secondary Students who are Exceptional, Diverse, or At-Risk 3-0-3

Prerequisite: Admission to Teacher Education. Completion of EDUC 3902, EDUC 3272, EDUC 4901, EDUC 3273, READ 3456, and EDUC 3274 with a grade of “C” or above. Must be taken concurrently with EDUC 4951 and EDUC 4953.

This course will provide teacher candidates with the knowledge necessary to identify characteristics of diverse learners, students with special needs, and students at risk. Teacher candidates will be provided with the necessary tools and strategies to promote successful student achievement by developing effective learning environments for all students. Teacher candidates will be apprised of legal issues, current laws governing students with exceptionalities, and techniques to accommodate individual differences in the classroom.

EDUC 3214 Exploratory Activities in Physical Education, Art, and Music 3-0-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I and II with a grade of “C” or better in each course, must be taken concurrently with ESOL 4242.

An introductory course that surveys methods and activities to teach fundamental skills in physical education, art, and music in the early childhood/elementary curriculum. Field experience required. (M)

EDUC 3263 Teaching Content and Process: Language Arts Education 2-2-3

Prerequisite: Admission to Teacher Education. Must be taken concurrently with EDUC 3101, 3271, 3287, 3285, MATH 3803. A practicum fee will be charged.

A study of the nature of language, language acquisition, and the development of the language arts curriculum for early childhood/elementary settings. Field experience required. (F)

EDUC 3271 Classroom Management 2-2-3

Prerequisite: Admission to Teacher Education. Must be taken concurrently with EDUC 3101, 3287, 3263, 3285, MATH 3803.

Students will examine and observe theoretical constructs of classroom management for children in PreK through fifth grade. Students also will develop practice skills during a field-based experience to manage children, resources, instruction, curriculum, and facilities to provide effective and meaningful learning. Field experience required. (F)

EDUC 3272 Classroom Management Seminar & Field Experience I 1-0-1

Prerequisite: Admission to Teacher Education, must be taken concurrently with EDUC 3902.

This course focuses on the development of management techniques and teaching skills for secondary teacher candidates. Included are observations and models in management used in the education and guidance of secondary students. Includes 133 hours in field experiences in secondary settings. A minimum grade of "C" is required for this course.

EDUC 3274 Classroom Management Seminar & Field Experience III

Prerequisite: Admission to Teacher Education, completion of EDUC 3902, EDUC 3272, EDUC 4901, EDUC 3273 with a grade of "C" or better in each course, must be taken concurrently with READ 3456.

This courses focuses on the development of management techniques and teaching skills for secondary teacher candidates. Included are observations and models in management used in the education and guidance of secondary students. Includes 133 hours in field experiences in secondary settings. A minimum grade of "C" is required for this course.

EDUC 3285 Professional Seminar and Field Experiences – Block I 1-0-1

Prerequisite: Admission to Teacher Education. Must be taken concurrently with EDUC 3101, 3287, 3263, 3271, MATH 3803.

Topics relevant to the preparation of teachers: Conceptual Framework; Professional Field Experiences (expectations and requirements); Development of E-Portfolio; Teacher Candidate Assessment; Lesson Plans; Professional Communication. (F) S/U

EDUC 3286 Professional Seminar and Field Experiences – Block II 1-0-1

Prerequisite: Admission to Teacher Education, completion of courses from Block I with a grade of "C" or better in each course, must be taken concurrently with EDUC 4261, 4263, ESOL 4240, MATH 3703, READ 3262.

Topics relevant to the preparation of teachers: Professional Field Experiences (expectations and requirements); Development of E-Portfolio; Professional Ethics; Student Health Issues; Safety & Security Issues. (S) S/U

EDUC 3287 Curriculum and Assessment 3-0-3

Prerequisite: Admission to Teacher Education. Must be taken concurrently with EDUC 3101, 3285, 3263, 3271, MATH 3803.

An introduction to curriculum and assessment with an emphasis on basic ideas for understanding curriculum development, implementation, and evaluation. This course explores ways for elementary childhood educators to implement instruction

within a full range of student abilities. Teacher candidates will examine and analyze the state standards, local curriculum documents, and published curricula. Teacher candidates will focus on assessment development, use, and interpretation in the classroom setting. (F)

EDUC 3902 Curriculum and Assessment for Secondary Teachers 3-0-3

Prerequisite: Admission to Teacher Education. Must be taken concurrently with EDUC 3272.

An introduction to curriculum and assessment with an emphasis on basic ideas for understanding curriculum development, implementation, and evaluation. This course explores ways for secondary educators to implement instruction within a full range of student abilities. Teacher candidates will examine and analyze the state standards, local curriculum documents, and published curricula. Teacher candidates will focus on assessment development, use, and interpretation in the classroom setting. (F)

EDUC 4251 Assessment and Correction: Mathematics Education 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I, II, and summer course-work with grade of “C” or better in each course, must be taken concurrently with EDUC 4262, 4284, MATH 4713, READ 4251, ESOL 4241.

Overviews development of acquisition of mathematical concepts. The assessment/correction process is examined. Teaching strategies appropriate to children with learning difficulties are described. Individual assessment and analysis of a particular child’s mathematical problems, including teaching to this analysis are developed in case study form. Current research on teaching mathematics to children with special needs is examined. Knowledge of teaching strategies and the assessment/correction process will be applied during field experience. Field experience required (F)

EDUC 4261 Teaching Content and Process: Social Studies Education 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Block I with a grade of “C” or better in each course, must be taken concurrently with EDUC 3286, 4263, MATH 3703, ESOL 4240, READ 3262.

Students will examine the current content and methodology of social studies education for young learners (grades P-5). Students will design and implement learning experiences that incorporate the knowledge, skills, and attitudes appropriate for an elementary social studies program. Field experience required. (S)

EDUC 4262 Teaching Content and Process: Science Education 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I, II, and summer course-work with a grade of “C” or better in each course, must be taken concurrently with EDUC 4251, 4284, MATH 4713, READ 4251, ESOL 4241.

Students will examine content, methodology, skills, and materials used to teach science to children in grades P-5 by means of course discussions and assignments, field placements/assignments, and course readings. Emphasis will be placed on developmentally appropriate practices and integration with mathematics and other appropriate subject areas. Field experience required (F)

EDUC 4263 Teaching Content and Process: Mathematics Education 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Block I with a grade of “C” or better in each course, must be taken concurrently with EDUC 3286, 4261, MATH 3703, ESOL 4240, READ 3262.

Mathematics education content, methods, and materials which are appropriate for the cognitive development of the P-5 child will be investigated. Students will apply knowledge of content, methods, and materials during field experience. Field experience required. (S)

EDUC 4284 Professional Seminar & Field Experiences- Block III 1-0-1

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I, II and summer course-work with a grade of “C” or better in each course, must be taken concurrently with EDUC 4251, 4262, MATH 4713, READ 4251, ESOL 4241.

Topics relevant to the preparation of teachers: Professional Field Experiences (expectations and requirements); Development of E-Portfolio; Parent-Community Relationships; Professional Collaboration; Legal Issues. S/U

EDUC 4286 Teaching Internship 8

Prerequisite: Admission to Teacher Education. Application for field (Internship) experience required prior to enrollment. Completion of courses listed in Blocks I, II, III and summer course-work with a grade of “C” or better in each course, taken concurrently with EDUC 4289, READ 3251.

Students will be involved 15 weeks (one semester) in a full-time, supervised and directed classroom setting. (S)

EDUC 4289 Teaching Internship Seminar 1-0-1

Prerequisite: Admission to Teacher Education, completion of courses listed Blocks I, II, III and Summer course-work with a grade of “C” or better in each course, must be taken concurrently with EDUC 4286, READ 3251.

Topics relevant to the preparation of teachers: Teacher Candidate Internship (student teaching) (expectations and requirements); E-Portfolio final product; Resume Writing; Professional Interviews. (S) S/U

EDUC 4901 Methods for Secondary Math/Science Teachers

Prerequisite: Admission to Teacher Education. Completion of EDUC 3902 & EDUC 3272 with a grade of “C” or above. Must be taken concurrently with EDUC 3273.

This course will provide secondary teacher candidates with strategies and techniques to become effective teachers. The course will focus on the teacher as a reflective decision-maker, and will focus on active learning through the design of quality assessment and instruction, using appropriate teaching methods that are performance based.

EDUC 4951 Internship in Secondary School Mathematics

Prerequisite: Admission to Teacher Education. Completion of EDUC 3902, EDUC 3272, EDUC 4901, EDUC 3273, READ 3456, and EDUC 3274 with a grade of “C” or above. Must be taken concurrently with EDUC 4953 and EDUC 3120.

Students will be in a full-time, supervised and directed classroom setting. Application for field experience required prior to enrollment.

EDUC 4953 Teaching Internship Seminar for Secondary Teachers

Prerequisite: Admission to Teacher Education. Completion of EDUC 3902, EDUC 3272, EDUC 4901, EDUC 3273, READ 3456, and EDUC 3274 with a grade of “C” or above. Must be taken concurrently with EDUC 4951 and EDUC 3120.

This course is designed to engage interns in a critical reflection of issues, topics, materials, and skills appropriate to their professional development and teaching experience during their internship. The course will also serve as a capstone experience for satisfying exit requirements of the program.

ELCT 1005. Direct Current Circuits I 2-2-3

Provides knowledge and skills to analyze, construct, and troubleshoot basic Direct Current electrical circuits that contain resistors. Topics include: electrical safety, electrical quantities, meters, Ohm’s law, energy and power, series and parallel circuits, opens and shorts, and soldering techniques. (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. Topics include BASIC Programming, debugging programs, forms, menus, OLE, standard controls, and ActiveX controls. This course satisfies the computer literacy requirement. (Career Course)

ELCT 1055. Digital Logic Circuits I 2-2-3

Prerequisite/Co-requisite: ELCT 1005.

Provides knowledge and skills to analyze and troubleshoot digital logic circuits. Topics include: number systems, logic gates, Boolean expressions, combinational logic, Karnaugh maps, programmable logic devices, adders, logic families. (Career Course)

ELCT 1065. Alternating Current Circuits I 2-2-3

Prerequisite: ELCT 1005.

Provides knowledge and skills to analyze, construct, and troubleshoot basic Alternating Current electrical circuits that contain resistors, inductors and capacitors. Topics include: Basic electromagnetism, AC waveforms, frequency and period, amplitude, AC measurements, oscilloscope, purely resistive AC circuits, inductance, capacitance, time constraints, reactance, impedance, basic transformer action, and three-phase supplies. (Career Course)

ELCT 1085. Semiconductor Devices & Circuits I 2-2-3

Prerequisite: ELCT 1005.

Co-requisite: ELCT 1065.

Provides knowledge and skills to analyze, construct, and troubleshoot simple semiconductor circuits. Topics include: PN junction diodes, clippers and clampers, zener voltage regulator, LED, photo diodes, varactors, power supplies, rectifier types, the bipolar junction transistor, and field effect transistors. (Career Course)

ELCT 1100. PC Maintenance and Troubleshooting I 3-2-4

Prerequisite or Co-requisite: CAPS 1101 or MGIS 2201 or CMPS 1130.

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 up-grading common computer components. This course satisfies the computer literacy requirement. (Career Course)

- ELCT 2005. Direct Current Circuits II** **2-2-3**
Prerequisite: ELCT 1005.
Provides knowledge and skills to analyze, construct, and troubleshoot more complex DC electrical circuits that contain resistors, capacitors, and inductors. Topics include: series-parallel circuits, source transformations, basic cell and battery construction and operation, resistive network theorems, Wye-Delta conversions, maximum power transfer theorem, and exponential rise and decay in RC and RL circuits.
- ELCT 2025. Introduction to Microprocessors** **2-2-3**
Prerequisite: ELCT 1055 or permission of instructor.
Provides basic knowledge of microprocessor circuits and their relation to computer programs. Topics include: CPU, arithmetic operations, logic operations, RAM, ROM, I/O, system buses, control signals, timing signals, and typical faults. (Career Course)
- ELCT 2035. Electronic Troubleshooting Techniques** **2-2-3**
Prerequisite: ELCT 1055.
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)** **2-2-3**
Prerequisite: ELCT 1055.
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 2045. Digital Logic Circuits II** **2-2-3**
Prerequisite: ELCT 1055.
Provides knowledge and skills to analyze and troubleshoot sequential and complex digital logic circuits. Topics include: flip-flop, latches, registers, counters, multiplexers, decoders, ALU, and trouble shooting. (Career Course)
- ELCT 2065. Alternating Current Circuits II** **2-2-3**
Prerequisite: ELCT 1065.
Provides knowledge and skills to analyze, construct, and troubleshoot more complex AC electrical circuits. Topics include: complex number representation of phasors, series, and parallel RL and RC circuits, network analysis for AC circuits, RLC circuits, resonance and passive filters. (Career Course)
- ELCT 2075. Motors, Drives, and Controls** **2-2-3**
Prerequisite: ELCT 1055 and ELCT 1085.
Provides knowledge and skills to analyze, install, and troubleshoot AC/DC motor drives. Topics include: electronic motor drives, single-phase AC motors, three-phase AC motors, Inverters, branch circuit protection, and overload protection, maintenance and troubleshooting procedures. (Career Course)
- ELCT 2085. Semiconductor Devices & Circuits II** **1-2-2**
Prerequisite: ELCT 1085.
Provides knowledge and skills to analyze, construct, and troubleshoot more complex semiconductor circuits. Topics include: BJT amplifier analysis, FET amplifiers,

Operational amplifier characteristics and applications, oscillators, and thyristors. (Career Course)

ELCT 2090. Instrument and Control Systems 1-2-2

Prerequisite: ELCT 1055 and ELCT 1085.

