

**BSC-1011L**  
**Biological Science II Laboratory**

1 Credit

A special fee will be charged for this course.

Prerequisites: BSC-1010 and BSC-1010L. College level reading skills required.

Corequisite: BSC-1011

**BSC-1025**  
**Nutrition & Drugs**

3 Credits

Primarily intended for non-science majors. Focuses on basic nutrients and their roles in human nutrition. Topics include the problems and possible solutions of deficiency diseases, world food shortages, obesity, commonly used drugs, drug effects on the body and drug addiction.

Prerequisites: College level reading, writing and math skills are required.

Corequisite: BSC-1025L

**BSC-1025L**  
**Nutrition & Drugs Lab**

1 Credit

A special fee will be charged for this course.

Prerequisites: College level reading and writing skills are required.

Corequisite: BSC-1025

**BSC-1085**  
**Human Anatomy & Physiology I**

3 Credits

Intended for Allied Health and science majors. Encompasses both anatomy and physiology; includes cell structure and function. Focuses on the study of human systems, particularly the integumentary, skeletal, muscular and nervous systems.

Prerequisites: College level reading, writing and math skills are required.

Corequisite: BSC-1085L

**BSC-1085L**  
**Human Anatomy & Physiology I Laboratory**

1 Credit

A special fee will be charged for this course.

Prerequisites: College level reading, writing and math skills are required.

Corequisite: BSC-1085

**BSC-1086**  
**Human Anatomy & Physiology II**

3 Credits

Focuses on cardiovascular, respiratory, digestive, endocrine, immune, lymphatic, urinary and reproductive systems.

Prerequisite: BSC-1085

Corequisite: BSC-1086L

**BSC-1086L**  
**Human Anatomy & Physiology II Lab**

1 Credit

A special fee will be charged for this course.

Prerequisite: BSC-1085L. College level reading and writing skills are required.

Corequisite: BSC-1086

**BSC-1092C**  
**Human Biology**

3 Credits

Intended for those not majoring in the biological sciences or allied health fields. Provides introductory material in human anatomy and physiology to focus on understanding the body organization and the interrelations of body organs systems combined and integrated with a hands-on laboratory component.

A special fee will be charged for this course.

Prerequisites: College level reading, writing and math skills are required.

**BUL-2241**  
**Business Law I**

3 Credits

Covers the main concepts of legal institutions, the legal environment, business ethics, public and private business law, contracts, business regulations the UCC (Uniform Commercial Code) and related laws.

Prerequisites: College level reading and writing skills are required.

**BUL-2242**  
**Business Law II**

3 Credits

Covers commercial paper, agency, partnerships, corporations, secured transactions, bankruptcy, securities regulations, real and personal property, trusts, wills and associated legal problems.

Prerequisite: BUL-1241

**CAP-1023**  
**Introduction to Game Development**

3 Credits

Survey of the various aspects of game development including: game programming and scripting, design, modeling and rendering. Students will work on projects involving design and storyboarding, computer programming and scripting, as well as multimedia presentations and artwork. Aspects of the gaming industry will be covered to include human-computer interaction, mathematical and physics consideration, and the business of game production and distribution.

Prerequisite: CGS-1000

**CAP 2023**  
**Game Design and Development**

3 Credits

In this hands-on course the student will practice creating 2D and 3D graphics using game and simulation software. The student will perform polygonal as well as nurbs modeling to create programmable 3D objects able to be rendered for simulation software and computer games, projects include creating objects and performing subdivision modeling to include splitting and extruding surfaces. Also, students will practice various animation techniques using software rendering as well as programming code.

Prerequisite: CAP 1023

**CAP 2024**  
**Advanced Game Design and Development**

3 Credits

In this hands-on course the student will continue to create animations for computer games and simulation software. The student will perform projects that include using ray tracing rendering, animating motion along a path, programming animation, rendering scenes and apply lighting and shading. Other projects allow the student to apply inverse and forward kinematics to create movement along nurbs and splines, as well as applying dynamics with particles and emitters. Rendering objects for use in computer game engines will also be covered.

Prerequisite: CAP 2023

**CAP-2816****Database Management II**

1 Credit

Focuses on advanced data file techniques. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1540 or permission of the instructor

**CAP-2840****Personal Financial Management**

1 Credit

Focuses on using a computer to manage personal finances, with an emphasis on determining a budget, entering checkbook information, preparing a personal net worth statement and keeping a record of monthly expenses.

**CAP-2939****Digital Media/Multimedia Technology Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis.

**CCJ-1010****Introduction to Criminology**

3 Credits

Focuses on the complex factors related to crime in America, including basic issues, scope and economic impact.

**CCJ-1020****Introduction to Criminal Justice**

3 Credits

Covers the historical and philosophical backgrounds of criminal justice agencies and examines the development of the courts, correctional agencies, and law enforcement processes. Topics include the Supreme Court, the 14th Amendment, individual rights, and requirements and opportunities in the law enforcement and correctional fields.

**CCJ-1500****Juvenile Delinquency**

3 Credits

Focuses on the history, nature, causes and scope of juvenile crimes with an examination of the justice system and treatment facilities.

**CCJ-1935****Seminar on Criminal Justice Issues**

3 Credits

Focuses on selected topics and issues not usually covered in other courses.

**CCJ-2013****Introduction to Victimology**

3 Credits

This course is about victims of crime. It provides an introductory level review of the many facets of criminal victimization and the efforts to assist crime victims. The course covers a wide range of topics including trends and interpretations of victimization research, laws, programs, and services, the emotional and social impact of crime, victim rights and restitution and the extent of participation by victims in the criminal justice process.

**CCJ-2191****Introduction to Human Behavior in Criminal Justice**

3 Credits

This course provides a study of human nature and the peculiarities of human behavior and how it relates to crime and delinquency with emphasis on how this behavior relates to the duties and responsibilities of the criminal justice practitioner. The course will emphasize abnormal behavior and how criminal justice practitioners should react with primary

emphasis on the behavioral aspects of people in crisis situations and how criminal justice practitioners should respond. The course will deal with issues of police crisis intervention and crisis management.

**CCJ-2610****Introduction to Criminal Typologies**

3 Credits

The primary goal of this course is for students to recognize and understand the utility of constructing typologies as a precursor to understanding criminal behavior. Students will review the differences in varying patterning of criminality.

**CCJ-2910****Directed Research**

3 Credits

An individualized study project which applies the objective approach in the observation and reporting of information relating to social problems, with a focus on understanding and interpreting data, as well as basic statistics. Documented research paper required and must relate to a criminal justice subject area in which internship is being done.

Prerequisites: CJT and Justice Administration majors only; permission of the instructor. College level reading and writing skills required.

**CCJ-2940****Criminal Justice Internship**

3 Credits

Provides an opportunity for the student with no criminal justice experience to observe the criminal justice system in operation. The student will be expected to compare classroom theory with the day-to-day operation of the criminal justice agency and the roles and responsibilities of the professional in the field. The student will be required to spend a total of 100 clock hours, spread over the semester, in the agency.

Prerequisites: CJT and Justice Administration majors only; permission of the instructor.

**CDA-1162****Telecommunications**

3 Credits

Focuses on the latest advances in telecommunications systems for both the home and office, and how they interconnect. Emphasis is on topics such as electronic mail, data communications systems, telephone systems and satellite communications centers.

Prerequisite: CGS-1000

**CEN-1300****Microsoft Windows Professional**

3 Credits

This course is to provide individuals who are new to Microsoft Windows with the knowledge necessary to understand and identify the tasks involved in supporting Windows networks. This is an introductory course designed to provide an overview of networking concepts and how they are implemented in Windows. Students should have a working knowledge of the Microsoft Windows 95/98, Windows NT, or Windows 2000 interface. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1550

**CEN-1301****Microsoft Windows Server**

3 Credits

This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows professional on stand-alone and client computers that are part of a work group or domain. In addition, this course provides the skills and knowledge necessary to install and configure Windows 2000 Server to create file, print, Web and terminal servers.

Prerequisite: CEN 1300 or permission of the instructor. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

**CEN-1303****System Administration for Microsoft SQL**

3 Credits

Provides students with the knowledge and skills required to install, configure, administer, and trouble-shoot Microsoft SQL Server client/server data-base.

Prerequisite: CEN-1301

**CEN-1305****Microsoft Windows Implementing and Supporting a Network Infrastructure**

3 Credits

This course provides students the knowledge and skills necessary to install, configure, manage, and support a network infrastructure that uses the Microsoft Windows Server products. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CEN-1301

**CEN-1306****Implementing & Supporting MS Exchange Server**

3 Credits

This course provides Microsoft Exchange Server support professional with in-depth product information on installing, configuring and administering Exchange Server.

**CEN-1308****Implementing and Supporting Microsoft Internet Explorer**

2 Credits

Provides students with a strong foundation in the architecture and key features of Microsoft Internet Explorer. Information provided in this course enables students to set up, configure, use, and deploy Internet Explorer in a network environment - with particular emphasis on intranet use. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CEN-1301

**CEN-1309****Implementing and Supporting Microsoft Systems Management Server**

3 Credits

Provides students with the knowledge and skills necessary to implement, administer, and troubleshoot information systems that incorporate Microsoft Systems Management Server (SMS). Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CEN-1305

**CEN-1310****Implementing and Supporting Microsoft Site Server**

3 Credits

Provides students with the knowledge and skills necessary to implement, administer, and troubleshoot information systems that incorporate Microsoft Site Server version. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CEN-1305

**CEN-1320****Microsoft Windows Implementing and Administering Directory Services**

3 Credits

This course is designed to provide students with the knowledge and skills necessary to install, configure and administer Microsoft Windows Directory services in an enterprise environment.

Prerequisite: CEN-1305

**CEN-1321****Microsoft Windows Designing a Directory Services Infrastructure**

3 Credits

Provides students with the knowledge and skills necessary to design an MS Windows directory services infrastructure in an enterprise network.