Provides knowledge and skills to analyze, construct, program, and troubleshoot instrumentation and control systems used in industrial processes. Topics include: sensors, controllers, PLC's, construction, application, calibration, installation and removal of equipment, process control operation (PID loops, single and cascade), input/output, processing and programming, and Human Machine Interface (HMI) software. (Career Course)

ELCT 2100. PC Systems Troubleshooting 3-2-4

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 2115. Robotics 1-2-2

Prerequisite: ELCT 2090.

Explores basic robotic concepts. Studies in typical application environments. Topics include: robot history and fundamentals, robot classification, power sources, robot application in the workplace, robot control techniques, path control, end of arm tooling robot operation and robot controllers, controller architecture in a system, robotic language programming, and human interface issues. Use of the robots on the Computer Integrated Manufacturing Systems (CIMS) will provide the laboratory requirements. (Career Course)

ELCT 2116. Computer Integrated Manufacturing (CIMS) 1-2-2

Prerequisite: ELCT 2040.

Co-requisite: ELCT 2115.

Introduces the concepts, terminology, and programming of Computer Integrated Manufacturing (CIMS). Allows students to work in instructor-supervised teams, assembling and operating an automated production system. Reviews system electrical, electronic and mechanical principles and equipment as it applies to a flexible manufacturing system, in this case the Computer Integrated Manufacturing System (CIMS). (Career Course)

ELCT 2120. A+ Certification Review 3-0-3

Provides a review and summary of knowledge from previous courses, enhances understanding of operating systems, and helps the student prepare for the A+ Certification Exam. (Career Course)

ELCT 2125. Telecommunications Principles 2-2-3

Prerequisite: ELCT 2065 and ELCT 2085.

Provides an overview of current telecommunications technologies. Topics include: telecommunications history, system features, modulation techniques, multiplexing techniques, transmission media, telephone network, wireless communication, data communication protocols, LANs, WANs, ISDN, ATM, networking technologies. (Career Course)

ENGL 0090. Certificate Preparatory English 3-0-3

Prepares students for ENGL 1100 by presenting a study of basic grammar, including parts of speech, subject-verb agreement, pronoun-antecedent agreement, verb tense, sentence fragments, fused sentences, and comma splices. Writing will include the four basic sentence patterns and basic paragraph development. Prospective students will be required to score 60 or above on the COMPASS English exam to exempt this course. (Institutional Credit) (F,S,M)

ENGL 0096. Learning Support English I 3-0-3

Prepares students for English 1100 or English 0098 by presenting a study of basic grammar including parts of speech, subject-verb agreement, pronoun-antecedent agreement, verb tenses, sentence fragments, fused sentences, and comma splices. Writing will include the four sentence patterns and basic paragraph development. Prospective students will be required to score 60 or above on the COMPASS exam to exempt this course. (Institutional Credit) (F,S,M)

ENGL 0098. Learning Support English II 4-0-4

Prerequisite: ENGL 0090 OR ENGL 0096 or COMPASS English score of 60-69.

Emphasizes the basics of grammar, paragraphs, and essays to prepare students for ENGL 1101. Prospective students will be required to score 70 or above on the COMPASS exam to exempt this course. (Institutional Credit) (F,S,M)

ENGL 0955. Intermediate ESL Writing 3-0-3

Prepares ESL students with COMPASS English scores below 60 for ENGL 1100: Communication Skills and ENGL 0975: Advanced ESL Writing. Areas of focus include sentence grammar, verb tenses, and paragraph writing. Students completing the course with at least 70% may take the exit exam. (Institutional Credit)

ENGL 0975. Advanced ESL Writing 4-0-4

Prerequisite: COMPASS English 60-69, College Placement Exam English 71-74, or ENGL 0090 or ENGL 0096.

Prepares students for the COMPASS English test. Prepares bilingual students for ENGL 1101. Attention is given to second language writing concerns, including limited-English and language-transfer errors. May be repeated three times. (Institutional Credit)

ENGL 1100. Communication Skills 3-0-3

Prerequisite: Satisfactory English placement score or successful completion of ENGL 0090 or ENGL 0096.

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) (F,S,M)

ENGL 1101. English Composition I 3-0-3

Prerequisite: READ 0098, unless exempt.

Focuses on skills required for effective writing in a variety of contexts, with emphasis on exposition, analysis, and argumentation, and a variety of research skills. A minimum grade of C is required in ENGL 1101 before the student can take ENGL 1102. ENGL 1101C satisfies the computer literacy requirement. (F,S,M)

- ENGL 1102. English Composition II** **3-0-3**
 Prerequisite: ENGL 1101 with a grade of “C” or better or the equivalent.
 Presents a literature-based 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. A minimum grade of C is required to complete this course. (F,S,M)
- ENGL 1105. Introduction to Greek Mythology** **1-0-1**
 Prerequisite: ENGL 1101 with a grade of “C” or better.
 Provides an introduction to and overview of the major Greek myth cycles. Students will become familiar with the major Greek gods and goddesses, the stories connected to them, and the heroes of the great epic and dramatic works of ancient Greece. (S, M)
- ENGL 1110. Creative Writing** **1-0-1**
 Prerequisite: ENGL 1102 with a grade of “C” or better.
 Introduces the stylistic conventions and techniques of prose and poetry with an emphasis on characterization, structure, point of view, imagery, and symbolism. Also emphasizes techniques of literary invention and offers exposure to the analysis and critique of peer and professional texts. Special attention is given to drafting and revising original works. Classes are contingent upon enrollment. (F)
- ENGL 1201. Introduction to Film as Literature** **3-0-3**
 Prerequisite: ENGL 1101 with a grade of “C” or better.
 Introduces humanistic, philosophic, and historical analyses of film from the silent period through modern times. Examines and analyzes selected films through lectures, readings, and viewings. Written assignments are required. Students may not receive credit for both CINM 1101 and ENGL 1201. (F,S,M)
- ENGL 2010. Linguistics** **3-0-3**
 Prerequisite: ENGL 1101 with a graded of C or better.
 Provides instruction in language, including its varieties, sound systems, word formation, sentence formation, language meaning, and discourse. Examines first and second language acquisition and classroom observation. Flexible course options will suit various learning interests and styles. (Web-based course)
- ENGL 2111. World Literature I** **3-0-3**
 Prerequisite: ENGL 1102 with a grade of “C” or better.
 Surveys important works of world literature from ancient times through the mid-seventeenth century. (F,S,M)
- ENGL 2112. World Literature II** **3-0-3**
 Prerequisite: ENGL 1102 with a grade of “C” or better.
 Surveys important works of world literature from the mid-seventeenth century to the present. Continues study begun in ENGL 2111, though 2111 is not a prerequisite. (F,S,M)
- ENGL 2120. British Literature I** **3-0-3**
 Prerequisite: ENGL 1102 with a grade of “C” or better.
 Surveys important works of English literature from the Old English period through the Neoclassical Age. (F)

- ENGL 2121. British Literature II** **3-0-3**
Prerequisite: ENGL 1102 with a grade of “C” or better.
Surveys important works of English literature from the Romantic Era to the present. Continues study begun in English 2120, though 2120 is not a prerequisite. (S)
- ENGL 2130. American Literature I** **3-0-3**
Prerequisite: ENGL 1102 with a grade of “C” or better.
Surveys important works of American literature from the Pre-colonial Age to the mid-nineteenth century. (F)
- ENGL 2131. American Literature II** **3-0-3**
Prerequisite: ENGL 1102 with a grade of “C” or better.
Surveys important works of American literature from the mid-nineteenth century to the present. Continues study begun in ENGL 2130, though 2130 is not a prerequisite. (S)
- ENGL 3203. Business Writing** **3-0-3**
Prerequisite: ENGL 1102 with a grade of “C” or better.
Provides an introduction to organization, style, and mechanics of technical and managerial writing and presentations. Includes practice in writing technical documents, including organizing, writing, editing, presenting reports, and designing visual aids while using the word processor and PowerPoint.
- ENGL 3900. Writing Creatively for Self-Advancement** **3-0-3**
Prerequisite: ENGL 1102 with a grade of “C” or better.
Provides an in-depth study and honing of skills of written communication, including poetry and creative nonfiction; emphasizes techniques of literary invention, particularly those of diction, concision, setting, tone, and theme; offers exposure to the analysis and critique of peer and professional texts. Special attention is given to drafting and revising original works. Oral presentation of creative work complements emphasis on writing.
- ENGL 4500. Literature of American Business** **3-0-3**
Prerequisite: ENGL 1102 with a grade of “C” or better.
Surveys the historic background of cultural attitudes and social climate in the United States that allowed for and fostered development in capitalism, industrialism, and technology of the 19th-century Industrial Revolution and beyond. Explores American literature’s representation and treatment of business and characters interacting in a business environment and the ethical concerns and consequences of living and working in this setting.
- ENGR 1105K. Introduction to Engineering** **2-2-3**
Prerequisite: MATH 1113.
Introduction to the basic skills of engineering, including engineering design and problem solving, the fields and functions of engineering, including measurements and estimation, units, dimensions, vectors, Newton’s laws, and other physical phenomenon common to many engineering problems. Laboratory exercises reinforce concepts taught in class.
- ENGR 1108K. Engineering Graphics** **2-3-3**
Co-requisite: MATH 2253.
Theory and application of the design process, using conventional drafting as well

as computer assisted design, spatial analysis, projection theory, sketching, creative design, and geometric dimensioning. Development and interpretation of drawings and specifications.

ENGR 2205. Engineering Statics 3-0-3

Co-requisite: Calculus II (MATH 2254) and Principles of Physics I (PHYS 2211) with a grade of “C” or better. Prerequisite coursework must be been successfully completed within the past three terms.

A study of elements of statics in two and three dimensions, free-body diagrams, distributed loads, centroids, and friction.

ESOL 4240. Applied Linguistics for Teachers of English as a Second Language 3-0-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Block I with a grade of “C” or better, must be taken concurrently with EDUC 3286, 4261, 4263, MATH 3703, ESOL 4240, READ 3262.

This course is designed for undergraduate students who desire an introduction to the topic of applied linguistics and second language acquisition in order to enhance their teaching English as a second language. (S)

ESOL 4241. Methods of Teaching ESOL 3-0-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Block I, II, and Summer course-work, with a grade of “C” or better in each course, must be taken concurrently with EDUC 4251, 4262, 4284, MATH 4713, READ 4251.

This course includes an examination of approaches, methods, and techniques for teaching English as a second language. Participants will demonstrate teaching strategies; develop lesson and unit planning skills; evaluate materials, textbooks, and resources available in the field; and examine issues in testing students of limited English proficiency for placement, diagnosis, exit, and evaluation. Field experience required. (F)

ESOL 4242. Culture and Education (Optional - Required for ESOL Endorsement) 3-0-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I and II with a grade of “C” or better in each course.

Students will examine issues relating to cultural pluralism and global perspectives and to the equitable education of culturally and linguistically diverse student populations. Topics will include the theoretical foundations of multicultural education and the importance of cross-cultural communication. Students will also examine, evaluate, and develop curricular materials for culturally and linguistically diverse populations. (M)

FINC 3056. Principles of Finance 3-0-3

Prerequisite: ACCT 2102 and MATH 2200 or BUSA 3050.

Introduces students to financial management. Topics include the structure and analysis of financial statements, cash flow, time value of money, investment valuation, capital budgeting, long and short term financial decision making.

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. (F,S)

- FREN 1002. Elementary French II** **3-0-3**
 Prerequisite: FREN 1001.
 Follows the same patterns and objectives of FREN 1101 but includes a more detailed study of grammar, longer conversational exercises, and some discussion of French history, culture, and literature. (F,S)
- FREN 2001. Intermediate French I** **3-0-3**
 Prerequisite: FREN 1002.
 Reviews intensively French grammar, verb forms, and idioms. Includes reading of moderately difficult texts and more advanced conversation exercises. Classes contingent upon enrollment.
- FREN 2002. Intermediate French II** **3-0-3**
 Prerequisite: FREN 2001.
 Continues readings of moderately difficult texts central to literature and culture of French-speaking peoples; includes advanced conversation exercises. Classes contingent upon enrollment.
- FYES 1000. First Year Experience Seminar** **2-0-2**
 Focuses on the academic strategies, resource knowledge and social networking necessary for First Year Students to make the transition to college. The course is designed to empower students with the life skills essential for success in college. Required for all first-time, full-time students. (F,S,M)
- GEOG 1100. Introduction to Geography** **3-0-3**
 Offers a broad introduction to the field of geography, with its various traditions, subfields, and associated technologies. Topic areas covered include the multiple aspects of cultural and physical geography and tools used in the discipline, such as Geography Information Systems (GIS) and Global Positioning Systems (GPS). (F,S)
- GEOG 1101. Introduction to Human Geography** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 Introduces the study of world geography with attention given to demographic, political, cultural, economic, and environmental characteristics of regions of the world. (F,S)
- GEOG 1111. Introduction to Physical Geography** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 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. (F,S,M)
- GEOL 1121K. Principles of Geology** **3-2-4**
 Prerequisite: READ 0098, unless exempt.
 This course is an introduction to the study of solid earth systems, particularly plate tectonics and its implications. The importance of the rock cycle, earth materials, and geologic time will also be emphasized.
- GEOL 1122K. Historical Geology** **3-2-4**
 Prerequisite: GEOL 1121K.
 This course is an introduction to the history of the earth. The course focuses on the geologic development of earth from its beginning to the present and the evolution of life through geologic time, as well as the interconnection between the two.