Prerequisite: CEN-1320

**CEN-1327****Plan and Maintain Microsoft Windows Network Infrastructure**

3 Credits

This course covers the subject matter of Microsoft's exam 70 293, which focuses on Windows Server 2003. More specifically, the student will learn how to plan and maintain a Windows Server 2003 network infrastructure. The student will examine the network infrastructure planning process, then plan server roles, plan and optimize network connections; plan and implement monitoring; and plan data protection and recovery. Finally, the student will learn how to troubleshoot infrastructure problems and create the master network infrastructure plan.

**CEN-2316****Microsoft Proxy Server**

3 Credits

This course covers installing, configuring, and troubleshooting Microsoft Proxy Server. In addition, this course will cover the basic architecture of the server, different methods of controlling access to the Internet, using Internet Service Manager to administer Proxy Server, configuring the cache, interoperability with other networks, enhancements to Performance Monitor, methods of improving performance, and other features of Proxy Server. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CEN-1302 and CEN-1303

**CEN-2939****Network Administrator Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis.

**CET-1114C****Basic Digital Systems**

3 Credits

This course is an introduction to basic digital electronics and is for the student who has previously taken EET-1083C, Electronic Orientation, or will be taking both classes in the same semester. Topics covered in this course are computer number systems, Boolean algebra, combinational logic circuits, logic family characteristics, and flip flops. Laboratory exercises will be assigned to reinforce the major concepts covered in the lecture segment of the course.

**CET-1122C****Introduction to Microprocessors**

3 Credits

Presents introductory material on microprocessing. Topics include the microprocessor chip and its architecture, bus systems, memory map, input/output devices, interface devices, machine and assembly languages, instructions and addressing modes. Laboratory exercises are included.

Prerequisite: CET-1114C

### **CET-1172C**

#### **Computer Upgrading & Repair**

3 Credits

Covers the knowledge and skills necessary for upgrading and repairing the hardware of a typical personal computer (PC). Includes the study of microprocessors, basic bus and input/output (I/O) interface types, and the types of semiconductor memories found in a typical PC. Also studied is the layout of the drives set up by a disk operating system and how the operating system works with the hardware. This course will further prepare the student for the A+ Certification test. Laboratory exercises are included.

### **CET-1174C**

#### **Advanced Computer Repair**

3 Credits

This course is for someone working in a computer-related field or who has completed CET 1172C. Provides hands-on PC repair experience, based on A+ certification. Covers advanced Windows PC software, hardware, and the most common problems that occur in PCs. IRQs, conflicts, registry, network, and browser problems are covered. Computer service business concepts are introduced. Laboratory exercises are included.

Prerequisite: CET-1172C

### **CET-1556C**

#### **Structured Cabling**

3 Credits

Provides the student with the basic concepts in a complete cabling system. Topics include cable types and their characteristics, connector types, cable layouts for a simulated system - backbone, cross connects, etc. - and cable installation, testing and troubleshooting of a cable system. The course includes lab work and a lab fee requirement.

Prerequisite: EET-1083C or CET-1172C

### **CET-1600**

#### **Cisco Network Fundamentals**

3 Credits

Prepares a student to apply and understand the basics of networking hardware. Course covers the OSI model and industry standards; network topologies; IP addressing, including subnet masks; and basic network design. This is the first of a 4-part series designed to prepare students for the Cisco Certified Networking Associate exam.

Prerequisite: CGS-1550 or permission of instructor.

### **CET-1610**

#### **Cisco Router Technology**

3 Credits

Designed to prepare a student to apply and understand the basics of networking hardware. The course covers beginning router configurations routed and routing protocols; and introduction to LAN switching. This is the second of a four-part series to prepare students for the Cisco Certified Networking Associate examination. The first part of this series is covered in CGS-1550.

Prerequisite: CET-1600

### **CET-2113C**

#### **Digital Systems Analysis**

3 Credits

This course is a continuation of the basic digital electronics covered in CET-1114C. The analysis of combinational logic and sequential logic circuits is covered in the lecture segment of the course. Circuits include adder/subtractor, registers, counters, multiplexors, and others. Laboratory exercises will be assigned to reinforce these major concepts and circuits.

Prerequisite: CET-1114C

### **CET-2152C**

#### **Advanced Microprocessors**

3 Credits

Covers the communications between the microprocessor and external devices. Topics include writing and debugging communications programs, analyzing and building interface circuits. Laboratory exercises are included.

Prerequisite: CET-1122C and CET-2113C

### **CET-2335C**

#### **Microcomputers Systems**

3 Credits

Covers the hardware of a typical personal microcomputer (PC). It includes the study of a 16-bit microprocessor, basic bus and input/output (I/O) interfaces, and the interfacing of semi-conductor memories found in a typical PC. Devices such as programmable interface adapters, programmable interrupt and direct memory access (DMA) controllers, and serial communications interface adapters are studied. The student will use the schematics of a PC and diagnostic tests to troubleshoot faults in an actual system. Laboratory work is required.

Prerequisite: CET-1122C and CET-2113C

### **CET-2615**

#### **Cisco Advanced Router Technology**

3 Credits

Designed to prepare a student to apply and understand the advanced principles and applications of networking hardware. The course covers advanced router configurations; LAN switching; network management; and advanced network design. This is the third of a four-part series to prepare students for the Cisco Certified Networking Associate examination. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CET-1610

### **CET-2620**

#### **Cisco Wide Area Networking Technologies**

3 Credits

Designed to prepare a student to apply and understand the advanced principles, applications, and implementation of networking hardware. The course covers advanced network design projects and advanced network management projects. This is the fourth of a four-part series to prepare students for the Cisco Certified Networking Associate examination.

Prerequisite: CET-2615

### **CET-2939**

#### **Computer Engineering Technology Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concert with his/her area of curriculum emphasis.

Credit for this course does NOT apply to the Associate in Arts degree.

### **CGS-1000**

#### **Introduction to Computers and Technology**

3 Credits

Provides students with an introductory overview of the Internet, World Wide Web, impact of computer on society and business, historic development of data processing, basic functions and use of word processing, spreadsheet, database, and presentation system and desktop publishing software applications, basic skills using a Web browser and search engine, and careers in the field of computer science.

**CGS-1010**  
**Introduction to Computers for Teachers**

3 Credits

Covers the major uses of computers in a classroom. A general introduction to computer literacy, including word processing, spreadsheets, databases, telecommunications, and CAI is covered. This course is designed for teachers and can be used for recertification.

**CGS-1103**  
**Project Management**

3 Credits

This course introduces the student to the basics of project management—in particular as project management applies to Web development. They learn to plan a project, create a project schedule, assign resources and costs, track projects, and share information across projects, applications and the World Wide Web.

Prerequisite: CGS-1000

**CGS-1104**  
**Accounting Applications**

1 Credit

Focuses on computerized accounting, with an emphasis on monitoring accounts receivables and payables, checks, processing orders, calculating payrolls, generating management reports and interpreting a general ledger.

Prerequisite: the ability to type 30 wpm

**CGS-1107**  
**Introduction to Computers**

1 Credit

An introductory computer literacy course for the general student population with emphasis on current technology and the implications for and the effects on our society. Topics will include cyberspace; communications, including the impact of the Internet and World Wide Web; ethical, privacy, environmental, and health related issues. Software applications will include a brief introduction to Windows, word processing, spreadsheets, and graphics. Students will complete a variety of short cross-curricular projects, integrating critical-thinking skills and cooperative learning.

**CGS-1160**  
**Desktop Information Management**

1 Credit

A general introduction to the basic capabilities of a desktop information management program, such as Outlook. Topics covered include organizing information, managing your time and schedule, and communicating with other people.

**CGS-1500**  
**Applied Word Processing**

1 Credit

Focuses on basic word processing applications, with an emphasis on term papers, reports and resumes. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

**CGS-1510**  
**Spreadsheet Applications I**

1 Credit

Focuses on basic spreadsheet applications such as replication, automatic recalculation, financial modeling, analysis and projection, and general mathematical calculations. Permission of the instructor. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000 or OST-1142

**CGS-1520**  
**Business Graphics I**

1 Credit

Focuses on graphic applications, with an emphasis on developing charts, displaying data in histograms, critical ratio graphs and scatter charts. Topics include line-, vertical-bar, horizontal single-sided and double-sided bar-charts, as well as regression and mean calculations.

Prerequisite: CGS-1000

**CGS-1521**  
**Introduction to Computers Drawing/Paint**

1 Credit

Introduces paint/draw computer program. Focuses on simple drawing and editing techniques and manipulating and modifying object.

Prerequisite: CGS-1000(6114)

**CGS-1540**  
**Database Management I**

1 Credit

Teaches how to work effectively with a data management application with an emphasis on assembling and organizing data in manageable records and files. Prerequisite: CGS-1000

**CGS-1550**  
**Introduction to Networking**

3 Credits

Introduces the students to the basics of local area networks. Provides an overview of networking, including a history of development and the uses and benefits of networks. Students are introduced to major network components with a discussion of critical selection considerations. Covers the prerequisite concepts necessary for the Microsoft program and will provide background information for the Cisco certification program.

Prerequisite: CGS-1000 or permission of instructor.

**CGS-1554**  
**Internet Basics**

1 Credit

An introductory course designed to teach the basics of navigating the Internet and the World Wide Web. Topics include "Internetiquette," using search engines and file transfer protocols.

A special fee will be charged for this course.

Prerequisite: CGS-1000

**CGS-1555**  
**Introduction to the Internet**

3 Credits

An introductory course designed to teach the basics of navigating the Internet and the World Wide Web. Students participate in online and offline activities such as accessing the Internet, sending electronic mail, browsing newsgroups, and completing research activities. Also discussed is "Internetiquette" - acceptable behaviors and standards of conduct.

A special fee will be charged for this course.