- HIST 1050. Appalachian History - Special Topics** **1-0-1**
 Prerequisite: READ 0098, unless exempt.
 Provides a topical survey of the social, economic, and political history of the Appalachian Region from the colonial period to the present. This course examines patterns of culture, economy, politics, land use, and social structure. Topics may vary each term. (S)
- HIST 1051. Sports History and the American Character** **1-0-1**
 Prerequisite: READ 0098, unless exempt.
 Surveys American sports history from 1900 to present to demonstrate the impact of sports on the unique American character. By focusing on topics in the history of American sports, the course will emphasize the relationships of sports, players, and spectators to American society. Through the connection of sports history with politics, sociology, and business, students will analyze how sporting activities have reflected the development of American society during the twentieth century. (F)
- HIST 1111. World Civilization to 1650** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 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. (F)
- HIST 1112. World Civilization since 1650** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 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. (S)
- HIST 2111. United States History to 1877** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 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. (F,S,M)
- HIST 2112. United States History since 1877** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 Surveys United States history from the Reconstruction era to the present. A continuation of HIST 2111 but may be taken independently. (F,S,M)
- HIST 3345. Business and Economic History of the United States** **3-0-3**
 Prerequisite: HIST 2111 or HIST 2112.
 Surveys United States economic history from colonial times to the present. Emphasis will be placed on the dynamic growth and socio-political repercussions of American industrial power at home and abroad in the second half of the 19th century, and on the economic development and the socio-political repercussions of American economic relationships within the U.S. and the larger global community in the 20th and 21st centuries. (Offered occasionally)

HIST 3350. History of Appalachia	3-0-3
Surveys the history of the Appalachian region from the colonial period to the present. The course will emphasize the social, economic, and political history of the region. This study of Appalachian history will shed light on the national experience as well. (F)	
HUMN 1000. Mystery Fiction in Popular Culture	1-0-1
Prerequisite: READ 0098, unless exempt.	
Introduces mystery fiction as an expression of popular culture. This course traces the historical and literary development and trends of mystery fiction from its mid-nineteenth-century beginnings; examines the elements of the classic mystery; provides an overview of the numerous subgenres and their characteristics; and examines ways in which characterizations, stereotypes, moral issues, and themes of mystery fiction reflect their own time and society. Short story and novel reading to be supplemented by occasional film, television, or audio versions of texts. (M)	
HUMN 1100. Political and Social Rhetoric of the 20th Century	1-0-1
Prerequisite: COMM 1110 and ENGL 1101 with grades of C or better.	
Examines the primary social movements of the years 1900-2000 through the public speaking of those movements' primary spokespersons. Students are given tools for examining rhetorical discourse as a preliminary to weekly discussions of selected speakers and movements. Video and text selections included. (S, alternating years)	
HUMN 1201. Expressions of Culture	3-0-3
Prerequisite: ENGL 1101 with a grade of "C" or better.	
Surveys landmark creative endeavors as expressions and reflections of the cultures that produced them. Course emphases include painting, music, dance, sculpture, architecture, myth, drama, philosophy, and literature as means of exploring human experience by participating in cultural events and by reading and writing reports. Students who have taken FNAR 1102 or MUSC 1100 or THEA 1100 may not use HUMN 1201 to fulfill their degree requirements in Area C. (F,S,M)	
IOMG 3251. Principles of Operations Management	3-0-3
See OPMT 3251.	
IOMG 3253. Introduction to Data Processing Systems	3-0-3
See OPMT 3253.	
IOMG 3254. Computer Integrated Manufacturing	3-0-3
See OPMT 3254.	
IOMG 3257. Introduction to Object Oriented Programming	3-0-3
See OPMT 3257.	
IOMG 4253. Integrated Materials and Supply Chain Management	3-0-3
See OPMT 4253.	
IOMG 4255. Manufacturing Planning and Control	3-0-3
See OPMT 4255.	
IOMG 4256. Application Development	3-0-3
See OPMT 4256.	
IOMG 4800. Special Topics in Operations Management	Variable 1-3
See OPMT 4800.	

ISCI 2001. Life and Earth Sciences 2-2-3

Prerequisite: READ 0098 unless exempt, BIOL 1105K.

This course is designed to provide students with a continuation of life sciences learned in Principles of Environmental Science and an introduction to the fundamentals of basic earth science concepts and methodology. Topics include the major concepts of cells, metabolism, geology and meteorology. The focus is on the function and reproduction of biological organisms and earth processes and their effects on the atmosphere, oceans, biological organisms, structure of landforms and formation of soils.

ISCI 2002. Integrated Physical Sciences 2-2-3

Prerequisite: MATH 1001 or MATH 1111, READ 0098 unless exempt.

An interdisciplinary course designed to provide students with a basic foundation of chemistry and physics. Subjects to be included are: Composition and properties of matter, changes and conservation of matter and energy, sources of energy, types and utilization of energy, motion, gravity, kinematics, waves, and electrical, magnetic, and gravitational fields.

LPNS 1103. Introduction to Nutrition and Diet Therapy 2-0-2

This course provides basic principles of nutrition. It focuses on developing an understanding of the food guide pyramid and how proper nutrition influences health and wellness. Skills will be practiced to enhance communication of optimal nutritional habits to the patient/client for needs throughout the life cycle. (Career Course) (F,S,M)

LPNS 1105. Pharmacology 3-1-3

Prerequisite: MATH 1102.

Co-requisites: LPNS 1109 and LPNS 1111.

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. Students will practice the procedures for medication administration in a simulated clinical environment. (Career Course) (F,S,M)

LPNS 1109. Nursing Skills I 4-0-4

Prerequisite: Acceptance into LPN program

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, and basic nursing procedures. (Career Course) (F,S)

LPNS 1111. Nursing Skills II 3-2-4

Prerequisite: LPNS 1109 and current professional rescuer CPR certification.

Continuation of LPNS 1109 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/or the acute care setting. (Career Course) (F,S)

LPNS 1120. Medical/Surgical I 4-4-6

Prerequisite: LPNS 1111.

The first of three 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 urinary and sensory systems. Each unit of study includes: pharmacology, diet, therapy, psychosocial, cultural aspects, and support of the terminally ill and dying. All curriculum threads are continuous. Clinical experience is in the acute care setting. (Career Course) (F,S,M)

LPNS 1121. Medical/Surgical II 4-4-6

Prerequisite: LPNS 1120.

Emphasis on common illness/disorders of the reproductive, endocrine, and gastrointestinal systems and oncology. Clinical experience is in the acute care setting. (Career Course) (F,S)

LPNS 1130. Medical/Surgical III 4-4-6

Prerequisite: LPNS 1121 or permission of the instructor.

Emphasis is on common illness/disorders of the musculoskeletal, eye, nose, the neurological, integumentary systems, and mental health. Clinical experience is in the acute care setting. (Career Course) (F,M)

LPNS 1140. Obstetrics 3-4-5

Prerequisite: LPNS 1130 or permission of the instructor.

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) (F,S)

LPNS 1141. Pediatrics 3-4-5

Prerequisite: LPNS 1140 or permission of the instructor.

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) (F,S)

LPNS 1150. Nursing Leadership I 2-0-2

Prerequisite: OADM 1250 or permission of instructor.

Co-requisite: LPNS 1120 or permission of instructor

The first of two courses. Builds on concepts presented in OADM 1250 and LPNS 1109. Provides students with concepts and issues related to leadership, management and safe health care delivery. (Career Course) (S,M)

LPNS 1151. Nursing Leadership II 0-4-2

Prerequisites: LPNS 1120 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 or acute care settings. (Career Course) (F,M)

LPNS 1160. State Board Reviews 2-0-2

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) (F,S)

- MARK 3010. Principles of Marketing** **3-0-3**
 Prerequisite: BUSA 1105 or BUSA 2106 or BUSA 3100.
 Provides a general survey of the field of marketing covering marketing channels, functions, methods and institutions. (F,S)
- MARK 3011. Consumer Behavior** **3-0-3**
 Prerequisite: MARK 3010.
 Examines the fundamental activities and motives impacting consumer choice, use and disposal of products. Emphasis on end users rather than business customers. Topics include internal and external factors that influence consumer choice, marketing strategies that influence consumer choice, group dynamics and the organizational buying process, and global consumption trends. (S)
- MARK 3023. Sales and Sales Management** **3-0-3**
 Prerequisite: MARK 3010.
 Focuses on the application of the principles of personal selling and sales management. Topics include the selling process, customer lifetime value, performance measures, professional ethics, time management, sales staff development and the use of technology to enhance productivity and customer service. (S)
- MARK 3233. Retail Marketing** **3-0-3**
 Prerequisite: MARK 3010.
 Explores store location, layout, organizational aspects, credit policies and control systems as they apply to retail operations. Investigates the application of these topics as they relate to online marketing strategies and tactics will be investigated as well.
- MARK 3517. Services Marketing** **3-0-3**
 Prerequisite: MARK 3010.
 Emphasizes the unique differences in the marketing of services including the development and implementation of marketing strategies. Topics include consumer behavior in services marketing, the gaps model of service quality, the marketing mix for services, and demand and capacity management. (M)
- MARK 3570. Advertising and Promotional Strategy** **3-0-3**
 Prerequisite: MARK 3010.
 Focuses on understanding the role of the promotional element of the marketing mix. Topics include the various promotional tools, advertising strategy, creative strategy, the pros and cons of various media options, regulatory constraints and global considerations affecting a firm's effort toward effective marketing communication. (F)
- MARK 4055. Business to Business Marketing** **3-0-3**
 Prerequisite: MARK 3010.
 Analyzes marketing principles and development of appropriate strategies for business to business sales. Topics include organizational buyer behavior, purchasing structures, and methods of developing synergies and relationships in an electronic business setting. Special emphasis is placed on B2B marketing systems using current technology along with projected changes as technology advances.
- MARK 4081. Marketing Management** **3-0-3**
 Prerequisite: Senior Standing. MARK 3010 and two additional MARK courses.
 Integrates marketing principles in the context of the decision making exercises related to customers, products, pricing, promotions, distribution and the laws regarding each of these topics. (S)

MARK 4121. Marketing Research and Analysis **3-0-3**

Prerequisites: MARK 3010 and MATH 2200.

Focuses on the systematic approach to the application of research techniques and procedures for assessing markets. Topics include research design, questionnaire construction, data sources and collection, data analysis, data interpretation and reporting. (F)

MARK 4288. Channels of Distribution **3-0-3**

Prerequisites: MARK 3010.

Examines the fundamental elements of channel systems and various institutions that utilize such systems. Distribution models that describe different industries will be investigated. These models will include ways to assess the legal environment and how price is impacted by channel relationships.

MARK 4351. International Marketing **3-0-3**

Prerequisite: MARK 3010.

Investigation of entry and operational strategies employed for development of international markets. Emphasis is placed on the differences in cultural, political, economic and business environments and how these barriers to international trade can be moderated using electronic systems.

MARK 4380. e-Commerce: A Marketing Approach **3-0-3**

Prerequisite: MARK 3010.

Analyzes e-commerce from both a business to business (B2B) and a retailer to consumer (B2C) perspective. Examines the changing role of the marketing and sales systems in this environment from a systems perspective. (F,M)

MARK 4800. Special Topics in Marketing **Variable 1-3 hours**

Prerequisite: MARK 3010.

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

MARK 4900. Marketing Internships **3-0-3**

Prerequisites: MARK 3010 and 9 hours in MARK.

Provides practical marketing experience with a pre-approved business/industry, service or government agency. A research paper on a project that relates to the firm's marketing system is required to receive credit.

MATH 0090. Certificate Preparatory Mathematics **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)

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

Reviews fractions, decimals, and percents. Topics include signed numbers, order of operations, variable expressions, linear equations and inequalities, and polynomials. Prospective students will be required to score at or above 25 on the COMPASS exam to be exempt from this course. (Institutional Credit) (F,S,M)

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

Continues the development of algebra. Topics include factoring polynomials, rational expressions and equations, linear graphing, simultaneous equations, radicals

and quadratic equations. Prospective students will be required to score at or above 40 on the COMPASS exam to be exempt from this course. (Institutional Credit) (F,S,M)

MATH 1001 Quantitative Skills and Reasoning 3-0-3

Prerequisite: Exemption or completion of Learning Support mathematics required; exemption or completion of Learning Support reading and English recommended.

This course is an alternative in Area A of the Core Curriculum and is not intended to supply sufficient algebraic background for students who intend to take Precalculus or the calculus sequences for mathematics and science majors. This course places quantitative skills and reasoning in the context of experiences that students will be likely to encounter. It emphasizes processing information in context from a variety of representations, understanding of both the information and the processing, and understanding which conclusions can be reasonably determined.

MATH 1102. Medical Mathematics 3-0-3

Prerequisite: Satisfactory Mathematics placement score or successfully complete MATH 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) (F,S,M)

MATH 1104. Applied Mathematics 3-0-3

Prerequisite: Satisfactory Mathematics placement score or successfully complete Math 0090 or Math 0096.

Topics include arithmetic, elementary algebra, geometry, measurement, and elementary trigonometry. (Career Course) (F,S,M)

MATH 1111. College Algebra 3-0-3

Prerequisite: MATH 0098 unless exempt.

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. (F,S,M)

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 1111. 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. (F,S,M)

MATH 1113H. Honors Precalculus Mathematics 3-0-3

Prerequisite: Admission into the Honors Program with a grade of B or higher in MATH 1111 or permission of the instructor.

This course is a three-credit-hour Honors course designed to provide academically talented and motivated students the opportunities to build and improve their critical and analytical thinking skills, problem-solving skills, written communication skills, collaborative learning skills, and conceptual understanding of some mathematical concepts. To prepare students for the study of calculus, physics, and engineering,

extensive treatment is given to selected topics with special emphasis on algebraic and transcendental functions and their graphs, analytic trigonometry, analytic geometry, applications of trigonometry (with special attention to the Complex Plane and Polar Form for Complex Numbers, DeMoivre's Theorem, the n th Roots of Complex Numbers, Vectors in the Plane, and Dot Product), systems of linear and nonlinear equations (with special attention to large systems, matrix methods for square systems), Discrete Algebra (sequences and sums, arithmetic and geometric sequences, infinite series, the Binomial Theorem, Principle of Mathematical Induction), Limits and Continuity, and at least one project (discovery or otherwise). A graphics calculator is required.

MATH 2008. Foundations of Numbers and Operations **3-0-3**

Prerequisite: MATH 1001, MATH 1111 or MATH 1113.

This course will emphasize the understanding and use of the major concepts of number and operations. Topics include problem-solving strategies; inductive and deductive reasoning; numeration systems and place value; operations and algorithms; identity elements and inverse operations; rational and irrational numbers; integers and number theory; special sets of numbers; exponents and decimals; ratios, percents, and proportional reasoning.

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

Prerequisite: MATH 1111 or MATH 1113 with a grade of "C" or better.

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. (F,S,M)

MATH 2200. Introduction to Statistics **3-0-3**

Prerequisite: MATH 1001, MATH 1111 or MATH 1113.

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. (F,S,M)

MATH 2253. Calculus and Analytic Geometry I **4-0-4**

Prerequisite: MATH 1113.

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. (F,S)

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. (S,M)

MATH 2255. Calculus and Analytic Geometry III **4-0-4**

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. (F)

- MATH 2256. Introduction to Linear Algebra** **3-0-3**
 Prerequisite: MATH 2253 with a co-requisite of MATH 2254.
 Introduces low-dimensional linear algebra through eigenvalues and eigenvectors. Applications to linear systems, least-square problems, and the calculus, including elementary differential equations. (S)
- MATH 2403. Differential Equations** **3-2-4**
 Prerequisite: MATH 2254 and MATH 2256.
 A study of differential equations, including first and higher order equations, linear and nonlinear systems of equations, numerical methods to approximate solutions, using Laplace transforms to determine solutions, and methods that yield infinite series solutions.
- MATH 2602. Linear and Discrete Mathematics** **3-2-4**
 Prerequisite: MATH 2403.
 Explores topics in linear algebra, induction, combinatorics, difference equations, and multivariate optimization with an emphasis on discrete and recursive methods.
- MATH 2770. Statistics and Applications** **3-0-3**
 Prerequisite: MATH 2255.
 Introduces the student to topics in probability, probability distributions, point estimation, confidence intervals hypothesis testing, linear regression and analysis of variance.
- MATH 3101. Introduction to Advanced Mathematics** **3-0-3**
 Prerequisite: MATH 2255.
 Preparation in mathematical reasoning and proof-writing necessary for upper division course work in mathematics. Topics include logic, integers and induction, sets and relations, equivalence relations and partitions, and functions.
- MATH 3201. Geometry** **3-0-3**
 Prerequisite: MATH 3101.
 An introduction to Euclidean and non-Euclidean geometries developed with the study of constructions, transformations, applications, and the rigorous proving of theorems.
- MATH 3301. Combinatorics** **3-0-3**
 Prerequisite: MATH 2254.
 Basic counting principles: permutations, combinations, probability, occupancy problems, and binomial coefficients. More sophisticated methods include generating functions, recurrence relations, inclusion/exclusion principle, and the pigeonhole principle. Additional topics include asymptotic enumeration, Polya counting theory, combinatorial designs, coding theory, and combinatorial optimization.
- MATH 3401. Linear Algebra** **3-0-3**
 Prerequisite: MATH 2256.
 Theory and applications of matrix algebra, vector spaces, and linear transformations; topics include characteristic values, the spectral theorem, and orthogonality.
- MATH 3703. Geometry for P-8 Teachers** **3-0-3**
 Prerequisite: MATH 2201.
 Continues MATH 2201, with emphasis for teachers of grades P-8. Logic; real numbers; basic and transformational geometry; measurement, including the metric system; problem solving; methods and materials for teaching mathematics at the P-8 level.

- MATH 3803 Algebra for P-8 Teachers** **3-0-3**
 Prerequisite: MATH 2201.
 Provides special emphasis for teachers of grades P-8 on understanding of the fundamental concepts of algebra with particular attention to specific methods and materials of instruction.
- MATH 4101. Abstract Algebra I** **3-0-3**
 Prerequisite: MATH 3101.
 An axiomatic approach to algebraic structures. Topics include groups, permutations, homomorphisms, and factor groups.
- MATH 4201. Number Theory** **3-0-3**
 Prerequisite: MATH 3101.
 A study of elementary problems in number theory with topics from divisibility, congruences, residues, special functions, Diophantine equations, and continued fractions.
- MATH 4301. Graph Theory** **3-0-3**
 Prerequisite: MATH 3101.
 Elementary theory of graphs and digraphs. Topics include connectivity, reconstructions, trees, Euler's problem, hamiltonicity, network flows, planarity, node and edge colorings, tournaments, matchings, and extremal graphs. A number of algorithms and applications are included.
- MATH 4401. Operations Research** **3-0-3**
 Prerequisite: MATH 3401.
 Linear programming, the simplex method, network theory, game theory, Markov analysis, and other topics such as inventory analysis, queuing theory, integer programming.
- MATH 4502. Statistics for Process Control** **3-0-3**
 Prerequisites: MATH 2181 and MATH 2200.
 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. (F)
- MATH 4511. Numerical Analysis I** **3-0-3**
 Prerequisite: MATH 2403 and CMPS 1301.
 Numerical solution of equations, polynomial approximation, numerical differentiation and integration, numerical solutions of ordinary differential equations, error analysis. Written programs using algorithms.
- MATH 4512. Numerical Analysis II** **3-0-3**
 Prerequisite: MATH 2256 and CMPS 1301.
 Numerical solutions of systems of linear equations, numerical computation of eigenvalues and eigenvectors, error analysis. Written programs using the algorithms.
- MATH 4601. Real Analysis** **3-2-4**
 Prerequisite: MATH 3101.
 An introductory course in functions of a real variable, limits, continuous functions, differentiation, and Riemann integration.

- MATH 4611. Complex Analysis** **3-0-3**
 Prerequisite: MATH 4601.
 Complex numbers, analytic functions, complex series, Cauchy theory, residue calculus, conformal mapping.
- MATH 4701. Probability and Statistics I** **3-0-3**
 Prerequisite: MATH 2255.
 Sampling distributions, Normal, t, chi-square and F distributions. Moment generating function methods, Bayesian estimation and introduction to hypothesis testing.
- MATH 4702. Probability and Statistics II** **3-0-3**
 Prerequisite: MATH 4701.
 Hypothesis testing, likelihood ratio tests, nonparametric tests, bivariate and multivariate normal distributions.
- MATH 4713 Probability and Statistics for P-8 Teachers** **3-0-3**
 Prerequisite: MATH 2201.
 Provides special emphasis for teachers of grades P-8 on the fundamental concepts of probability and statistics with particular attention to specific methods and materials of instruction.
- MFGT 1207. Industrial Safety I** **3-0-3**
 Study of accidents and their causes, the cost of accidents, appraising safety performance, safety, inspection, planning and maintaining a safe environment or organization; also administration of school, shop and industrial accident prevention programs. (Career Course)
- MFGT 1208. Industrial Safety II** **3-0-3**
 Prerequisite: MFGT 1207, Industrial Safety I, or permission of instructor.
 An in-depth study of the organization of accident prevention programs, job hazards, analysis, accident cost control, inspections, reports, records and safety standards as established by the federal and state governments. (Career Course)
- MFGT 1210. Occupational Health and Safety** **3-0-3**
 This course reviews the OSHA requirements, paperwork and resources for safety professionals. Areas covered are the OSHA standards for OSHA certification, voluntary compliance industrial standards, welding safety, ladders, scaffolding, platforms, steps/stairs, confined space lock out, respiratory, blood born pathogens, rules, regulations, history, record keeping, citations, compliance requirements, elevated platforms, trips, and falls. (Career Course)
- MFGT 1269. Lean Manufacturing** **3-0-3**
 This course incorporates an analysis of work methods and work measurement systems in manufacturing plants. (Career Course)
- MFGT 2101. Fundamentals of Manufacturing** **3-0-3**
 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. (Career Course)

MFGT 2215. Safety Management 3-0-3

Prerequisite: MFGT 1207, Industrial Safety I, or permission of instructor.

This course will help students develop behavioral and management safety skills necessary for business and industry. It presents fundamental elements that form an effective safety program. The elements are designed with situations and ideas that allow for a successful implementation of a safety program. The necessary OSHA forms, data collection, reporting and posting is covered. This course is applicable for the safety and non-safety professional responsible for safety function. Through case studies, measurement and monitoring techniques, including recommendations for implementation, this course covers management strategies to effectively evaluate safety programs. (Career Course)

MGIS 2201. Fundamentals of Computer Applications 3-0-3

Prerequisite: MATH 1111 or higher.

Assures a basic level of computer applications literacy to include spreadsheet, database, word processing, LAN, e-mail, and Internet utilizations. This course satisfies the computer literacy requirement. (F,S,M)

MGIS 3351. Management Information Systems 3-0-3

Prerequisites: BUSA 3400 or MGIS 2201.

Covers essential business aspects of information systems such as networks, databases, the Internet, management reporting, software development, computer hardware, and information ethics. The course also examines the use of information systems for managerial decision-making and for gaining strategic advantage. Students will utilize basic programming concepts to develop a small application. This courses satisfies the computer literacy requirement. (F,S)

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

Co-requisite: 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. This course satisfies the computer literacy requirement. (F)

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 are included. Introduces advanced applications using these structures, such as object-oriented, visual languages for faster development. Microcomputer-based languages will be explored. (S)

MGIS 3354. Telecommunications Management 3-0-3

Prerequisite: MGIS 3351 or concurrent.

Provides an understanding of telecommunications and data communications technologies, voice communications and data networks, protocols, standards and management. Topics include transmission media, data communications, and voice and data technology. (S)

MGIS 3357. Application Development with RPG 3-0-3

Prerequisite: MGIS 3352 or MGIS 3360.

Design, coding, and testing of programs using the Report Program Generator (RPG IV) language. Topics include report editing, mathematical operations, use of subrou-

tines to support structured programming, ifs and case structures, and external and logical files. (S)

MGIS 3360. Computer Programming Languages 3-0-3

Prerequisite: MGIS 3351 or concurrent.

Introduces the student to fundamental computer programming concepts. Emphasizes solving business type problems using both procedural and object-oriented languages. Topics include the three major constructs of all programming languages, designing, writing and testing programs that perform input and output, arithmetic operations, decision-making, iteration, abstraction, encapsulation, inheritance, and polymorphism.

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

Prerequisite: MGIS 3351.

Examines the process of developing business information systems. Topics include requirements specification, systems modeling, and systems design techniques in the context of the Systems Development Life Cycle. Structured approaches and techniques such as Data Flow Diagrams are emphasized. Object-oriented approaches and techniques including UML are also introduced. A major component of the course is the analysis and design of a business system as a term project.

MGIS 4355. Information Resource Management 3-0-3

Prerequisite: MGIS 3351.

Covers current issues in information systems management. Topics include the strategic use of information resources, organizational impacts of information systems use, ethical use of information, management of the IT function, project management, and IT funding.

MGIS 4356. Database Management Systems 3-0-3

Prerequisite: MGIS 3351.

Focuses on the use of database systems in business to support information systems and decision-making. Topics include database concepts, data modeling, database design and development, administration of database systems, and database technologies. Students will have hands-on experience developing a database application.

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

Prerequisite: MGIS 4354.

Covers design principles and programming of web-based management information systems, both Internet and Intranet. Topics include organizational considerations involved in developing and running a web-based MIS, and system considerations associated with the design, development, implementation, and support of a web-based MIS. Students will develop a web site for a real or hypothetical organization. (F)

MGIS 4370. Systems Analysis and Design of Web-based MIS 3-0-3

Prerequisite: MGIS 3352 or MGIS 3360 or concurrent.

Examines the process of developing business information systems with a significant web component. Topics include requirements specification, systems modeling; systems design techniques in the context of the Systems Development Life Cycle, and design principles and programming of web-based management information systems, both Internet and Intranet. A major component of the course is the analysis and design of a business system with a significant web component as a term project.