Prerequisite: CGS-1000

**CGS-1577**  
**Presentation Systems**

3 Credits

Students in this course learn how to design and develop multimedia presentations using linear design. Students learn the differences between a presentation program and an authoring program. Project components will include text, graphics, sound, video, and animation. Students will learn to create, import, and scan these components. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000, CGS 1555 or permission of instructor.

**CGS-1760**  
**Introduction to UNIX**

3 Credits

This course is designed to teach the UNIX operating system. Emphasis will be on the UNIX utility commands, the kernel software, and the shell programs. The two UNIX text editors will be covered. This course will be project oriented. Additional topics include Linux and using the X Window GUI.

Prerequisite: CGS-1000

**CGS-1761**  
**Computer Operating Systems**

3 Credits

This course provides a basic history and overview of computer operating systems. Basic theories, concepts and terminology, and evolution of computer operating systems are covered. Development, function, and comparisons of common operating systems such as DOS, Windows 9x, WindowsNT/2000, Unix/Linux, AS/400, and Mac OS are discussed. In particular, this class is meant to introduce processes such as the processing unit, file systems, process management, synchronization, memory management and I/O management.

Prerequisite: CGS-1000

**CGS-1871**  
**Multimedia Authoring I**

3 Credits

Introduces the student to multimedia basics, application structure, and organization. Focus is on the conceptual elements of multimedia implementation and authoring basics. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000 and COP-2823

**CGS-1936**  
**Perl and CGI**

3 Credits

Introduces students to the programming language Perl and its use with CGI. Topics include understanding the basics of programming in Perl and performing tasks such as information processing, data formatting and its retrieval. Additional topics may include using CGI scripts in client-server systems such as the Internet, processing HTML web forms, and accessing database servers. Students enrolled in a degree or college certificate program must complete all prerequisites.

Prerequisite: CGS-1000

**CGS-2069**  
**E-Commerce**

3 Credits

Introduces the student to electronic commerce, e-commerce market mechanisms, retailing in e-commerce, consumer behavior, customer service, B2B and collaborative commerce, public B2B exchanges, intra-business, e-government, C2C, mobile commerce, laws, ethics, cyber crime, payment and order fulfillment processes, e-strategy and Internet communities.

Prerequisite: CGS-1000 or permission of instructor.

**CGS 2091**  
**Information Technology Ethical and Legal Issues**

3 Credits

After taking this course the student will be able to identify different types of computer crime and distinguish the various types of law applicable. Existing and emerging legislation pertaining to computer crime will be presented. The student will be exposed to various types of incidents and the proper evidence handling techniques. Ethics codes will be presented and discussed.

**CGS-2172**  
**E-Commerce Development**

3 Credits

Students will use one of the e-commerce software packages to plan and develop an e-commerce Web site.

Prerequisites: CGS-2820 and CGS-2822 or permission of instructor. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

**CGS-2301**  
**Management Information Systems**

3 Credits

Focuses on the role of information systems in the management process, with emphasis on the various aspects of processing data, characteristics of communication and information, and problem solving.

Prerequisite: CGS-1000

**CGS-2509**  
**Introduction to Adobe Acrobat**

1 Credit

Provides students with the knowledge and skills necessary to create, post to the Internet, and distribute PDF files. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000

**CGS-2511**  
**Spreadsheets Applications II**

1 Credit

Emphasizes advanced spreadsheet techniques. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1510

**CGS-2512**  
**Spreadsheets III**

1 Credit

This is a continuation of CGS 2511, Spreadsheets II. More advanced concepts and macro programming are emphasized. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-2511

**CGS-2525**  
**Business Graphics II**

1 Credit

This is a continuation of CGS 1520, Business Graphics I. Advanced concepts are emphasized. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1520

**CGS-2541**  
**Database Design**

3 Credits

Focuses on the use and development of a database program, with an emphasis on loading, modifying and querying capabilities. Topics include storage devices, data design, administration, analysis and implementation, data structures, indexed and direct file organizations, and hierarchical network and relational models. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000

### **CGS-2763**

#### **Unix/Linux Administration I**

3 Credits

This course is a continuation of CGS-1760 (Introduction to Unix). The focus is hands-on Linux system administration. Topics include system administration concepts, system installation and configuration. Additional topics include understanding the UNIX file system, configuring basic system hardware and services, managing user accounts, basic system security and backups. Major Unix variants will also be covered. This course continues with CGS-2764 (Unix/Linux Administration II).

Prerequisite: CGS-1000 or permission of instructor

### **CGS-2764**

#### **Unix/Linux Administration II**

3 Credits

This course is a continuation of CGS 2760 (Unix Administration I). The focus is on UNIX and Linux administration. Topics include creating shell scripts and using scripting tools, software development tools (such as 'make' and RCS/CVS), managing documentation and creating 'man' pages with 'nroff', configuring services including email, printing, file sharing, logging, DNS and FTP. Also covered will be building and configuring custom kernels, kernel modules, patching and updating the kernel and applications, and basic system security. Student will gain hands-on experience installing, configuring and using Linux.

Prerequisite: CGS-2763

### **CGS-2820**

#### **WEB Authoring-HTML**

3 Credits

Introduces the student to the fundamentals of Web page authoring. Students will learn how to use HTML to create web pages. They will learn how to generate HTML links, add graphics, create image maps, tables, frames, and forms. Advanced techniques include new HTML tags, virtual reality, audio, and video and presentation of other nonstandard data. They will also learn how to use FTP to upload and download files. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000

### **CGS-2822**

#### **Web Site Creation**

3 Credits

This course is designed to introduce the student to software application tools necessary to create a Web site. The student will use and apply a Web site creation program such as FrontPage, Dreamweaver, Cold Fusion, etc. They will have the opportunity to develop a Web site from initial concept to publication.

Prerequisite: CGS-2820 or permission of instructor. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

### **CGS-2823**

#### **Introduction to Active Server Pages**

3 Credits

Introduces the student to the process of designing and maintaining interactive and dynamic Web applications with the server-based scripting language Active Server Pages (ASP). The student learns about the interrelationship among the pieces of the ASP architecture, how to choose a scripting language, and how to determine which tasks should be handled client-side instead of server-side via ASP. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1000

### **CGS-2825**

#### **Web Site Management**

3 Credits

Students in this course learn how to establish and maintain a Web environment by concentrating on the establishment and maintenance of Web Servers. Other topics include database access from a CGI script, email, FTP servers, security, firewalls, and Proxy Servers. Students will learn about establishing access policies, MIME types, and enabling CGI scripts. This should be one of the last courses that the student takes in the Internet Services Technology degree. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-2763

### **CGS-2874**

#### **Multimedia Authoring II**

3 Credits

A continuation of CGS 1871 Multimedia Authoring I, with emphasis on advanced authoring skills. Students will develop in-depth projects using video, audio, text, hypertext, and graphics while controlling the program direction. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1871

### **CGS-2876**

#### **Digital Audio/Video Design**

3 Credits

Introduces the student to the essential software, tools, and techniques commonly used by Web and multimedia designers to produce digital audio and video. Various audio/video programs such as Real Player, Music Match, Cake Walk, Adobe Premiere, and After Effects may be used in this course.

Prerequisite: CGS-2820 or CGS-1871 or CGS-1555

### **CGS-2877**

#### **Digital Animation Design**

3 Credits

Introduces the student to the essential software, tools, and techniques commonly used by Web and multimedia authors and designers to produce digital animation effects. Various animation programs such as gif animators, 3D animation applications, Macromedia Fireworks, Flash, and Shockwave may be used in this course as well as multimedia authoring programs such as Macromedia Director or Tool Book.

Prerequisite: CGS-2820 or CGS-1871 or CGS-1555

### **CGS-2939**

#### **Internet Services Technology Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis.

### **CGS-2940**

#### **Web Technology Internship**

3 Credits

A coordinated work-study course involving class work and field experience. Students will participate in hands-on activities by assisting with Web page development and/or web server implementation. Objectives determined by the student and faculty-coordinator will be used to evaluate the student. This should be one of the last courses the student takes in the Web Technology A.S. Degree program. The student will attend a minimum of 3 clock hours per week in the internship experience.

**CGS-2942****Database Services Internship**

3 Credits

A coordinated work-study course involving class work and field experience. Students will participate in hands-on activities by assisting with database design and development. Objectives determined by the student and teacher-coordinator will be used to evaluate the student. This should be one of the last courses the student takes in the Database Services Technology AS degree. Prerequisites are determined by the instructor.

**CHD-1800****Introduction to Early Childhood Administration**

3 Credits

Designed to provide potential and current early child administrators with the opportunity of satisfying one of the educational requirements for the Foundational Level Child Care and Education Administrator Credential and one of the three courses required for the Level Two Administrator Credential as defined by the State of Florida. It is intended to introduce the needed skills and information in the following areas: developmentally appropriate childcare environments, leadership for childcare settings, financial and legal issues of childcare, and developmentally appropriate education curriculum.

Prerequisites: High School Diploma or equivalent, 30 hour Florida Intro Child Care Course, 10 hours DAP Special Needs, CDA or equivalent.

**CHM-1020C****Chemistry & Society**

3 Credits

A study of how chemicals directly affect our lives, including drugs, biocides, food additives, detergents, cosmetics, and plastics. Laboratory experimentation will be included.

A special fee will be charged for this course.

Prerequisites: College level reading, writing and math skills are required.

**CHM-1025****Modern Chemistry**

3 Credits

Covers an elementary treatment of mathematical tools of the chemist, atomic theory, periodic arrangement of the elements, chemical bonding nomenclature of compounds, chemical reactions, stoichiometry and gas laws. Designed for students with no chemistry background.

Prerequisites: College level reading, writing and math skills are required.

Corequisite: CHM-1025L

**CHM-1025L****Modern Chemistry Laboratory**

1 Credit

Accompanies CHM 1025. Topics include laboratory techniques, measurement, chemical reactions, abbreviated qualitative analysis, quantitative chemistry techniques and gas law applications.