- MGIS 4380. Project Management** **3-0-3**
 Prerequisite: MGIS 3351 and MNGT 3051.
 Covers a variety of project management techniques that can be applied in an IT or non-IT project context. Managing scope, time, cost, and quality are explored. Students are exposed to project management tools and associated software that can assist in better planning and managing projects. Examples are drawn from IT and non-IT areas.
- MGIS 4800. Special Topics in MIS** **Variable 1-3 hours**
 Prerequisite: MGIS 3351.
 Supervised, in-depth individual research and study of one or more current topics in MIS in conjunction with an associated major project. Students will be required to prepare a formal report and presentation of the topic research and project.
- MGIS 4900. Management Information Systems Internships** **3-0-3**
 Prerequisite: MGIS 3351 and 9 hours in MGIS.
 Provides practical MIS experience with a pre-approved business/industry, service or government agency. A research paper on a project that relates to the firm's management information system is required to receive credit.
- MGMT 2201. Introduction to Management** **3-0-3**
 This course is designed to familiarize students with the basic functions of the management process applicable to 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 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 training needed by supervisors in a broad array of working environments. 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)
- MGMT 2212. Managing Financial Performance** **3-0-3**
 Prerequisite: MATH 0090 or MATH 0096 (unless exempt).
 In this non-accounting course students will learn to read and understand financial statements and to use them as management tools. They will become aware of how management decisions affect income statement and balance sheets, as well as a company's cash flow. They will learn to calculate a simple break even analysis and

see how changes in a company's cost structure affect its profitability. Students will also learn how to access financial information about the industry in which they work. (Career Course)

MGMT 2255. Multicultural Business Environments 3-0-3

Introduces the student to the nature and process of communication in relation to culture, to understand cultural barriers to communication and to examine strategies for bridging those barriers. (Career Course)

MGMT 2288. IT Business Environment 3-0-3

Introduces students to the trends in the IT industry, to business in the U.S. today and the impact technology has on our global economy. Students will learn the legal and ethical implications of their actions in transacting business as well as the importance of promoting diversity in the workplace. Skills for initiating an effective job search are also covered. (Career Course)

MGMT 2290. Business Interaction Skills 3-0-3

This course provides students with the tools to communicate and interact more effectively in person, in writing and on the telephone with both internal and external customers. Topics include: organizing and communicating technical information to non-technical people, modifying communication style to overcome barriers to communication, using skills of effective teamwork and collaboration to accomplish goals, providing excellent customer service, handling difficult/dissatisfied customers, and writing effective letters, memos, and e-mails at work. (Career Course)

MGMT 2293. Personal Effectiveness and Analytical Skills 3-0-3

This course combines skills and techniques for critical and creative thinking with personal effectiveness to provide IT professionals with the necessary tools to navigate in today's volatile business environment. Topics include: overcoming mental blocks to creativity, organizing thoughts into a systematic approach to problem solving, identifying the root causes of problems, analyzing and choosing the best options, and developing implementation plans. Additionally, skills to manage time and priorities, applying stress management techniques, managing change successfully, and behaviors and characteristics of a leader will be covered. (Career Course)

MGMT 2296. Organization Effectiveness 3-0-3

This course provides students with the essential skills and techniques to perform more effectively in their jobs. Topics include: how to plan and conduct an effective meeting, proper behaviors for meeting participants, applying basic project management techniques to define, schedule, and carry out project tasks, handling challenges faced by project managers, organizing and presenting a technical presentation, and functioning successfully in a productive mentoring relationship. (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

Prerequisites: Successful completion (with a grade of "C" or better) of ALHT 1110, 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 are 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, special stains, leukemias/lymphomas, flow cytometry, 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 immunohematology 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 3-2-4

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** **2-2-3**
 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. Satisfies the computer literacy requirement. (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)
- MNGT 3051/BUSA 3051. Principles of Management** **3-0-3**
 Prerequisite: BUSA 2106.
 Introduces the basic concepts and processes of management including the study of the legal, social, and political environment with an emphasis on the behavioral perspectives in organizations.

- MNGT 3621/BUSA 4621. Organizational Behavior** **3-0-3**
See MNGT 4605.
- MNGT 4053/BUSA 3053. Human Resource Management** **3-0-3**
Prerequisite: MNGT 3051.
Presents theory and policy to perform the human resource function in modern organizations. Topics include EEO law and regulations, selection, recruitment, performance appraisal, compensation, training, and labor relations.
- MNGT 4501/BUSA 4501. Entrepreneurship** **3-0-3**
Prerequisite: MNGT 3051, MARK 3010 and FINC 3056.
Explores the increasing importance of entrepreneurial activity and the steps necessary in starting a new business venture. Topics include the entrepreneurial personality; small business management techniques; the economic impact of small businesses; and the influence of the environment on small businesses. Student teams design and present a business plan for a new venture.
- MNGT 4602/BUSA 4602. Leadership** **3-0-3**
Prerequisite: MNGT 3051.
Focuses on managerial leadership through a broad survey of theory, research and practice of leadership in formal organizations. The topic of leadership effectiveness is at the core of this class.
- MNGT 4605. Organizational Effectiveness**
Prerequisite: MNGT 3051.
Investigates formal organizations as social instruments and the means by which such organizations can become more effective. Topics include organization structure, the effects of structure, organizational growth, and the effects of environment and technology on organizational processes.
- MNGT 4701/BUSA 4051. Strategic Management** **3-0-3**
Prerequisite: Completion of 42 hours of upper division business courses including the following business core courses: MNGT 3051, MARK 3010, FINC 3056, OPMT 3251, COMM 3301.
Co-requisite: BUSA 4700.
Represents the capstone course in business. Presents theory and practice of strategic decision making within organizations. Topics include environmental analysis, organizational direction, strategy formulation, and implementation and strategic control, strategic management theory, research and concepts, environmental influences on business, and secondary research methodology.
- MNGT 4800/BUSA 4800. Special Topics in Management** **Variable 1-3**
Prerequisite: MNGT 3051.
Supervised, in-depth individual research and study of one or more current topics in Management in conjunction with an associated major project. Student will be required to prepare a formal report and presentation of the research topic and project.
- MNGT 4900/BUSA 4900. Management Internship** **Variable 1-3**
Prerequisite: MNGT 3051 and 9 hours in MNGT.
Provides practical management experience with a pre-approved business/industry, service or government agency. A research paper on a project that relates to the firm's management system is required to receive credit.

MOAS 1110. Clinical Procedures I **2-2-3**

Prerequisites: ALHT 1110, BIOL 1100 or BIOL 1107, MATH 1102, and MLTS 1101. Enrollment is limited to students accepted into the Medical Office Assisting or Medical Office Administration 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. Students will have met state requirements and been approved by the Department of Human Resources to work with x-ray equipment upon successful program completion. (Career Course) (F,S)

MOAS 1111. Clinical Procedures II **3-0-3**

Prerequisites: ALHT 1110, BIOL 1100 or BIOL 1107, MATH 1102, MLTS 1101 and MOAS 1110. Enrollment is limited to students accepted into the Medical Office Assisting or Medical Office Administration program.

Further the student's knowledge of the more complex activities in a physician's office. Topics include: collection/examination of specimens; venipuncture; urinalysis; administration of medications including oral, topical, subcutaneous, intramuscular, and intradermal medications; first aid and CPR; physical therapy procedures; and principles of radiology safety.

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

Prerequisites: ALHT 1110, BIOL 1100 or BIOL 1107, MATH 1102, MLTS 1101 MOAS 1110 and MOAS 1111. Enrollment is limited to students accepted into the Medical Office Assisting or Medical Office Administration program.

Students perform a practicum in a physician's office or health care facility. Students will be eligible to take the American Association of Medical Assistant National Exam for certification upon completion of this course. (Career Course) (F,S)

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)
- MRKT 2220 Customer Relationship Development 3-0-3**
This course presents a comprehensive approach to creating, maintaining, and expanding customer relationships. By combining theory with best practices and applications of proven customer service techniques, it is designed to help those in marketing and management positions to better understand how to motivate their employees and serve their customers by infusing a customer service attitude into the organization. (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) (F,S,M)
- MSHP 1110. Lathes 1-6-3**
Introduction to the lathe, emphasizing safety, tool sharpening, machine parts and accessories. Measuring tools, drilling and boring are included in the course. (Career Course) (F,S,M)
- 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) (F,S,M)
- MSHP 1130. Machining Techniques 1-6-3**
Prerequisites: MSHP 1110 and 1120.
The use of all machine tools and equipment through machine projects. Precision machining is stressed. (Career Course) (F,S,M)
- MSHP 1140. Grinders 1-6-3**
Emphasis is placed on the operation of surface grinders, and tool and cutter grinderst. Projects made in other courses are finished on the surface grinder. (Career Course) (F,S,M)
- MSHP 1150. Advanced Machining Techniques I 1-6-3**
Prerequisites: MSHP 1110 and 1120.
Presents complicated projects on all equipment. Precision layout, machining techniques, inspection procedures, and machine tool attachments are stressed. (Career Course) (F,S,M)
- MSHP 1160. Advance Machining Techniques II 1-6-3**
Prerequisites: 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) (F,S,M)
- MSHP 1170. Computer Numerical Control (CC) Operations 1-6-3**
A study of the planning, programming, tool selection, determining feeds and speeds, setting up, and operating CC programs. The production of parts on a CC milling machine and a CC lathe are also covered. (Career Course) (F,S,M)

- MUSC 1100. Music Appreciation** **3-0-3**
 Prerequisite: COMPASS Reading score of 80 or better.
 Introduces music from the Middle Ages to the present to foster an appreciation and understanding of music in its cultural/historical context. No musical background is needed. Students who have taken HUMN 1201 may not use MUSC 1100 to fulfill their degree requirements in Area C. (F,S,M)
- NURS 1101. Fundamentals of Nursing I** **1-5-3**
 Co-requisites: NURS 1102, MATH 1111, BIOL 2212.
 Introduces nursing concepts and skills. Requires clinical application in a health care setting. (Career Course) (F)
- NURS 1102. Pharmacology** **2-0-2**
 Prerequisite: Exit (or exempt) all areas of Learning Support.
 Introduces pharmacological concepts including drug classifications, mathematical calculations, and principles of drug administration. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)
- NURS 1103. Fundamentals of Nursing II** **2-5-4**
 Prerequisites: NURS 1101, 1102.
 Co-requisite: 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) (F)
- NURS 1104. Nutrition** **1-0-1**
 Prerequisite: Exit (or exempt) all areas of Learning Support.
 Introduces nutrition concepts with emphasis on metabolism, essential nutrients, and the nurse's role in diet therapy. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)
- NURS 1105. Maternal and Infant Care** **2-6-4**
 Prerequisite: NURS 1103.
 Co-requisite: 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) (S)
- NURS 1106. Mental Health Nursing** **2-6-4**
 Prerequisite: NURS 1103.
 Co-requisite: 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) (S)
- 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) (F,S)
- 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) (F)

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) (S)

NURS 2203. Nursing Issues 1-0-1

Prerequisite: NURS 2201.

Co-requisite: NURS 2202.

Discusses current issues in nursing, prepares students in basic computer skills, and facilitates the transition from student to health care professional. This course satisfies the computer literacy requirement. (Career Course) (S)

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 service business. Students will prepare financial statements, work with journals and ledgers, prepare banking statements, accounting receivables and payables, and develop skill in the use of spreadsheet software. (Offered as needed)

OADM 1102. Intermediate Office Accounting Procedures 3-0-3

Prerequisite: OADM 1101 or permission of instructor.

Continues the principles studied in OADM 1101. Students will study the procedures for promissory notes, bad debts, depreciation, accruals and deferrals, partnerships, and corporations. (Offered as needed)

OADM 1104. Small Business Accounting Systems 3-0-3

Prerequisite: OADM 1101 or ACCT 2101.

A study of accounting procedures using computer simulation packages. Students will create and manipulate data in the general ledger, accounts payable, and accounts receivable, as well other procedures needed for small businesses. (Offered as needed) (F,S,M)

OADM 1120. Workplace Communication Skills 3-0-3

A basic course in the effective use of oral and written communication skills related to the workplace. Emphasis is on effective preparation and presentation of workplace information. (Offered as needed)

OADM 1140. Basic Keyboarding 0-2-1

This course is for non-office majors who need keyboarding skills for program requirements or for any student who elects the course with permission from his/her advisor. Students will develop the "type by touch" methods of keying information on

the computer. Basic Word functions, such as Save, Retrieve, and Print are taught. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

OADM 1150. Document Processing I **2-2-3**

Develops the “type by touch” method of keying information and begins the process of developing computer skills. After the keyboard lessons are completed, the student will develop formatting skills for business letters, memos, tables, and reports. Word functions may include Margin changes, Block, Move, Insert, Spell Check, Date, Bold, Underline, and others. Speed building and accuracy are stressed. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

OADM 1151. Document Processing II **2-2-3**

Prerequisite: OADM 1150 or equivalent.

Continues the principles begun in OADM 1150 Document Processing I. More advanced formats are mastered, and Word functions such as Merge, Multiple Windows, Footnotes, and Macros are used. Speed building and accuracy are stressed. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

OADM 1159. Medical Office Procedures **2-2-3**

Prerequisite: OADM 1150 or equivalent, ALHT 1110.

Emphasis on the production of medical correspondence and various types of medical forms used in the clinical setting. Students will be responsible for transcribing in-depth history and physical reports, case studies, operative reports and follow-up visits. A wide variety of insurance forms will be used extensively. A research paper is required. Sources must include the Internet as well as the usual literary materials. (Career Course) (F,M)

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. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

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. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

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. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

OADM 1220. Office Procedures 2-2-3

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 literary materials. This course satisfies the computer literacy requirement. (Career Course) (Offered as needed)

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) (F,S,M)

OADM 1232. Business Communications 3-0-3

Prerequisites: OADM 1230 or ENGL 1100 or ENGL 1101.

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

OADM 1240. Desktop Publishing 2-2-3

Prerequisite: OADM 1150 or permission of instructor.

Builds on the word processing skills developed in Document Processing I and II. 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, Word Art images, advanced line formatting, merge, and style features. Microsoft Word software will be used. This course satisfies the computer literacy requirement. (Career Course) (F,S,M)

OADM 1242. Spreadsheet Applications 2-2-3

A course designed to provide in-depth study of windows-based spreadsheet software. Emphasis will be placed on office-style activities and critical thinking skills. This course satisfies the computer literacy requirement. (Career Course) (F,S)

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) (F,S,M)

OPMT 3251/OMG 3251 Principles of Operations Management 3-0-3

Prerequisite: BUSA 2106, MGIS 2201, and MATH 2200 or BUSA 3050 (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. Topics include coverage of operations strategy and managing change, product design, process selection and planning, and controlling the supply chain. (F,S)

OPMT 3253/OMG 3253 Introduction to Data Systems 3-0-3

Prerequisite: MGIS 3351.