A special fee will be charged for this course.

Prerequisites: College level reading, writing and math skills are required.

Corequisite: CHM-1025

**CHM-1032****Chemistry for Health Sciences**

3 Credits

A chemistry course designed for allied health programs. Focuses on basic chemical and physical principles applied to the life process. Topics include inorganic, organic, and physiological chemistry. Mathematics applications are minimal.

Prerequisites: College level reading, writing and math skills are required.

Corequisite: CHM-1032L

**CHM-1032L****Chemistry for Health Sciences Laboratory**

1 Credit

Accompanies CHM-1032. Topics include laboratory techniques, measurement, chemical bonding, radioactivity, gases, and examples of common inorganic, organic, and biological reactions.

Corequisite: CHM-1032

**CHM-1045****College Chemistry I**

3 Credits

First part of a two-semester sequence. Topics include advanced treatment of stoichiometry, atomic theory, chemical bonding, solutions and thermochemistry.

Prerequisites: CHM-1025 or permission of instructor and MAC-1105. College level reading, writing and math skills are required.

Corequisite: CHM-1045L

**CHM-1045L****College Chemistry I Laboratory**

1 Credit

Accompanies CHM 1045. Topics include analytical techniques, physical property determinations, gas laws and thermochemical processes.

A special fee will be charged for this course.

Prerequisite: College level reading, writing and math skills are required.

Corequisite: CHM-1045

**CHM-1046****College Chemistry II**

3 Credits

Second part of a two-semester sequence. Topics include liquid and solid behavior, physical properties of solutions, kinetics, chemical equilibria, electrochemistry and chemical thermodynamics.

Prerequisites: CHM-1045. College level reading, writing and math skills are required.

Corequisite: CHM-1046L

**CHM-1046L****College Chemistry II Laboratory**

1 Credit

This course accompanies CHM 1046. Topics include spectrophotometric determinations, chemical kinetics, electrochemistry, inorganic qualitative analysis and chemistry equilibria.

A special fee will be charged for this course.

Prerequisite: CHM-1045L. College level reading, writing and math skills are required.

Corequisite: CHM-1046

**CHM-2132C****Chemical Instrumentation**

3 Credits

An introduction to a variety of chemical analysis methods and corresponding instrumentation commonly employed in a chemical laboratory or industry setting. The course will combine lecture/discussion with chemical laboratory experiences to give both a foundation in the principles behind the methods and extensive hands-on laboratory experience geared to the workplace. Fundamentals of instruments are demonstrated but the emphasis is placed on the applications in which the instruments are used.

Prerequisites: CHM-1046 and CHM-1046L

**CHM-2210**  
**Organic Chemistry I**

4 Credits

First part of a two-semester sequence. Focus is on the chemistry of hydrocarbons. Topics include nomenclature, chemical bonding, synthetic methods, characteristic reactions, spectroscopic analyses, reaction mechanisms and structure determinations.

Prerequisite: CHM-1046 and CHM-1046L. College level reading, writing and math skills are required.

Corequisite: CHM-2210L

**CHM-2210L**  
**Organic Chemistry I Laboratory**

1 Credit

Accompanies CHM 2210. Topics include organic separations, synthesis, spectroscopy, chromatography and identification of organic compounds.

A special fee will be charged for this course.

Prerequisite: CHM-1046 and CHM-1046L. College level reading, writing and math skills are required.

Corequisite: CHM-2210

**CHM-2211**  
**Organic Chemistry II**

4 Credits

Second part of a two-semester sequence. Focus is on the chemistry of hydrocarbon derivatives.

Prerequisite: CHM-2210 and CHM-2210L. College level reading and math skills are required.

Corequisite: CHM-2211L

**CHM-2211L**  
**Organic Chemistry II Laboratory**

1 Credit

Accompanies CHM 2211. Topics include the analysis of NMR spectra, multi-step synthesis and organic qualitative analysis.

A special fee will be charged for this course.

Prerequisite: CHM-2210L. College level reading and math skills are required.

Corequisite: CHM-2211

**CIS-1930**  
**Business Financial Management**

1 Credit

Focuses on computerized applications in management, with an emphasis on inventory control, project management, financial management and expert systems. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: OST-1142

**CIS-1931**  
**Microcomputer Concepts**

3 Credits

Focuses on using microcomputers to solve business problems, evaluate personal computers and software, and complete a wide range of office tasks. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

**CIS-2321**  
**Systems Analysis**

3 Credits

Focuses on the systems development life cycle, with an emphasis on identifying and assessing system requirements, analyzing and designing new systems in relation to use in business. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisites: CGS-2301 and CGS-2541

**CIS 2352C**  
**Ethical Hacking I**

3 Credits

Hands-on course teaches students how to hack into information systems using ethical standards. The student will learn system and network penetration testing, the tools and techniques used to exploit vulnerabilities such as social engineering, buffer overflows, etc., and how to defend against attacks.

Prerequisite: CNT-1401

**CIS-2353**  
**Security Management and Computer Auditing**

3 Credits

In this course the student will learn the steps necessary to perform a computer audit. The student will create an audit project plan based on various information technology scenarios and then practice performing fieldwork, analyzing data to draw conclusions and preparing an audit report offering recommendations.

**CIS 2359C**  
**Ethical Hacking II**

3 Credits

A continuation of Ethical Hacking I with emphasis on advanced techniques.

Prerequisite: CIS 2352C

**CIS-2381C**  
**Computer Forensics and Incident Response**

3 Credits

The student will design and develop strategies for inspecting potentially corrupted servers, networks and workstations. In this hands-on course the student will practice detecting possible intrusions, inspecting log files, tracking violators. Students will practice computer forensic exercises using detection tools and tracking methodologies.

Prerequisite: CNT-1401

**CIS-2939**  
**Computer Information Administration Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis.

**CIS-2941**  
**Computer Information Internship**

3 Credits

A coordinated work-study course involving class work and field experience. Students will participate in hands-on activities by assisting with PC support, help desk, and/or microcomputer specialist. Objectives determined by the student and teacher-coordinator will be used to evaluate the student. This should be one of the last courses the student takes in the Computer Information AS degree. Prerequisites determined by the instructor. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

**CIS-2945**  
**Information Technology Security Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concert with his/her area of curriculum emphasis.

Prerequisites: CTS 2321 and CIS 2359C

**CJC-1000****Introduction to Corrections**

3 Credits

Provides an introduction to the historical, theoretical and objective understanding of crime, the offender and the correctional process in society. Topics include custodial procedures and theory, correctional treatment, and basic social systems in relation to crime problems.

**CJC-2162****Probation and Parole**

3 Credits

Explores the history, functions, purposes and operations of community corrections programs within the criminal justice system which provide diversion, supervision and treatment of offenders. This course reviews the theories and practices of probation and parole within a community setting, the principles and methods of probation and parole systems at federal, state and local levels, court procedures, the role of the probation and parole officers and their associates in the rehabilitation process will be covered.

**CJE-1000****Introduction to Law Enforcement**

3 Credits

This course covers the history and philosophy of law enforcement in America including the organization and objectives of local, state and federal agencies. Areas covered will include contemporary problems facing modern law enforcement. The course will also cover the various approaches to modern law enforcement and the selection of and training of career officers to enforce the laws in a democratic society. Topics covered will include law enforcement as a balance of social, historical, political, legal, individual and organizational forces.

**CJE-1640****Introduction to Criminalistics**

3 Credits

This course explains and discusses the crime laboratory and its procedures, functions and duties. Crime scene procedures and techniques for locating, preserving and security evidence will also be discussed. Selected laboratory techniques and procedures such as comparison and identification of tool markings, blood, hair, fibers, drugs, chemicals, photographs, firearms, ballistics and documents will be explained.

**CJE-1642C****Introduction to Crime Scene Technology**

3 Credits

This course explains and discusses the basic scientific techniques used in criminal investigation with emphasis on the role of the crime scene investigator. This course will focus on such areas as recording the crime scene, collecting and preserving physical evidence, and the examination of evidence. The techniques used by the crime scene investigator to collect, protect, process, and analyze crime scene evidence will be explored.

**CJE-1643C****Advanced Crime Scene Technology**

3 Credits

This course explains and discusses advanced principals and theories in crime scene technology. This course will cover specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence; gun shot residue, blood spatter and bodies.

Prerequisites: CJE-1640 and CJE-1642C

**CJE-1680****Introduction to Computer Crimes**

3 Credits

Provides the student with an overview of crimes involving the use of computer technology and the Internet. It will cover how computer related crimes are committed and how they are investigated. Topics covered will include computer crime scene management and the legal issues involved in the prosecution of computer crimes.

**CJE-2004****Career Choices in Criminal Justice**

1 Credit

This course will expose the students to the diversity of requirements and career opportunities within the criminal justice system. This course will provide the students with an understanding of the different agencies within the criminal justice system including police, courts and corrections. This course will cover all levels of agencies including city, county, state and federal. The course will also cover careers related to criminal justice including juvenile justice, private investigation and security, and bail bonds agents. The course will cover the roles of these agencies and employment opportunities. The course will also provide students with information on law enforcement academies and strategies for job searching, resumes and job interviews.

**CJE-2170****Comparative Police and Criminal Justice Systems**

3 Credits

This course will survey contemporary foreign law enforcement and criminal justice systems. This course will compare and contrast selected foreign systems with those of the United States. This course will include a study of the operational and philosophical differences between the various cultural and legal systems studied.

**CJE-2233****Drug Abuse and Crime**

3 Credits

This course will introduce students to the negative effects of drugs, alcohol, and other substance abuse. This course will cover the problems created by the illegal use of narcotics and other dangerous substances and its relationship to criminal behavior. This course will emphasize the criminal implications and control of drug and substance abuse as well as touching on the social and historical implications.