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

- OPMT 3254/IOMG 3254 Computer Integrated Manufacturing 3-0-3**
 Prerequisite: MGIS 2201.
 Introduces the concepts and terminology of computer integrated manufacturing with special emphasis on the practical application of automation technology. Topics include elementary programming structures, binary, octal and hexadecimal number systems, measurement theory and computer integrated manufacturing.
- OPMT 3257/IOMG 3257 Introduction to Object Oriented Programming 3-0-3**
 Prerequisite: MGIS 2201.
 Introduces programming with a structured language. Emphasis is placed upon development of correct, efficient programs that are easy to maintain. Topics include problem analysis, program design, documentation, testing and debugging.
- OPMT 4253/IOMG 4253 Integrated Materials and Supply Chain Management 3-0-3**
 Prerequisite: OPMT 3251.
 Examines the technology, tools, and practices of modern integrated materials sourcing and logistics. Topics include distribution requirements planning, continuous replenishment, just-in-time, and efficient replenishment.
- OPMT 4255/IOMG 4255 Manufacturing Planning and Control 3-0-3**
 Prerequisite: OPMT 3251.
 Examines the planning involved in manufacturing operations and evaluates personnel requirements, control methods, equipment and supplies. Topics include simulation methods to production planning and control, mapping techniques, and experimental design.
- OPMT 4256/IOMG 4256 Application Development 3-0-3**
 Prerequisite: MGIS 2201.
 Increases 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.
- OPMT 4503/BUSA 4503 Quality Management Systems 3-0-3**
 Prerequisite: MNGT 3051, IOMG 3251, and MGIS 2201.
 Examines the continuous quality management and improvement philosophy. Topics include strategic management, quality assessment, teams, the role of leadership, lean manufacturing, tools for improving, quality processes, techniques for charting attribute and variable data, Statistical Process Control, Six-Sigma, and lean manufacturing.
- OPMT 4800/IOMG 4800 Special Topics in Operations Management Variable 1-3**
 Prerequisite: OPMT 3251.
 Supervised, in-depth individual research and study of one or more current topics in Operations Management in conjunction with an associated major project. Students will be required to prepare a formal report and presentation of the research topic and project.
- OPMT 4900 Operations Management Internship Variable 1-3**
 Prerequisite: OPMT 3251 and 9 hours in OPMT.
 Provides practical Operations Management experience with a pre-approved business/industry, service or government agency. A research paper on a project that relates to the firm's operation management system is required to receive credit.

PHED 1005. First Aid/CPR and Cardiovascular Fitness 1-0-1

Prerequisite: READ 0098, unless exempt.

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. Course will also involve cardiovascular physical activity and discuss behaviors recommended for reducing risk factors for heart disease. (American Red Cross Certification-First Aid, Adult CPR, and Automated External Defibrillation) (F,S,M)

PHED 1020. Physical Fitness Concepts 0-2-1

Prerequisite: READ 0098, unless exempt.

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. (S)

PHED 1030. Health & Wellness Concepts 1-0-1

Prerequisite: READ 0098, unless exempt.
(Not an activity course.)

Introduces personal responsibility for health and wellness and provides information and strategies that can be adopted. Covers topics such as wellness assessment, self-managed behavior, physical fitness, nutrition, weight control, stress management. (F,S,M)

PHED 1100. Fitness Circuit Training 0-2-1

Acquaints students with basic knowledge and skills pertaining to the importance of participation in physical activity and its contribution to optimal living. Involves alternating cardiovascular exercises with flexibility and resistance exercises. (F,S,M)

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. (F,S,M)

PHED 1120. Jogging 0-2-1

Introduces students to the basic knowledge and techniques necessary for a life-long fitness program. Teaches students how to use jogging/running to become more physically fit and more efficient in daily work and recreation. (F,S)

PHED 1130. Swim Fitness 0-2-1

Provides guidance for students who want to use aquatic exercise to improve 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. (S,F)

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, free weights (dumbbells), calisthenic exercises, and cardiovascular equipment. (F,S,M)

- PHED 1150. Dance for Fitness and Sport** **0-2-1**
 Introduces student to a variety of current dance styles, which may be used to improve health and fitness. (F,S)
- PHED 1170. Beginning Aikido** **0-2-1**
 Provides an introduction to aikido, a Japanese martial art form popularized by Steven Seagal. Unlike some other martial arts, aikido is not a competitive sport but rather a purely self-defense style. Teaches how to throw or restrain attackers by redirecting their own energy and momentum. Since one uses the attacker's energy, aikido does not require great physical strength. (F,S)
- PHED 1210. Beginning Badminton** **0-2-1**
 Introduces basic badminton skills, terminology, and rules. (F,S,M)
- PHED 1260. Beginning Tennis** **0-2-1**
 Introduces basic tennis skills, techniques, rules, scoring, and strategy. (F,S)
- PHED 1280. Basketball** **0-2-1**
 Provides instruction for students who choose to use the game of basketball to improve health and wellness. Classes will involve students with skills and drills, playing strategies, fitness techniques, and effective training principles. Covers topics such as, basic rules, terminology, nutrition, injury care and prevention, and health-related fitness components. (S)
- PHED 1290. Student Assistant** **0-2-1**
 Prerequisite: Permission of Instructor.
 Allows students who have previously exhibited knowledge and skills appropriate to a course to continue their interest by assisting in a class. (F,S,M)
- PHED 2010. Introduction to Physical Education** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 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. (S)
- PHIL 1101. Introduction to Philosophical Issues** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 Inquires into the art of knowing. Examines the questions of meaning, truth, reality, freedom, life, morality, and religion. (F,S)
- PHIL 1102. Logic and Critical Thinking** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 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. Highly recommended for pre-law students. (S)
- PHIL 1103. Introduction to World Religions** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 Studies selected world religions with primary concentration on the origin and major periods of the scriptural and doctrinal development of these religions. (F)

- PHIL 3150. Ethics and the Workplace** **3-0-3**
 Prerequisite: PHIL 1101.
 A study of ethical issues in voluntary associations, business, and society, with special emphasis on corporate responsibility, regulation of business, and the protection of workers, consumers, and the environment in commercial and non-commercial operations. (Offered occasionally)
- PHYS 1111K. Introductory Physics I (Trigonometry based)** **3-3-4**
 Prerequisite: MATH 1111 or MATH 1113.
 An introductory course which will include material from mechanics, thermodynamics and waves. Elementary algebra and trigonometry will be used. (F,M)
- PHYS 1112K. Introductory Physics II (Trigonometry based)** **3-3-4**
 Prerequisite: PHYS 1111.
 An introductory course which will include material from electromagnetism, optics and modern physics. Elementary algebra and trigonometry will be used. (S,M)
- PHYS 2211K. Principles of 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. (F)
- PHYS 2212K. Principles of 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. (S)
- POLS 1101. American Government** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 Surveys the structure and operation of the American federal government, the state government of Georgia, and American local government. (F,S,M)
- POLS 2101. Introduction to Political Science** **3-0-3**
 Prerequisite: READ 0098, unless exempt.
 Introduces the nature and study of politics, including an examination of the basic concepts of the discipline, such as law, government and the state. Attention is also given to the various institutions and processes of government and politics through which law and policy are made. (S)
- POLS 2201. State and Local Government** **3-0-3**
 Prerequisite: POLS 1101.
 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. (Offered occasionally)
- POLS 2301. Comparative Politics** **3-0-3**
 Prerequisite: POLS 1101.
 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.” (Offered occasionally)

POLS 2401. International Relations 3-0-3

Prerequisite: POLS 1101.

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 Arab/Israeli disputes; conflict and cooperation; the role of international organizations, such as the United Nations; United States/Russian and United States/Third World Relations. (S)

PSYC 1101. Introduction to Psychology 3-0-3

Prerequisite: READ 0098, unless exempt.

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. (F,S,M)

PSYC 2101. The Psychology of Adjustment 3-0-3

Prerequisite: PSYC 1101.

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. (F,S)

PSYC 2103. Human Development 3-0-3

Prerequisite: PSYC 1101.

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

PSYC 2204. Applications in Psychology 3-0-3

Prerequisite: PSYC 1101.

Surveys psychology as used in industrial, educational, criminal justice, and community settings, with an emphasis on psychology as it applies to social issues. (F,S)

PSYC 2250. Abnormal Psychology 3-0-3

Prerequisite: PSYC 1101.

Examines the psychology of deviations from the normal in behavior. Emphasis is upon dynamic factors in the development of differential psychological disorders. (F,S)

PSYC 3370. Industrial/Organizational Psychology 3-0-3

Prerequisite: PSYC 1101.

Examines the application of psychological principles, concepts, theory, and research to the work setting. Emphasis will be placed on the individual in the work environment and the processes required for organizational effectiveness. (Offered occasionally)

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 Stan-

dards, 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 1102. Radiology Terminology 2-0-2

Prerequisite: RADT 1101.

Introduces the elements of medical terminology as it relates to the field of radiologic technology. Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes. (Career Course)

RADT 1111. Radiographic Anatomy I 2-1-3

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: vertebral column, skull, sinuses, and systems including: digestive, urinary, and biliary. (Career Course)

RADT 1113. Advanced 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, nervous system 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 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). (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 upper and lower extremities, pelvis, spines, and bony thorax. (Career Course)

RADT 1123. Radiologic Procedures III 2-2-3

Prerequisite: RADT 1122.

Continues the study of radiologic procedures to include: skull, sinuses, mastoids, zygomatic arches, facial bones, upper and lower gastrointestinal, urinary, and biliary systems. Laboratory evaluations will be administered. (Career Course)

RADT 1131. Radiographic Exposure I 2-1-2

Prerequisite: Program Admission to 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) (F)

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) (M)

RADT 1143. Radiologic Science I 3-0-3

Prerequisite: RADT 1232.

Introduces the concept of basic physics and emphasizes the fundamentals of x-ray generating equipment. Topics 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) (S)

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. Intermediate Clinical Radiologic Technology I **0-20-4**

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 1232. Introduction to Radiographic Exposure I **2-1-2**

Prerequisite: RADT 1101.

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: introduction to atomic structure and x-ray production, film processing and chemicals, artifacts, automatic processor troubleshooting, processing quality assurance, state and federal regulations, silver recovery systems, 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 2105. Radiologic Seminar I **2-2-3**

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. Additional topics included in the course are: radiographic pathology, and radiographic quality assurance. Students will also have the opportunity to be evaluated on a variety of mock registry examinations. (Career Course)

RADT 2106. Radiographic Technology Review **3-3-4**

Prerequisite: RADT 2145.

Provides a review of basic knowledge from previous courses and helps the student prepare for the national certification 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 2145. Advanced Radiologic Science II **3-0-3**

Prerequisite: RADT 1143.

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 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) (S)

- 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) (F)
- 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. 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. 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 2234. Advanced Radiographic Exposure II** **2-1-2**
Prerequisite: RADT 1232.
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 2244. Radiation Protection** **2-1-2**
Prerequisite: RADT 1143.
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. (Career Course)
- RADT 2246. Radiation Biology** **2-1-3**
Prerequisite: RADT 2145.
Provides a review of the topics discussed in Radiation Protection as well as instruction on the interaction of radiation on living matter. Topics include: radiation detection, measurement, patient and radiographer protection, dose limits, radiation biology, cell anatomy, radiation/cell interaction, and effects of radiation. (Career Course)

RADT 2254. Intermediate Radiologic Technology II **0-24-5**

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 **0-28-6**

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 0090. Certificate Preparatory Reading **3-0-3**

Prepares students for READ 1100 by emphasizing vocabulary development, identification of main ideas and details, author's style, and other basic components of reading. Prospective students will be required to score 70 or above on the COMPASS Reading exam to exempt this course. (Institutional Credit) (F,S,M)

READ 0096. Learning Support Reading I **3-0-3**

Prepares students for READ 0098 by developing reading skills such as finding the main idea, locating supporting details (major and minor), practicing skills involving inferential and literal comprehension, and using vocabulary in context. Students may exit Learning Support from this course. Prospective students will be required to score 70 or above on the COMPASS Reading exam to exempt this course. (Institutional Credit) (F,S,M)

READ 0098. Learning Support Reading II **4-0-4**

Prerequisite: READ 0090 or READ 0096 or a COMPASS Reading score of 70-79.

Teaches reading skills necessary for success in studying and comprehending college-level courses. Emphasizes vocabulary, literal and inferential comprehension, analysis, efficiency, and reading rate. (Institutional Credit) (F,S,M)

READ 0955. Intermediate ESL Reading **3-0-3**

Prepares ESL students for with COMPASS Reading scores below 70 for READ 0975: Advanced ESL Reading. Develops basic academic reading skills, including finding main ideas, locating major and minor supporting details, making inferences, and using vocabulary in context. (Institutional Credit)

READ 0975. Advanced ESL Reading 4-0-4

Prerequisite: READ 0955 or READ 0090 or a COMPASS Reading score of 70-79.

Emphasizes second-language vocabulary development, signal words, and critical reading skills. Passing this course and the required COMPASS Reading exam enables ESL students to satisfy the learning support reading requirement. May be repeated three times. (Institutional Credit)

READ 1100. Reading Skills 3-0-3

Prerequisite: COMPASS reading placement score of 70 or above or successful completion of READ 0090, READ 0096, or READ 0955.