**CJE-2300****Police Administration and Organization**

3 Credits

Provides an introduction to the principles of law enforcement, organization and supporting services as they apply to staff functions, personnel recruiting, training, promotions, planning, research, inspection, control, and policy formation. Topics include functions of patrol, criminal investigation, vice control units, juvenile bureau, intelligence, sections, detention facilities, supply and transportation.

**CJE-2400****Community Relations**

3 Credits

Focuses on the relationship of criminal justice agencies to the community and how social change affects law enforcement, corrections and the courts.

**CJE-2671C****Latent Fingerprint Development**

2 Credits

This course explains and discusses the techniques involving detection, enhancement and recovery of latent fingerprints from physical evidence. This course will cover mechanical and chemical methods and surfaces will be analyzed and evaluated for application in both theory and practice.

**CJE-2672C****Fingerprint Classification**

2 Credits

This course explains and discusses the Henry modified system of fingerprint classification. This course will deal with all aspects of fingerprint classification, identification, and filing systems and will prepare the student to conduct inked fingerprint examinations.

**CJE-2673C****Forensic Photography**

3 Credits

This course explains and covers basic crime scene photography skills, including camera operation, exposure control, proficiency in relational photos, and flash control for crime scene and evidentiary documentation. The course will also cover special light sources and the use of filters, specialized equipment, digital cameras, and hand held video camera-recorders.

**CJL-1062****Constitutional Law**

3 Credits

Provides an in-depth study of criminal law, with an emphasis on the role of the Supreme Court and constitutional law as it applies to law enforcement and civil rights.

**CJL-1070****The Legal Rights of Prisoners**

3 Credits

Survey the legal rights of inmates in correctional facilities, with an emphasis on specific cases and decisions affecting correctional practices.

**CJL-1100****Criminal Law**

3 Credits

Focuses on the classification and analysis of criminal acts, such as homicide, rape, assault, robbery, larceny, burglary, and auto thefts, with an emphasis on specific cases and selected court decisions. Topics include court organization, court orders, writs, warrants, and other papers.

**CJL-1500****Introduction to the Court System**

3 Credits

This course examines the history, traditions and philosophy of the American court system. Emphasis will be placed on the roles of the prosecutor, the judge, the defense attorney, the jurors, the defendants and the public. The course will focus on the general themes of law on the books, law in action and law in controversy. Course content will include an overview of the structure and operations of the court system with special emphasis on the Florida Court System.

**CJL-2072****Civil Rights and Liability in Criminal Justice Systems**

3 Credits

This course will provide students with an overview of federal civil rights legislation and state federal tort law as it applies to criminal justice. Topics covered will include practitioner and supervisor liability, 1983 actions, 241 crimes, wrongful death actions, and various personnel laws including ADA, EEOC, age and sex discrimination and sexual harassment.

**CJL-2130****Criminal Evidence and Procedure**

3 Credits

Provides an introduction to criminal procedures such as arrest, search and seizure, use of force and handling evidence. Topics include the legal use and degree of force, rights of suspects and arrested persons, types of evidence, admissibility, proof and competence of evidence as related to criminal law and recent court decisions.

**CJL-2610****Courtroom Presentation/Scientific Evidence**

3 Credits

This course explains and discusses how to present physical, documentary, and scientific evidence in the courtroom. The course will cover proper dress, speaking, listening, and stress will be explained. The student will understand how to present courtroom testimony, especially in areas of scientific evidence. The course will also include how to prepare and present visual aids and exhibits collected at crime scenes. The course will include mock trial exercises.

**CJT-2100****Criminal Investigation**

3 Credits

Covers methods of investigation, interviews, interrogation, electronic equipment, surveillance and sources of information, with an emphasis on case preparation and problems in criminal investigations.

**CLP-1000****Psychology of Personal Growth**

3 Credits

Covers the origin and development of individual needs and personality patterns, approaches to self-management, and self-control and assessment of personal value systems. Emphasis is on personal awareness and experientially-based activities. It is not acceptable as a prerequisite for other psychology courses.

**CNT-1401****Introduction to Network Security**

3 Credits

Basic computer and network security theory, concepts and terminology are presented. The CIA triad, basic threats, intrusion techniques, vulnerabilities and their various countermeasures are included. Students will also discuss ethical behaviors and basic security practices for authentication, encryption and secure network topologies.

Prerequisite: CGS-1550 or CEN-1527 or CET-1600

**CNT-2210****Wide Area Network Fundamentals**

3 Credits

This course presents wide area network (WAN) technology theories, concepts, hardware and media. Included are point-to-point and shared multipoint, frame relay, DSL, ISDN, T-carrier, synchronous optical networks (SONET), asynchronous transfer mode (ATM), hybrid fiber coax (HFC) and distributed data interface technologies.

Prerequisite: CGS-1550

**CNT-2405****Advanced Internetworking Security**

3 Credits

Advanced computer and network security concepts and terminology are presented with a focus toward internetworked environments. Intrusion threats, intrusion techniques, and vulnerabilities are discussed as are countermeasures and their implementation. Includes installation and use of intrusion detection systems, packet sniffers and network analyzers. Development of comprehensive network security plans, response and recovery plans, and disaster recovery plans are included. Issues in wireless technologies demonstrated.

Prerequisite: CNT-1401

**CNT-2510**  
**Wireless Networking**

3 Credits

This course presents an overview of common wireless technologies such as 802.11a, 802.11g, 802.11n, cellular, PCS, Infrared, and Bluetooth, including theories, concepts of their operation, installation, and basic troubleshooting. Basic computing and common wireless technologies such as analog, AMPS, CDMA, TDMA GSM, 2G, 3G, PCS and ESMR are discussed as well as new trends as they develop. Wireless local area networks and integration with wired networks are also included.

Prerequisite: CGS-1550

**CNT-2941**  
**Networking Services Internship**

3 Credits

A coordinated work-study course involving class work and field experience. Students will participate in hands-on activities by assisting with network support, and networking installation and development. Objectives determined by the student and teacher-coordinator will be used to evaluate the student. This should be one of the last courses the student takes in the Networking Services AS degree. Prerequisites are determined by the instructor.

**CLP-2001**  
**Advance Psychology of Personal Growth**

3 Credits

An existential experimental approach to human behavior which focuses on awareness of ourselves, effective communication and problem-solving skills involved in human interactions.

Prerequisite: CLP-1000

**COP-1000**  
**Programming Logic**

3 Credits

Introduces programming logic, with an emphasis on problem definition, flow charts, tables, control breaks, and multi-record single processing programs. Topics include read process-write loops, array creation and retrieval, and documentation standards. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000

**COP-1120**  
**COBOL, Beginning**

3 Credits

Introduces the computer programming for business, with an emphasis on program design and development, generating reports and creating files. Topics include structured programming, testing, implementation and documentation, file structures, input and output devices, table processing and operating system facilities.

A special fee will be charged for this course.

Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1000

**COP-1220**  
**Programming in "C"**

3 Credits

Introduces programming in the "C" language with an emphasis on basic input/output functions. Topics include interactive programming, style and methodology, top-down design and structured programming. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1000

**COP-1812**  
**Introduction to XML Authoring**

3 Credits

This course teaches students how to use XML to create customized tags for Web pages and to work effectively with XML. Students will develop Web sites integrating XML into their projects. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1000

**COP-1820**  
**Visual BASIC, Beginning**

3 Credits

Provides a basic overview of Windows programming and applications. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1000

**COP-1821**  
**Visual BASIC, Advanced**

3 Credits

Advanced course focusing on the development of Windows applications using an event driven programming system. Topics include arrays, data structures, and developing PEN applications. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1820

**COP-2121**  
**COBOL, Intermediate**

3 Credits

An advanced course using COBOL, with an emphasis on sequential and random access files, processing techniques and program development. Topics include structured programming, batch and interactive environments, development, testing implementation and documentation.

A special fee will be charged for this course.

Prerequisite: COP-1120. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

**COP-2202**  
**Scientific Programming Applications/FORTRAN**

3 Credits

Focuses on the use of the FORmula TRANslation programming language to solve engineering, science and mathematics problems. Topics include numerical methods of integration and simulation.

A special fee will be charged for this course.

Prerequisite: College level math skills are required.

**COP-2224**  
**Programming in C++**

3 Credits

Focuses on advanced programming in the "C" language, with an emphasis on small and large object-oriented programs using C++. Topics include inheritance, information hiding and operator overloading.

Prerequisites: COP-1000 and COP-1220 or permission of instructor

**COP-2344  
Shell Scripting**

3 Credits

This course is intended for students who have mastered the basic Linux/Unix operating environment and who would like to read and understand the various administrative scripts, and to write scripts to automate day-to-day tasks. This course is designed to teach students skills they need to effectively read, write and debug shell scripts. This course explores in detail the Bash shell scripting language. Major topics covered include reading, writing, modifying, and debugging shell scripts, the shell environment, regular expressions, text filtering with grep, sed, and the awk commands, conditional control statements and loops, interactive scripts, the use of other shell features such as variables, parameters, argument lists, shell functions, shell traps.

Prerequisite: CGS-1760 and COP-1000

**COP-2360  
Programming in C#**

3 Credits

An introductory course to programming in the C# language. Emphasis is placed on the basic data, methods and classes of the C# language. Additionally, object oriented programming concepts will be introduced. Programming style and object oriented methodology will be stressed throughout the course.

Prerequisite: COP-1000

**COP-2740  
Database Programming - SQL**

3 Credits

The course covers the concepts of both relational and object relational databases using the SQL programming language. Students are taught to create and maintain database objects and to store, retrieve and manipulate data. Students learn to retrieve data by using advanced techniques, grouping operations and navigational retrieval. They also learn to write SQL queries to generate report-like output. Hands-on practice using assigned projects reinforce the fundamental concepts

Prerequisite: CGS-1000

**COP-2741  
Oracle Database Administration Fundamentals I**

3 Credits

Provides students with the knowledge and skills required to install, configure, administer and troubleshoot a specific database management system (DBMS) in a client/server environment. Topics such as backing up and restoring a database, as well as scheduling, monitoring and performance will be covered. Sizing database objects such as tables and indexes will be covered, as well as database securities.

Prerequisite: CGS-2541

**COP-2742  
Database Administration II**

3 Credits

Provides students with the knowledge and skills required to install, configure, administer and troubleshoot a specific database management system (DBMS) in a client/server environment. Topics such as complex restoring of a database will be covered. Advanced concepts such as data warehousing, data mining and transaction processing will be covered.

Prerequisite: COP-2741

**COP-2745  
Database Programming - Advanced**

3 Credits

This course covers advanced coding concepts of a specific DBMS. For example, if the student is studying MS Access, this course covers coding using Visual Basic for Applications (VBA). If the student is studying MS SQL Server, this course introduces advanced concepts using Transact SQL (TSQL). If the student is studying Oracle DBMS, the student will code in PL/SQL. Students will be taught to code programs to perform error handling and create triggers. Students will program stored procedures and custom functions, and learn to call those reusable programs.

Prerequisite: COP-2740

**COP-2800  
JAVA Programming**

3 Credits

Introduces programming in JAVA. Focus is on object-oriented programming to create stand-alone applications for enhancing Web pages. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-1000 or permission of instructor

**COP-2805  
JAVA Advanced**

3 Credits

A continuation of COP 2800. The focus is on the development of client-server applications, applets, and advanced GUI. Topics include advanced object orientated programming in Java, multi-threading, files, multimedia, database use, and networking concepts used for client-server applications. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-2800 or permission of instructor

**COP-2822  
Scripting for the Web**

3 Credits

Introduces scripting languages used to enhance WEB documents. Focus is on the use of scripts and how they relate to the Web environment. Students will develop applications using a scripting language such as Visual Basic, JAVAScript, and/or Perl. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisites: COP-1000 and CGS-2820

**COP-2823  
Graphics Design for Multimedia/Internet**

3 Credits

Introduces graphics design for the Internet and multimedia projects. Focus is on instructional design process, effective page design, and scanning techniques. Students will use digital imaging software such as PhotoShop to create effective computer screen design elements. Color theory and visual communications is introduced. Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: CGS-1000

**COP-2826  
Advanced Graphics Design for Multimedia/Internet**

3 Credits

A continuation of COP 2823. Focus is on advanced graphic design techniques. Students use digital imaging software to prepare graphics for use in Students enrolled in a degree or college credit certificate program must complete all prerequisites.

Prerequisite: COP-2823

### **COP-2939**

#### **Computer Programming Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis.

### **COP-2940**

#### **Computer Programming Internship**

3 Credits

A coordinated work-study course involving class work and field experience. Students will participate in hands-on activities by assisting with programming creation and programming maintenance. Objectives determined by the student and teacher-coordinator will be used to evaluate the student. This should be one of the last courses the student takes in the Computer Programming AS degree. Prerequisites determined by the instructor. Students enrolled in a degree or college credit certificate program must complete all

### **CRW-1001**

#### **Creative Writing I**

3 Credits

Focuses on analyzing creative writing through class discussions and readings. Works by students and others will be critiqued. Participation on the staff of the College's literary magazine is encouraged.

Prerequisite: ENC-1101 or permission of instructor

### **CRW-1002**

#### **Creative Writing II**

3 Credits

Further critical analyses of both the student's own writings and the writings of others combined with the readings and discussions of the process of creative writing. Continuation of the skills developed from CRW 1001.

Prerequisite: CRW-1001. College level reading and writing skills are required.

### **CTS-2310**

#### **Windows Security**

3 Credits

The student will design and develop strategies for securing a windows-based network, both server and workstation. In this hands-on course the student will practice implementing security on windows servers to include configuring security for application servers and administration servers. Students will practice using monitoring, auditing and performance tools.

Prerequisite: CNT-1401

### **CTS-2311**

#### **Unix/Linux Security**

3 Credits

This course covers the concepts and administration of system and network security on Unix and Linux systems. Students will gain the skills needed to protect Unix and Linux servers from various types of threats. Students will understand, plan and implement security on Linux servers including developing security policies, local system security, network security, monitoring systems and networks, basic firewall setup and the use of various security related tools (e.g., PAM, sudo).

Prerequisites: CGS-2764 and CGS-1550. College level reading and writing skills are required.

### **CTS-2321**

#### **Unix/Linux Networking**

3 Credits

This course covers the concepts and administration of networking services on Unix and Linux systems. Topics include Windows network integration with SMB (Samba), DNS, email services and other common network services such as DHCP, FTP, LDAP and NTP (network time protocol). Students will receive basic network concepts such as network models and LANs, IPv4, IPv6 and PPP. Students will also gain hands-on experience with basic network security, and network configuration and troubleshooting using common network management tools.

Prerequisites: CGS-2764 and CGS-1550. College level reading and writing skills are required.

### **CTS-2939**

#### **Database Technology Capstone**

3 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project-based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis.

### **DAA-1101**

#### **Modern Dance I**

2 Credits

Elementary level modern dance training is for those with entry level skills in modern dance. The course will offer students the opportunity to develop an understanding of the basic principles and concepts of modern dance technique through several movement experiences and explorations. Students explore and develop awareness of body alignment, dance vocabulary, self-awareness, coordination, strength and musicality. Attendance at and written critiques of dance performances provide an enhanced view of the scope of the dance field. This course may be taken twice for credit.

### **DAA-1104**

#### **Modern Dance II**

2 Credits

This studio course will serve as a continuation of Modern Dance I and will further explore basic principles of modern dance technique. It will broaden students' awareness of dance concepts such as momentum, weight shift, rebound and release. It will further develop dance vocabulary, body alignment, and develop an introductory framework for dance aesthetics. Attendance at and written critiques of dance performances will provide deeper insight into the dance field. This course may be taken twice for credit.

Prerequisite: Audition or instructor permission

### **DAA-1200**

#### **Ballet I**

2 Credits

Elementary level ballet training for those with entry level skills in ballet. Emphasis is on correct placement and alignment of the body, a knowledge of basic ballet terminology, and the development of spatial awareness as it applies to the execution of ballet exercises, positions and steps. Attendance at written critiques of dance performances provide an enhanced view of the scope of the dance field. This is a studio course and may be repeated twice for credit.

Prerequisite: Audition or instructor permission

**DAA-1204**

**Ballet II**

2 Credits

Ballet II is a continuation of Ballet I. Student experiences an intensification of barre work through the use of more complex coordination of the arms and legs. Intensified center work includes more complex floor patterns to develop the use of space in movement sequences. Introduction to steps requiring an advanced beginning expertise in ballet. Leotards, tights and ballet shoes are required. Attendance at and written critiques of dance performances will provide deeper insight into the dance field. May be repeated for credit for a maximum of 4 credit hours.

**DAA-1610L**

**Dance Composition I**

2 Credits

This creative studio course examines basic tools of the choreographic craft. Students gain experience in structural movement from simple phrases to complex organizational units through motif development, exploration of shape, space, time, transitions and basic compositional forms. The student will explore solo, partner and group structures and use various devices to create their own artistic expressions. Reading, writing and critical analysis of dance included.

**DAA-1680L**

**Dance Ensemble**

1 Credit

This creative studio course provides an opportunity for dance performers to work in a repertory company and to explore the various devices and skills of ensemble performance. Culminates in a staged performance. This course is repeatable for elective credit.

Prerequisite: Audition required.

**DAA-1800**

**Dance Basics**

1 Credit

Dance Basics is a studio course designed to introduce students with little or no prior training to the basic concepts of dance technique. The emphasis in this class will be placed upon attaining correct body alignment, learning the positions of the arms and feet, and the understanding of time, space, weight and energy as it relates to dance. Students learn basic dance vocabulary while developing strength and musicality.

**DAA-1900**

**Dance Practicum**

1 Credit

This activity/analysis course provides for the expansion of the student's range of expression and performance/production or pre-professional skills through a directed study experience. Working with a dance faculty advisor, the student will choose, refine, develop, document and present a project whose intent will be the increase of the student's mastery of selected skills from the coursework attempted to date.

Prerequisite: Audition or consent of instructor.

**DAA-2105**

**Modern Dance III**

2 Credits

This studio course is intended to further the understanding of the principles of modern dance technique through more complex exercises and exploration of movement dynamics while developing speed in movement analysis and synthesis. Intricate rhythmical structures and increased spatial awareness will challenge students. Continuing critical analysis will be expected, along with a sharpening of both the student's overall dance knowledge and aesthetic understanding of the dance form. This course may be taken twice for credit.

Prerequisite: Audition or instructor permission

**DAA-2106**

**Modern Dance IV**

2 Credits

This studio course is a continuation of Modern Dance III. Emphasis is on expanding the technical training of the student by increasing complexity of movement capabilities. More emphasis will be placed spatial awareness, rhythmical structures, exploration and on partnering. Continuing critical analysis will be expected, along with a sharpening of both the student's overall knowledge and aesthetic understanding of the dance form. The course will focus more attention on the student's individual dance preparation. Attendance at and written critiques of dance performances will provide deeper insight into the dance field. This course may be taken twice for credit.

Prerequisite: Audition or Instructor Permission

**DAA-2205**

**Ballet III**

2 Credits

The continuation of ballet training at the beginning of the intermediate level. Emphasis is on strength and technical development through the skilled execution of intermediate level steps and center floor combinations. Uses the technical demands of ballet to further develop stamina and to increase expertise in spatial awareness. Attendance at and written critiques of dance performances increase the student observation and analytical skills.