Improves vocabulary, comprehension, critical reading, and other skills related to the student's technical program. Enables the student to read and comprehend course texts, reports, business letters, and other forms of business communication. (Career Course exclusively for certificate students) (F,S,M)

READ 3251 Children's Literature 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I, II, III, and Summer course-work with a grade of "C" or better in each course, must be taken concurrently with EDUC 4286, 4289.

A survey of the past and current literature available for use with the young child as well as the role literature should play in early literacy development. Field placement is required. (S)

READ 3262 Teaching Content and Process: Reading Education 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Block I with a grade of "C" or better in each course, must be taken concurrently with EDUC 3286, 4261, 4263, ESOL 4240, MATH 3703.

An introduction to skills, approaches, materials, and methods of reading instruction. Field experience required. (S)

READ 3456 Reading and Writing Across the Curriculum for Secondary Teachers 2-2-3

Prerequisite: Admission to Teacher Education, completion of EDUC 3902, EDUC 3272, EDUC 4901, EDUC 3273 with a grade of "C" or better in each course, must be taken concurrently with EDUC 3274.

This course includes an examination of content literacy - the ability to use reading, writing, talking, listening, and viewing processes to learn subject matter across the curriculum. Content assessment, responsiveness to literacy needs, linguistic and cultural differences, research-based best practices, and learning with electronic texts will be covered.

READ 4251 Assessment and Correction Reading Education 2-2-3

Prerequisite: Admission to Teacher Education, completion of courses listed in Blocks I, II and summer course-work with a grade of "C" or better in each course, must be taken concurrently with EDUC 4251, 4262, 4284, ESOL 4241, MATH 4713.

The course will provide undergraduate students with knowledge and skills to administer informal assessments to determine children's strengths and weaknesses in reading. Students will be able to analyze test results and prescribe reading strategies to help children advance through the reading process. Field experience required. (F)

RESP 1100. Introduction to Respiratory Care**3-0-3**

Prerequisite: Acceptance into the Respiratory Program.

This course introduces students to the Respiratory Care profession and the skills needed to become a Respiratory Therapist. Topics will include the history of the Respiratory Care profession, a discussion of the future of Respiratory Care, a description of the organization of a hospital Respiratory Care department, an overview of common modalities and specialized areas of Respiratory Care including an introduction to Therapist driven protocols and clinical practice guidelines, a discussion of job opportunities and areas for advancement within the profession, an overview of legal and ethical issues impacting Health Care, and particularly Respiratory Care, in today's Health Care environment. Universal precautions and OSHA blood and body fluids precautions will be presented. The functions of the NBRC, AARC, CoARC, and the Georgia Medical Board will be examined and the credentialing and licensing processes outlined. Specific terminology and abbreviations needed by the respiratory profession will be developed. Mastery of Cardiopulmonary Resuscitation will be expected of the student during this course.

RESP 1111. Fundamentals of Respiratory Care**3-2-4**

Prerequisites: Admission into Respiratory Care Program, RESP 1100 is required as a prerequisite or a co-requisite.

Co-requisite: RESP 1131.

This course introduces the principles and practices of Non Critical Respiratory Care. The course will emphasize Therapist Driven Protocols and Clinical Practice Guidelines. Basic Respiratory Care skills in modalities such as oxygen, humidity, bland aerosol, medicated aerosols, passive hyperinflation, chest physiotherapy, postural drainage, airway clearance therapies, arterial blood gases and bedside pulmonary function studies will be developed. Emphasis will be placed on setting up, using and troubleshooting equipment, and on the physical and physiologic principles of gas exchange, ventilation, acid base balance and gas laws. The application of basic physical principles involving the properties of matter, thermodynamics, and mechanics as it relates to respiratory practices and equipment will be explored in class and lab. To progress to RESP 1121, each student will be required to successfully complete and pass a Lab competency exam. Basic math competency is required. Students may be required to demonstrate proficiency in basic math skills for progression in the program.

RESP 1121. Clinical Practicum I**0-16-5**

Prerequisites: RESP 1111, RESP 1131.

Co-requisites: RESP 1132, RESP 1133.

An introduction to respiratory care of the non-critically ill Patient in the clinical environment. An emphasis will be placed on departmental protocols, clinical practice guidelines, patient identification, and communication skills. The student will be required to master the following modalities: oxygen therapy, humidity therapy, bland continuous aerosol therapy, medicated nebulizer therapy, passive hyperinflation, chest physiotherapy and postural drainage, arterial blood gas draws and analysis, equipment cleaning and environmental therapy. Basic airway management, and bedside pulmonary function testing will also be explored. Equipment theory and application will be reinforced.

RESP 1131. Patient Assessment and Protocols**3-2-4**

Prerequisites: Admission into Respiratory Care program. RESP 1100 is required as a prerequisite or a co-requisite.

Co-requisite: RESP 1111.

This course introduces the concepts and techniques of patient assessment through inspection, palpation, percussion, and auscultation. The student will demonstrate proficiency in patient physical examination, and taking a complete patient medical history. Principles of barrier protection for blood and body fluid exposures, and isolation precautions will be emphasized. Basic chest x-ray interpretation, basic ECG monitoring, basic laboratory values such as CBC, electrolytes, and basic microbiology are presented. Assessment of critically ill patients is introduced. Each student will be required to successfully complete a Lab competency examination in order to progress to RESP 1121.

RESP 1132. Cardiopulmonary Pharmacology**3-0-3**

Prerequisites: RESP 1111, RESP 1131.

Co-requisites: RESP 1121, RESP 1133.

A general pharmacology course for the respiratory care professional caring for the acute and sub-acute patient. Emphasis will be placed on the indications, contraindications, hazards, and routes of administration for the drugs discussed. The pharmacology of the major therapeutic classes of drugs important to respiratory care will be presented.

RESP 1133. Cardiopulmonary Anatomy and Physiology**3-0-3**

Prerequisites: RESP 1111, RESP 1131.

Co-requisites: RESP 1121, RESP 1132.

A study of normal and abnormal anatomy and physiology of the cardiac, pulmonary, and renal systems. The mechanisms of homeostatic control for acid/base balance, ventilation, gas transport, and circulation will be addressed. Hemodynamic monitoring will be emphasized.

RESP 2110. Mechanical Ventilation and Critical Care**3-2-4**

Prerequisites: RESP 1121, RESP 1132, RESP 1133.

Co-requisites: RESP 2310.

This course introduces the critical care modalities of airway management and positive pressure ventilation including tracheal suctioning, endotracheal intubation, and tracheostomy care. Concepts of mechanical ventilation are presented. Other critical care skills such as arterial lines, hemodynamic monitoring, advanced patient monitoring, bronchoscopy, and tracheostomy are presented. Basic math skills are required for this course. Each student will be required to successfully pass a lab competency exam in order to progress to RESP 2210.

RESP 2121. Neonatal and Pediatric Respiratory Care**2-0-2**

Prerequisites: RESP 2110, RESP 2310.

Co-requisites: RESP 2210, RESP 2130, sophomore year.

This course presents the physiological and clinical concepts of mechanical ventilation and critical care monitoring of the pediatric and neonatal patient. The course focuses on respiratory care modalities and concepts specifically related to the pediatric and neonatal patient. Some topics include: ventilator design & function, assessment & monitoring of pediatric/neonatal patients, techniques for improving ventilation & oxygenation, weaning strategies, and labor & delivery. Critical thinking skills will be emphasized to support the application of neonatal/pediatric physician and therapist driven protocols.

RESP 2130. Specialized Areas of Respiratory Care 2-0-2

Prerequisites: RESP 2110, RESP 2310.

Co-requisites: RESP 2121, RESP 2210.

This course surveys the important principles and practices of respiratory care in the following specialty areas: Pulmonary Function Testing, Polysomnography and Sleep Disorders, Pulmonary Rehabilitation, Geriatric Care, and Home Care. Students will apply the knowledge learned in this course in Practicum III.

RESP 2201. Clinical Practicum IA 0-11-3

Prerequisites: Current CPR, RESP 1121.

Co-requisites: RESP 2110, RESP 2310.

This course is a continuation of Clinical Practicum I and a bridge to Clinical Practicum II. Emphasis will be placed on refining skills and care for the non-critical patient with a gradual development of skills and competences to care for ventilator dependent patients. Students will apply skills they will be learning in RESP 2110. Students will be required to present clinical case studies on major cardiopulmonary pathologies in conjunction with studies in RESP 2310.

RESP 2210. Clinical Practicum II 0-16-5

Prerequisites: Current CPR, RESP 1121, RESP 2201.

Co-requisites: RESP 2121, RESP 2130.

This course is a continuation of RESP 1121 and RESP 2201. Emphasis will be placed on departmental protocols and clinical practice guidelines. Students will care for adult critically ill patients in the Intensive Care Unit. Mastery of active hyperinflation therapies, chest physiotherapy, arterial blood punctures and analysis, and concepts of airway management and mechanical ventilation is expected. The student will be required to attend a competency workshop and to successfully demonstrate intubations and ventilator competency. Students will be required to complete weekly logs and case studies as part of this course.

RESP 2220. Clinical Practicum III 0-16-5

Prerequisites: RESP 2121, RESP 2210, RESP 2130.

Co-requisites: RESP 2321, RESP 2330.

Practicum to support content presented in RESP 2121 and RESP 2130. Practical experiences will occur in proportion to emphasis placed on the cognitive content in the companion courses. This course may also provide an opportunity for accelerated or advance students to explore additional clinical experiences outside the usual program scope. Emphasis will be placed on the neonatal/pediatric intensive care patient, pulmonary function studies and sleep studies.

RESP 2310. Cardiopulmonary Disease and Treatment 3-0-3

Prerequisites: RESP 1121, RESP 1132, RESP 1133.

Co-requisites: RESP 2110.

A survey course of the clinical pathophysiology of selected cardiopulmonary diseases. The emphasis will be placed on the description of the etiology, clinical manifestations, diagnosis, therapeutics, and prognosis of acute and chronic diseases of the cardiopulmonary patient. Student will be required to present clinical case studies on the major cardiopulmonary pathologies.

RESP 2330. Credential Preparation 1-0-1

Prerequisites: RESP 2121, RESP 2130, RESP 2210.

Co-requisites: RESP 2220, RESP 2321.

This course will focus on a review of essential concepts of Respiratory Care with emphasis on content examined by the NBRC entry level and advanced level examinations. Critical thinking skills will be reinforced through presentation and discussion of case studies. Surveys of clinical research literature, and journal articles will be examined. Each student must take and successfully pass the NBRC Self Assessment Exam as a requirement for passing the course, and for graduation from the program.

RGTE 0199. Regents' Writing Skills 2-0-2

The Regents' Writing Skills course is intended to ensure that all graduates of USG institutions possess certain minimum skills in writing. Students learn to evaluate their own writing strengths and weaknesses and work on improving their writing skills so that they are able to write an essay meeting the Regents' criteria. Students registering for this course MUST also register for the essay section of the Regents' test. (Institutional Credit) (F,S,M)

RGTR 0198. Regents' Reading Skills 2-0-2

The Regents' Reading Skills course is intended to ensure that all graduates of USG institutions possess certain minimum skills in reading comprehension. Students work on improving their comprehension of material drawn from a variety of subject areas (social science, natural science, and humanities) with various modes of discourse (exposition, narration, and argumentation). Critical thinking and the following four major aspects of reading are emphasized: vocabulary in context, inferential comprehension, literal comprehension, and analysis. Students registering for this course MUST also register for the reading section of the Regents' Test. (Institutional Credit) (F,S,M)

SOCI 1000. Race and Ethnicity in American Society: An Introduction 1-0-1

Prerequisite: READ 0098, or a COMPASS score of 80 or better.

Introduces study of racial and ethnic relations in the United States, with emphasis on the historic and social development of the concept of race in the United States and how different beliefs and perceptions about "race," ethnicity and culture have been constructed. As well, the course will examine the histories, experiences and cultures of the various "races" and ethnicities that make up American society. (F,S,M)

SOCI 1101. Introduction to Sociology 3-0-3

Prerequisite: READ 0098, or a COMPASS score of 80 or better.

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. (F,S,M)

SOCI 1160. Social Problems 3-0-3

Prerequisite: SOCI 1101.

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. (F,S)

- SOCI 2293. Marriage and Family** **3-0-3**
 Prerequisite: SOCI 1101.
 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. (S)
- SOCI 3560. Environmental Sociology** **3-0-3**
 Concerned with the ways in which humans relate to and utilize their natural environment. Topics discussed are the social factors that contribute directly to environmental degradation and resource depletion. The role of environmental social movements are also examined. (S)
- SOCI 3750. Sociology of Work and Industry.** **3-0-3**
 Prerequisite: SOCI 1101.
 This course introduces students to how sociologists analyze work and business in modern industrial societies. Topics covered include the evolution of the carpet industry, small business financing, the rise of the modern corporation, the emergence of management as a profession, industrial relations and labor management, alienation and satisfaction, blue-collar work and workers, and the new service economy and occupations. (Offered occasionally)
- SOWK 2002. Language and Culture for Social Work** **3-0-3**
 Prerequisite: A grade of "C" or better in SPAN 1002.
 An introductory course designed to prepare students for social work practice with Latino individuals and families at the associate-degree level. It provides a survey of current issues relevant to Latino families and intensive practice of Spanish language skills in a professional context. The languages of instruction will be Spanish and English. The class will serve as an elective in Area F of the AA Social Work Plan of Study. (F)
- SOWK 2101. The Profession of Social Work** **3-0-3**
 History and current status of the profession of social work. The role of the social worker in various fields of practice. The professional's commitment to social and economic justice for vulnerable and oppressed populations. The person-in-environment perspective. (F,S,M)
- SOWK 2102. History of Social Welfare** **3-0-3**
 Prerequisite: ENGL 1102.
 History and current status of social welfare programs and services in the United States. Philosophical, religious, economic, and political perspectives on social welfare. A comparison of approaches to social welfare in the United States and other developed nations. (F,S,M)
- SOWK 2103. Interviewing Skills** **2-1-3**
 Prerequisite: ENGL 1102.
 This course seeks to provide an introduction to methods, skills, and procedures used in interviewing clients in a variety of practice settings. The course incorporates theory, research, and practice skills relevant to relationship building, the change process, and professional communication skills and techniques. Students will be offered the opportunity to learn and practice professional interviewing, assessment,

goal-setting, and communication skills and techniques. The course will consist of lecture and classroom experience as well as a weekly laboratory. The course will encourage students to take the risk of gaining greater self-awareness and insight related to tolerance, diversity, and difference.