Prerequisite: Audition or instructor permission

**DAA-2206**

**Ballet IV**

2 Credits

Ballet IV is a continuation of Ballet III. Student experiences an intensification of barre work through the use of more complex coordination of the arms and legs. Intensified center work includes more complex floor patterns to develop the use of space in movement sequences. Introduction to steps requiring an advanced beginning expertise in ballet. Introduction of Pointe work if student proficiency is met. Attendance at and written critiques of dance performances will provide deeper insight into the dance field. This course may be taken twice for credit.

Prerequisite: Audition or instructor permission

**DAA-2500L**

**Jazz Dance**

1 Credit

Jazz dance is a studio course designed to introduce the student to the historical development of modern jazz dance, its technique, and methods of expression through exercise, locomotion, and non-locomotion. Emphasis is placed on technique, terminology, movement combination and historical information. This course may be taken twice for elective credit.

**DAN-1600C**

**Music for Dance**

2 Credits

The study of music and its relationship to the dancer. In addition to basic rhythmic structures the student will learn to use them as a tool in teaching dance and in choreography. The student will further gain insight into the process of selecting appropriate music for various choreographic projects.

**DAN-2100**

**Introduction to Dance**

3 Credits

A lecture/activity course devoted to the study of dance in its many cultural and societal contexts. The course is designed to heighten student awareness of an appreciation of the aesthetic, socio-cultural, and vocational roles played by dancers from the art form's historical roots to contemporary trends. Reading, writing, critical analysis and some physical activity are included.

Prerequisites: College level reading and writing skills are required.

**DEH-1003**  
**Dental Hygiene Instrumentation**

1 Credit

Dental Hygiene Instrumentation introduces the student to the theory and practical skills necessary for basic instrumentation. Laboratory sessions are included to demonstrate proficiency in utilizing dental hygiene instruments and dental charting. Additional topics that will be covered in lecture include professionalism and ethics, communication skills, asepsis and maintenance of hand instruments and hand pieces, patient assessment, oral prophylactic procedures, and dental charting.

Corequisites: DEH-1003L, DES-1020 and DES-1020L

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-1003L**  
**Dental Hygiene Instrumentation Lab**

2 Credits

Dental Hygiene Instrumentation Lab introduces the student to the practical skills necessary for basic instrumentation. Laboratory sessions are included to demonstrate proficiency in utilizing dental hygiene instruments and dental charting. Additional topics that will be covered in laboratory include professionalism and ethics, communication skills, asepsis and maintenance of hand instruments and hand pieces, patient assessment, oral prophylactic procedures, and dental charting.

Corequisites: DEH-1003, DES-1020, DES-1020L

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-1130**  
**Oral Embryology and Histology**

2 Credits

Oral Embryology and Histology is a comprehensive study of the embryonic, fetal, and postnatal development, and microanatomy of the cells and tissues that comprise the head, neck, and oral cavity. Lecture topics include development and histology of the structures of the head, neck, and oral cavity; development and histology of teeth development and histology of the tooth supporting structures; and development and histology of orofacial structures.

Corequisites: DES-1020, DES-1020L

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-1800C**  
**Clinical Dental Hygiene I**

5 Credits

Clinical Dental Hygiene I is the first term for direct patient care. Students apply the principles and perform clinical activities for the prevention of oral disease, including data collection, prophylaxis, application of prevention agents, and oral home care instructions. This is a combined course with classroom interactions and clinical experience. Students are required to successfully complete a number of procedures.

Prerequisites: DEH-1003, DEH-1003L, DES-1801, DES-1801L

Corequisites: DEH-2400, DEH-2602

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-1811**  
**Dental Ethics, Jurisprudence**

1 Credit

This course is designed to provide knowledge of professional ethics and legal responsibilities, professional organizations, state and dental practice acts and continuing education regulations and requirements. Dental office management will be introduced to provide dental hygiene students with the business and professional skills necessary to practice in an office and/or alternate practice setting. Emphasis will be placed on the student's ethical and legal roles as a dental hygienist and on the business aspects of the profession. In addition, preparation for the National Board examination and test-taking skills will be covered.

Prerequisites: DEH-2804C, DEH-2702

Corequisite: DEH-2702L

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-1820C**  
**Clinical Dental Hygiene II**

3 Credits

DEH-1820C is a continuation of DEH-1800C. It is a combined course that provides discussion of clinical activities along with clinical experience. This is the second term for direct patient care. Students apply the principles and perform clinical activities for the prevention of oral disease, including patient assessment, treatment planning, scaling, debridement, root planning, application of preventive agents, oral irrigation and antimicrobial agents, treatment of hypersensitivity, and oral home care instructions. Additional topics include oral communication skills, instrument sharpening, pulp vitality testing, special needs patients, nutritional counseling, ultrasonics, and air polishing. Students are required to successfully complete a number of procedures.

Prerequisites: DEH-1800C

Corequisites: DES-1101, DES-1101L

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2300**  
**Pharmacology and Oral Medicine**

2 Credits

Pharmacology, oral medicine, anesthesiology, and dental emergencies introduces principles of basic pharmacology as they pertain to the practice of dentistry and dental hygiene. It emphasizes actions and reactions of medications commonly used in the dental office or taken by dental patients. Topics include terminology, pharmaceutical references, prescriptions and abbreviations, pharmacokinetics, drugs used in dentistry and their pharmacokinetics, drugs that may alter dental treatment and their pharmacokinetics, drugs used in dental emergencies, drug abuse, and nitrous oxide monitoring (as mandated in the Florida State Administrative Code Chapter 64B-14).

Prerequisites: DEH-1820C, DEH-2400

Corequisites: DEH-2804C, DES-2934

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2400**  
**General and Oral Pathology**

3 Credits

General and Oral Pathology presents the principles of general pathology in relation to diseases of the teeth, soft tissue, and supporting structures of the oral cavity, as well as general pathologic conditions affecting the head and neck. Topics include terminology and diagnostic procedures, variants of normal conditions, benign conditions of unknown cause, inflammation and repair, caries and pulpal pathology, immune response, oral diseases with immunological pathogenesis, autoimmune diseases, infectious diseases, embryology of the head and neck, developmental disorders of the soft tissues and teeth, developmental cysts, neoplasia, odontogenic tumors, other tumors of oral structures, genetics, genetic syndromes and diseases of the head and neck, general pathologic conditions affecting the oral structures, TMJ disorders, and dental implants.

Prerequisites: DEH-1130, MCB-1000, MCB-1000L

Corequisites: DEH-1800C, DEH-2602

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2602**  
**Periodontology**

2 Credits

This course provides information on the principles of periodontology pertinent to dental hygiene practice. Topics include tissues of the periodontium, epidemiology of periodontal diseases, classification of periodontal diseases, disease prevention, disease treatment and management, drug therapy, immunology and host defense mechanisms, microorganisms associated with periodontology, surgical and nonsurgical treatment, implantology and maintenance, and periodontal/endodontic emergencies.

Prerequisites: DEH-1130, MCB-1000, MCB-1000L

Corequisites: DEH-1800C, DEH-2400

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2702**  
**Community Dental Health**

2 Credits

This course is designed to provide knowledge of attitudes, skills, and behaviors necessary to promote dental health and prevent disease through organized community-based programs. Students will be responsible for assessing, planning, implementing, and evaluating procedures in a community oral health program.

Prerequisite: DES-1831C

Corequisites: DEH-2804C, DES-2934

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2702L**  
**Community Dental Health Practicum**

1 Credit

This course is designed to provide the student with community-based experiences in public health settings for the promotion of dental health and the prevention of dental disease. Students will apply principles of program assessment, implementation, and evaluation procedures for all sites visited.

Prerequisites: DEH-2702

Corequisites: DES-2503, DEH-1811

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2804C**  
**Clinical Dental Hygiene III**

5 Credits

Clinical Dental Hygiene III, a continuation of DEH-1820C, is a combined course that provides discussion of clinical activities along with clinical experience. This is the third term for direct patient care. Students apply the principles and demonstrate improved patient care skills while performing clinical activities for the prevention of oral disease, including patient assessment, treatment planning, scaling, debridement, root planning, ultrasonics, and air polishing application of preventive agents, oral irrigation and antimicrobial agents, and oral home care instructions.

Prerequisites: DEH-1820C, DES-1831C

Corequisites: DEH-2300, DES-2934

Credit for this course does NOT apply to the Associate in Arts degree.

**DEH-2806C**  
**Clinical Dental Hygiene IV**

6 Credits

Clinical Dental Hygiene IV is a continuation of DEH-2804C. This course combines advanced clinical activities with previous clinical experience. This is the fourth term for direct patient care, which emphasizes quality patient care, time constraints, and communication skills. Students will continue to perform clinical activities for the prevention of oral disease, including patient assessment, treatment planning, scaling, debridement, root planning, ultrasonics, and air polishing application of preventive agents, oral irrigation and antimicrobial agents, and oral home care instructions. Additional experience will include office management, legal aspects, ethics, dental hygiene practice settings, dentistry and dental hygiene regulation, and general office procedures. Students are required to successfully complete an advanced number of procedures.

Prerequisites: DEH-2804C, DES-2934

Corequisites: DEH-1811, DES-2503

Credit for this course does NOT apply to the Associate in Arts degree.

**DEP-1004**  
**Development Psychology of the Life Span**

3 Credits

Emphasizes developmental and psycho-social growth from conception to death. Topics include Piaget's stages of cognitive development, Erickson's "Eight Ages," the concept of maturity, changing personalities in later adulthood, theories of aging and death and dying.

**DEP-1004H**  
**Honors Developmental Psychology of the Life Span**

3 Credits

Same as for DEP 1004 with honors content.

Emphasizes developmental and psycho-social growth from conception to death. Topics include Piaget's stages of cognitive development, Erickson's "Eight Ages," the concept of maturity, changing personalities in later adulthood, theories of aging and death and dying.

Honors Institute permission required.

Prerequisites: College level reading and writing skills are required.

**DEP-2102**  
**Child Development**

3 Credits

Focuses on the development and psychosocial aspects of the child through adolescence. Topics include heredity, maturity and social determinants of child behavior.

Prerequisites: College level reading and writing skills are required.

**DES-1020**  
**Oral, Head & Neck Anatomy**

2 Credits

Oral, Head & Neck Anatomy is a detailed study of the gross anatomy of the head and neck, and the external and internal morphology of the primary and permanent dentition. Emphasis is placed on structures directly affected by the practice of dentistry. Head and neck anatomy lecture topics include anatomic terminology, anatomic landmarks; the study of skeletal, muscular, nervous, respiratory, cardiovascular, lymphatic, endocrine, and exocrine systems, facial spaces and the spread of dental infections. Dental anatomy lecture topics include anatomy of the oral cavity, dental terminology, external and internal tooth anatomy, tooth nomenclature and numbering systems, individual tooth and root morphology, tooth eruption schedules, occlusion, and operative dentistry. In order to apply knowledge of head, neck, and dental anatomy to clinical dental hygiene, students will study anatomical models of the head, neck, oral cavity, and teeth, and extracted teeth.

Corequisites: DEH-1003, DEH-1003L, DES-1020L

Credit for this course does NOT apply to the Associate in Arts degree.

**DES-1020L**  
**Oral, Head & Neck Anatomy Lab**

1 Credit

This course provides an opportunity to use anatomical models of the skull and teeth to apply didactic information in the laboratory setting and begin to apply knowledge of anatomy to clinical dental hygiene. Lab fee required.

Corequisites: DES-1020, DEH-1003, DEH-1003L

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1101**

### **Dental Materials**

2 Credits

Dental Materials focuses on the nature, qualities, composition, and manipulation used in dentistry. The primary goal of this course is to enhance the student's ability to make clinical judgments regarding the use and care of dental materials based on how these materials react in the oral environment. Lecture topics include dental material standards, dental material properties, impression materials, gypsum products, mouth guards and whitening systems, dental bases, liners and cements, temporary restorations, classifications for restorative dentistry, direct restorative materials, indirect restorative materials, polishing procedures for dental restorations, removable dental prostheses, sealants and implants. Students will have hands-on laboratory experience in the proper manipulation of dental materials commonly employed in dentistry. Some of the material taught in DES-1100C provides didactic, practical, and clinical experience necessary for the dental hygiene student to perform expanded functions as required by, and outlined in Florida Statue Title XXXII, Chapter 466, Section 466.024, and in the Florida Administrative Code Chapter 64, Sections B5-16.001, B5-16.002, and B5-16.006 through B5-16.010.

Prerequisites: CHM-1032, CHM-1032L, MCB-1000, MCB-1000L

Corequisites: DES-1101L, DES-1831C

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1101L**

### **Dental Materials Lab**

1 Credit

This course is designed to provide basic knowledge and laboratory practice necessary for the proper manipulation of dental materials commonly employed in dentistry.

Prerequisites: CHM-1032, CHM-1032L

Corequisites: DES-1101, DES-1831C

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1201**

### **Dental Radiology**

2 Credits

This course provides the student with fundamental knowledge of the nature, physics and biological effects of radiation to maximize understanding of proper control and safety precautions to be used in exposing, processing, mounting, and evaluating diagnostically acceptable radiographs.

Corequisites: DES-1020, DES-1020L, DES-1201L

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1201L**

### **Dental Radiology Lab**

1 Credit

This course provides the student with laboratory experience in exposing, processing, mounting, and critiquing diagnostically acceptable intraoral and extraoral radiographs.

Corequisites: DES-1201, DES-1020, DES-1020L

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1801**

### **Introduction to Clinical Procedures**

2 Credits

This core course introduces the dental hygiene student to the basic concepts of clinical practice. Topics include the history of dentistry, dental health team members, professional organizations, medical/dental history, vital signs, operation and maintenance of dental equipment, operator/patient, four-handed techniques, oral evacuation, dental charting, cleaning of removable appliances, coronal polishing, and fluoride application techniques.

Corequisites: DEH-1003, DEH-1003L, DES-1801L

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1801L**

### **Introduction to Clinical Procedures Lab**

1 Credit

This course is designed for the practical application of professionalism and clinical procedures. Development of introductory skills is practiced in the clinical setting. Demonstration of required procedures is evaluated using preset standards.

Corequisites: DES-1801, DEH-1003, DEH-1003L

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-1831C**

### **Expand Duties for Dental Hygienists**

2 Credits

Expanded Duties for Dental Hygienists is a combined lecture and clinical course designed to provide didactic, practical, and clinical experience necessary for the dental hygiene student to perform expanded functions as required by, and outlined in Florida Statue Title XXXII, Chapter 466, Section 466.024, and in the Florida Administrative Code Chapter 64, Sections B5-16.001, B5-16.002, and B5-16.006 through B5-16.010.

Prerequisite: DEH-1800C

Corequisites: DES-1101, DES-1101L, DEH-1820C

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-2503**

### **Office Management**

1 Credit

This course enables the student to gain knowledge and proficiency in all procedures necessary for office management. The course includes telephone techniques, ordering supplies, recall system, appointment control, bookkeeping, billing, and insurance procedures.

Prerequisites: DES-2934, DEH-2804C

Corequisite: DEH-2702L

Credit for this course does NOT apply to the Associate in Arts degree.

## **DES-2934**

### **Advanced Clinical Procedures**

1 Credit

Advanced Clinical Procedures is a lecture course that is a continuation of concepts and clinical procedures introduced in previous clinical courses. This course provides discussion of case-based studies and the application of specialized care treatment procedures. Students develop critical thinking skills based on the application of theory and advanced dental hygiene procedures. Topics include dietary surveys, recall systems and applied techniques with an emphasis on patients having specialized needs and unusual case factors that may complicate routine care.

Prerequisites: DEH-1820C, DEH-2400

Corequisites: DEH-2300, DEH-2804C

Credit for this course does NOT apply to the Associate in Arts degree.

## **DIE-2000**

### **Introduction to Dietetics**

3 Credits

This course provides an in-depth introductory study of dietetics, the normal nutritional principles and the application of these principles, the professional opportunities for registered dietitians, and the role of the American Dietetic Association in dietetics education and practice.

## **DIE-2129**

### **Quality Control in Food and Nutrition**

3 Credits

Students will be introduced to quality assessment and control in foods and nutrition. Topics will include review of laws, regulations and standards relating to the practice of dietetics.

**DIE 2270  
Clinical Nutrition I**

3 Credits

This course provides an in-depth introductory study of dietetics; in-depth review of nutrition science; the normal nutritional principles and the application of these principles throughout the life cycle. Prerequisites: HUN-2201 and DIE-2000.

**DIE 2271  
Clinical Nutrition II**

3 Credits

This course provides an advanced study of dietetics and the application of the science of nutrition to various disease states. Prerequisites: DIE-2533

**DIE-2401  
Nutrition Education and Interviewing**

3 Credits

Provides information on the nutritional habits of various cultural groups, educational methods which have an impact on food purchases and interviewing techniques.

**DIE-2419  
Nutrition Education Practicum**

2 Credits

Provides the student with a practical application of nutrition education counseling. Actual interviews and customer needs records will reinforce the theories taught and the development and planning of menus.

**DIE-2533  
Clinical Practicum**

2 Credits

This course provides a supervised practice experience in a clinical acute care setting. This course is coordinated with and taught concurrently with Clinical Nutrition II. Didactic instruction and the supervised practicum are coordinated to allow the student to apply medical nutrition therapy and develop the specific competencies of a dietetic technician in an acute care hospital clinical setting.

Prerequisite: DIE-2270

Corequisite: DIE-2271.

**DSC-1002  
Introduction to Terrorism**

3 Credits

This course teaches the foundations of national security as it relates to international and domestic terrorism and the United States engagement in the war against terrorism. This course is a survey of the history and development of terrorist organizations and extreme political militancy both in the United States and the world.

**DSC-1003  
Intro to Homeland Security**

3 Credits

This course provides an introspective review of the history of the U.S. Homeland Defense Initiative and will explore the evolution of homeland security in the United States, including an overview of the government agencies and laws involved.

**DSC-2033  
Weapons of Mass Destruction**

3 Credits

This course introduces students to various types of weapons of mass destruction. The student will be introduced to basic principles of weapons of mass destruction, recognition, identification, decontamination, and treatment protocols. The student will understand the importance of personal protective equipment and its proper uses and understand the toxicology, physical and chemical properties associated with weapons of mass destruction.

**EAP-0100  
Speech/Listening I**

3 Credits

An introductory level listening and speaking course in which students develop the ability to understand and participate in brief conversations on familiar topics and begin to develop their pronunciation. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

**EAP-0120  
Reading I**

3 Credits

Introductory course for EAP students with emphasis on comprehension of limited written materials. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

**EAP-0140  
Writing I**

3 Credits

An introductory level writing course in which students develop the ability to write grammatically correct sentences and learn basic organizational skills for paragraph writing. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework. **EAP-0160**

**Grammar I**

3 Credits

Introductory grammar course for EAP students with emphasis on basic verb tenses and simple sentence patterns. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

**EAP-0200  
Speech/Listening II**

3 Credits

A high-beginning/low-intermediate level listening and speaking course in which students continue to develop their ability to understand and participate in conversations and further develop their pronunciation skills. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP-0100

**EAP-0220  
Reading II**

3 Credits

A high introductory level reading course for EAP students with emphasis on developing reading skills and vocabulary. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP-0120

**EAP-0240  
Writing II**

3 Credits

A high beginning to low intermediate level writing course in which students continue to develop writing skills in the context of guided discourse with an emphasis on logical organization and mechanics. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP-0140

**EAP-0260  
Grammar II**

3 Credits

A high introductory grammar course for EAP students with emphasis on basic grammatical structures and statement/question patterns. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP-0160