SOWK 3003. Spanish for the Social Services 3-0-3

Prerequisite: A grade of “C” or better in SPAN 2001, admission to Bachelor of Social Work upper division.

Advanced communication skills for serving Spanish-speaking clients. Advanced conversational skills with important social work terms and concepts. Proper greetings, translation of technical terms, and ways of reducing discomfort for Spanish-speaking clients. Usually includes a study abroad experience. (M)

SOWK 3004. Advanced Spanish for Social Work I 3-1-3

Prerequisite: A grade of “C” or better in SPAN 2002 or Social Work 2002.

An advanced course in Spanish grammar, verb forms, and idioms with special application to health and social service settings. Advanced readings from contemporary sources such as newspapers, Spanish-language health and social service documents, and Latin American legal documents. Emphasizes the ability to use conversational Spanish. The class will be conducted primarily in Spanish. (F)

SOWK 3005. Advanced Spanish for Social Work II 3-1-3

Prerequisite: A grade of “C” or better in SPAN 3001 or Social Work 3004.

An advanced course in Spanish grammar, verb forms, and idioms with special application to health and social service settings. Advanced readings from contemporary sources such as newspapers, Spanish-language health and social service documents, and Latin American legal documents. Emphasizes the ability to use conversational Spanish with assignments for watching Spanish-language television, listening to local Spanish language radio programs, and conversing with native speakers. The class will be conducted primarily in Spanish. (S)

SOWK 3101. Cultural Diversity 3-0-3

Prerequisite: Admission to Bachelor of Social Work upper division.

A general introduction to the concepts of cultural diversity in the United States, including the various histories of oppression of minority groups. Readings and sensitivity exercises related to African-American, Appalachian, and Hispanic/Latino cultures. An introduction to the concepts of cultural competence with visits to social service agencies serving diverse populations. In-class exercises and community visits related to vulnerable populations. (F)

SOWK 3102. Human Behavior in the Social Environment 3-0-3

Prerequisite: Admission to Bachelor of Social Work upper division.

An overview of theories of human behavior needed for generalist practice with an introduction to ego psychology, behaviorism, and life-stage development theories. An introduction to ecological systems theory and the ecological perspective in social work with orientation to micro, meso, and macro levels of understanding individuals, and families. (F)

SOWK 3103 Human Behavior in the Social Environment II 3-0-3

Prerequisite: SOWK 3102, BIOL 1108.

The second of a two-course HBSE sequence is a study of the interaction of human behavior and the social environment with an emphasis on larger systems: groups,

organizations, and communities utilizing the ecological and multi-level systems perspectives. Theoretical bases will be applied to the health care system in the United States and other industrial nations, including an examination of social worker roles in healthcare settings. (S)

SOWK 3201. General Practice of Social Work I 3-0-3

Prerequisite: SOWK 2101, SOWK 2102, SOWK 3102.

Theory and practice of generalist social work. Knowledge, skills, and ethical principles needed for beginning social work practice. Problem identification, assessment, intervention, evaluation of practice with individuals and families from a person-in-environment perspective. Record keeping in social service agencies. Requires 50 hours of practicum in a social agency. Lab emphasizes application of theory to cases involving individuals as clients. (S)

SOWK 3302. Social Work in Public Welfare 3-0-3

Prerequisite: SOWK 2102, Admission to Bachelor of Social Work upper division.

History and structure of the public welfare programs of the United States with special attention to recent developments in child and elder protective services, welfare reform, employment initiatives, and orientation to entry-level positions in the Department of Family and Children's Services of the State of Georgia. (F)

SOWK 3501. Social Work in Mental Health 3-0-3

Prerequisite: Admission to Bachelor of Social Work upper division.

History of mental health concepts and systems in the United Kingdom and in the U.S. An overview of current mental health law, services, and systems. Particular attention to the mental health system in Georgia and recent reforms. The roles of social workers in mental health services. Some common interventions appropriate for generalist social workers. (S)

SOWK 3502. Social Work with the Elderly 3-0-3

Prerequisite: Admission to Bachelor of Social Work upper division.

Overview of concepts of aging. A review of systems serving the elderly in the United Kingdom and in the U.S. and the social policies which underlie those services. The roles of social workers in geriatric services. Interventions with the elderly appropriate for generalist social workers. (S)

SOWK 3503. Substance Abuse 3-0-3

Prerequisite: Admission to Bachelor of Social Work upper division.

History of substance abuse concepts and service systems. An overview of treatment approaches with particular attention to the services offered in Georgia. The roles of social workers in substance abuse services. Some common interventions appropriate for generalist social workers. (F, S)

SOWK 3504. Seminar in Child Welfare 3-0-3

Prerequisite: SOWK 3302.

Seminar. Discussion of case material for students employed in child welfare services or doing a senior practicum in child welfare in the Georgia Department of Family and Children's Services. Risk assessment, intake and family assessment, case planning, intervention, and documentation within the context of family-centered child welfare practice. (S)

SOWK 3505. Social Work with Appalachian Clients

Prerequisite: Admission to the Bachelor of Social Work upper division, SOWK 3101, SOWK 3102.

Practice skills for work with individuals and families in the context of the Appalachian culture. Particular attention to work with social class and oppression issues, to the implications of poverty and limited opportunities, to societal marginalization, to extended family systems, and to effects of emigration and immigration for Appalachian communities.

SOWK 4100. Social Welfare Policies and Services

3-0-3

Prerequisites: SOWK 2102 and SOWK 4201.

Social insurance, public assistance, and social service programs in the United States, including the nonprofit, private sector. Social welfare within a capitalist economy and an individualistic, democratic society. Comparative social welfare systems in Europe and Latin America. The influences of economics and politics on social services. Introduction to models of policy analysis. (S)

SOWK 4201. General Practice of Social Work II

3-0-3

Prerequisites: SOWK 3201, SOWK 3103.

Theory and practice of generalist social work. Knowledge, skills, and ethical principles needed for entry-level social work practice. Problem identification, assessment, intervention, and evaluation of outcome from a multi-level, ecological systems perspective and a strengths perspective. Emphasizes application of theory toward interventions with groups, organizations, and communities. (F)

SOWK 4301. Latino Family and Culture

3-0-3

Prerequisite: SOWK 3102.

Co-requisite: SOWK 3003.

A survey of current family theory with application to Latino families. Latino family patterns, naming customs, family celebrations, and general cultural patterns with special attention to Mexican and Mexican-American traditions. Requirement may be met through foreign study in May or in the summer term at the Escuela Para Estudiantes Extranjeros (EEE) of the University of Veracruz, Mexico, with which the Board of Regents has exchange agreements. (M)

SOWK 4400. Foundation for Social Work Research

3-0-3

Prerequisite: SOWK 3201.

Basic principles of social science research based on the scientific method. Requires a prior knowledge of introductory statistics. Analytical and evaluative methods of knowledge building and application in social work and social welfare settings. Empirically-based practice and the evaluation of the individual social worker's own practice interventions. (F)

SOWK 4401. Senior Exit Project Directed Study

1-0-1

Co-requisite: SOWK 4400, SOWK 4998.

The first of a two-course sequence of directed study experiences during which the senior BSW student will conceptualize an outcome study related to the student's senior practicum, conduct a literature review of the topic area, select measurement tools, and write a first draft of the project. The study will develop in parallel with the development of research skills and completion of assignments in SOWK 4400 and

the development and application of practice skills in SOWK 4998. It is expected that approximately two hours per week of the practicum hours may be devoted to the project. (F)

SOWK 4402. Senior Exit Project Directed Study 1-0-1

Prerequisite: SOWK 4400, SOWK 4401, SOWK 4998.

Co-requisite: SOWK 4999.

The second of a two-course sequence of directed study experiences during which the senior BSW student will complete an outcome study related to the student's senior practicum, refine the literature review of the topic area, carry out the design of the study, and write a polished manuscript presenting the results of the study. It is expected that a minimum of three hours per week of the practicum hours will be devoted to the project. (S)

SOWK 4900. Directed Readings in Social Work Variable

1-6 hours. May count as elective hours. Repeatable for a maximum of 6 hours.

Individual study, reading, or projects under direction of a social work faculty member. Nontraditional format: Directed study.

SOWK 4998. Practicum and Seminar in Social Work I 2-20-5

Prerequisite: SOWK 3201. Co-requisite SOWK 4201.

Generalist practicum and integrative seminar. A minimum of 20 hours per week of supervised social work practice in a social agency is required. Nontraditional format: practicum. (F)

SOWK 4999. Practicum and Seminar in Social Work II 2-20-5

Prerequisite: SOWK 4998.

Generalist practicum and integrative seminar. A minimum of 20 hours per week of supervised social work practice in a social agency is required. Nontraditional format: practicum. A continuation of SOWK 4998. (S)

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. Emphasizes the development of speaking, writing, reading, and listening skills and introduces students to the culture, history, and geography of Spanish-speaking regions. (F,S,M)

SPAN 1002. Elementary Spanish II 3-0-3

Prerequisite: SPAN 1001 or its equivalent.

Follows SPAN 1001 with lessons in the same patterns and objectives but with a more detailed study of grammar, longer conversational exercises, and further discussion of the history and culture of Spanish-speaking peoples. (F,S,M)

SPAN 1002. Elementary Spanish II (With Integrated Study Abroad Component/ISAC) 3-0-3

Prerequisite: SPAN 1001 and permission of the instructor.

Instructs in the further development of Spanish speaking, writing, reading, and listening skills but includes a more detailed study of grammar, longer conversational exercises, and continued discussion of the history and culture of Spanish-speaking peoples. Students who register for Spanish 1002 ISAC are required to register and pay the additional fee for the 8-10-day study abroad component to Mexico. (M, alternating years)

SPAN 1100. Conversational Spanish 3-0-3

Introduces basic grammar and Spanish vocabulary for use in a variety of occupations. Emphasizes frequently used phrases, comprehension, and situational role-playing. Topics may vary from semester to semester. (Career Course) (S)

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

Prerequisite: SPAN 1001.

Emphasizes applied business/industrial terms associated with performing business transactions in Spanish-speaking environments. Explores fiscal matters, political/legal environment, and routine applications important to business success. (Career Course)

SPAN 2001. Intermediate Spanish I 3-0-3

Prerequisite: SPAN 1002.

Offers intensive review of Spanish grammar, verb forms, and idioms. Involves reading texts of moderate difficulty and more advanced conversation exercises. (F)

SPAN 2002. Intermediate Spanish II 3-0-3

Prerequisite: SPAN 2001 or its equivalent.

Continues the reading of moderately difficult texts in the literature and culture of Spanish-speaking peoples; includes advanced conversation exercises. (S)

SPAN 3001. Advanced Spanish I 3-2-3

Prerequisite: SPAN 2002.

Presents an advanced course in Spanish grammar, verb forms, and idioms. Includes advanced readings from contemporary sources such as newspapers and current novels with themes of social interest. Emphasizes the ability to use conversational Spanish with assignments for watching Spanish language television, listening to local Spanish radio, and conversing with native speakers. Requires two hours of language lab per week. Requirement may be met through foreign study during May or during the summer at the Escuela Para Estudiantes Extranjeros (EEE) of the University of Veracruz, Mexico, with which the Board of Regents has exchange agreements.

SPAN 3002. Advanced Spanish II 3-2-3

Prerequisite: SPAN 3001.

Presents advanced Spanish grammar, composition, idioms, and conversation. Includes advanced readings from contemporary sources such as newspapers and current novels with themes of social interest. Emphasizes the ability to use conversational Spanish with assignments for watching Spanish language television, listening to local Spanish radio, and conversing with native speakers. Requires two hours of language lab per week. Requirement may be met through foreign study during May or during the summer at the Escuela Para Estudiantes Extranjeros (EEE) of the University of Veracruz, Mexico, with which the Board of Regents has exchange agreements.

THEA 1100. Theatre Appreciation 3-0-3

Prerequisite: READ 0098 or a COMPASS Reading score of 80 or better.

Survey and critical appreciation of theatre. Provides an overview of theatre history, the elements of a play as literature, insight into how a play is analyzed from a preproduction and production point of view, an understanding of theatre as an art form, and knowledge of technical aspects of theatre. No previous experience required. (S)

- 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) (F,S,M)
- 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) (F,S,M)
- WELD 1102. Welding II** **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) (F,S,M)
- 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) (F,S,M)
- 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) (F,S,M)
- WELD 1111. Welding III** **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) (F,S,M)
- WELD 1112. Welding IV** **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) (F,S,M)
- 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) (F,S,M)
- 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) (F,S,M)

WELD 1126. Pipe Welding I

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) (F,S,M)

WELD 1128. Pipe Welding II

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) (F,S,M)